COLLEGE OF ARTS AND SCIENCES

COLLEGE OF ARTS AND SCIENCES

The Mission of the College

It is the mission of the College of Arts and Sciences to deliver a first-rate education dedicated to the traditions and values of the liberal arts. These traditions include developing the skills of critical reasoning, writing, reading and deduction and providing a firm grounding in the theories and methodologies of the humanities, social and natural sciences and mathematics. These values include a commitment to rigorous questioning of principles and practices, intellectual integrity, community responsibility and diversity of perspectives in the pursuit of truth and social justice. Fundamental to a liberal education is the acquisition, preservation and transmission of new ideas and knowledge. Study within the College of Arts and Sciences broadens and enriches students’ intellectual and cultural background. The College provides a core curriculum for all students whatever their major fields or career goals. With specialized and interdisciplinary programs at the undergraduate and graduate levels, the College strives to offer a wide variety of learning and research opportunities to its students, guided by nationally and internationally renowned faculty—faculty as passionate and intent on adding to human understanding as they are to passing this understanding on to future generations. The liberal arts provide both a rich variety of fields of academic specialization and a vital base for professional, creative and technological study.

Students pursuing degrees in the College of Arts and Sciences are introduced to a variety of disciplinary and intellectual perspectives through the College’s General Requirements. These requirements provide a solid foundation in essential communications skills and mathematics; a strong and varied background in the humanities, the social sciences and the natural sciences; and, for most students, study of a foreign language as a tool for approaching another culture. These requirements thus supply a broad acquaintance with the traditional liberal arts and a firm basis for more specialized study.

All students in the College select at least one area of academic specialization. This area of specialization may be within one of the traditional disciplines, it may be interdisciplinary or it may be self-designed. Students may also pursue a second major area or one or more minor areas of specialization.

In addition to general requirements and the specific requirements within the areas of specialization, students have elective credit hours that may be used to pursue secondary areas of specialization, to explore areas of general interest or to take additional coursework within the area of specialization or in related areas. Elective coursework in the liberal arts provides not only a sound basis for more specialized learning but also intellectual enrichment that is of lasting value to any student in the university.

Study in the liberal arts provides a basis for success in a wide variety of careers. In addition to preparing students for later professional study, it provides communication skills, analytical tools and mental flexibility necessary for success in adapting to changing careers in a changing world. Above all, study in the liberal arts prepares students for a lifetime of learning experiences and for personal and intellectual as well as professional growth.

Departments and Schools

• Center for Comparative and Integrative Programs
• Center for the Study of Gender and Sexuality
• Department of Anthropology
• Department of Biological Sciences
• Department of Chemistry and Biochemistry
• Department of Computer Science
• Department of English
• Department of Geography
• Department of Geology
• Department of History
• Department of Mathematical Sciences
• Department of Modern and Classical Language Studies
• Department of Pan-African Studies
• Department of Philosophy
• Department of Physics
• Department of Political Science
• Department of Psychological Sciences
• Department of Sociology
• School of Biomedical Sciences
• School of Peace and Conflict Studies

Undergraduate Programs

• American Sign Language - B.A.
• Anthropology - B.A.
• Anthropology - B.S.
• Applied Mathematics - B.S.
• Biology - B.A.
• Biology - B.S.
• Biotechnology - B.S.
• Botany - B.S.
• Chemistry - B.A.
• Chemistry - B.S.
• Classics - B.A.
• Computer Science - B.A.
• Computer Science - B.S.
• Criminology and Justice Studies - B.A.
• Earth Science - B.A.
• Economics - B.A.
• English - B.A.
• Environmental and Conservation Biology - B.S.
• Environmental Studies - B.A.
• French Literature, Culture and Translation - B.A.
• Geography - B.A.
• Geology - B.A.
• Geology - B.S.
• German Literature, Culture and Translation - B.A.
• Global Studies - B.A.
• History - B.A.
• Integrated Life Sciences - B.S./M.D.
• Integrative Studies - B.I.S.
• Mathematics - B.A.
• Mathematics - B.S.
• Medical Technology - B.S.
• Pan-African Studies - B.A.
• Paralegal Studies - B.A.
• Peace and Conflict Studies - B.A.
• Philosophy - B.A.
• Physics - B.A.
• Physics - B.S.
• Political Science - B.A.
• Psychology - B.A.
• Psychology - B.S.
• Russian Literature, Culture and Translation - B.A.
• Sociology - B.A.
• Spanish - B.A.
• Teaching English as a Second Language - B.A.
• Translation - B.S.
• Zoology - B.S.

Special Programs (Non-Degree)
• Columbus Program in Intergovernmental Issues
• Pre-Dentistry Advising Program
• Pre-Medicine/Pre-Osteopathy Advising Program
• Pre-Pharmacy Advising Program
• Pre-Veterinary Medicine Advising Program
• Washington Program in National Issues

Minors
• African Studies
• American Sign Language
• Ancient, Medieval and Renaissance Studies
• Anthropology
• Applied Mathematics
• Applied Statistics
• Arabic
• Biological Sciences

• Business French
• Business German
• Business Russian
• Business Spanish
• Chemistry
• Chinese
• Classics
• Climatology
• Computer Science
• Criminology and Justice Studies
• Creative Writing
• English
• French
• Forensic Anthropology
• Geographic Information Science
• Geography
• Geology
• German
• German Studies
• Greek
• Health Care Ethics
• History
• History and Philosophy of Science
• Italian
• Italian Studies
• Japanese
• Jewish Studies
• Latin
• Latin American Studies
• Lesbian, Gay, Bisexual, Transgender and Queer Studies
• Mathematics
• Medical Anthropology
• Pan-African Studies
• Paralegal Studies
• Peace and Conflict Studies
• Philosophy
• Physics
• Political Science
• Pre-Law
• Professional And Technical Writing
• Psychology
• Religion Studies
• Russian
• Russian Studies
• Sociology
• Spanish
• Studies in Globalization, Identity and Space
• Urban Studies
• Women's Studies
• World Literature and Cultures
Graduate Programs

- Anthropology - M.A.
- Applied Geology - Ph.D.
- Applied Mathematics - M.A.
- Applied Mathematics - M.S.
- Applied Mathematics - Ph.D.
- Biological Sciences - Botany - M.S.
- Biological Sciences - Botany - Ph.D.
- Biological Sciences - Cell Biology and Molecular Genetics - M.S.
- Biological Sciences - Cell Biology and Molecular Genetics - Ph.D.
- Biological Sciences - Ecology and Evolutionary Biology - M.S.
- Biological Sciences - Ecology and Evolutionary Biology - Ph.D.
- Biological Sciences - Integrative Physiology and Neurobiology - M.S.
- Biological Sciences - Integrative Physiology and Neurobiology - Ph.D.
- Biology - M.A.
- Biology - M.S.
- Biomedical Sciences - Biological Anthropology - Ph.D.
- Biomedical Sciences - Cellular and Molecular Biology - M.S.
- Biomedical Sciences - Cellular and Molecular Biology - Ph.D.
- Biomedical Sciences - Neurosciences - M.S.
- Biomedical Sciences - Neurosciences - Ph.D.
- Biomedical Sciences - Pharmacology - M.S.
- Biomedical Sciences - Pharmacology - Ph.D.
- Biomedical Sciences - Physiology Interdisciplinary - M.S.
- Biomedical Sciences - Physiology Interdisciplinary - Ph.D.
- Chemical Physics - M.S.
- Chemical Physics - Ph.D.
- Chemistry - M.A.
- Chemistry - M.S.
- Chemistry - Ph.D.
- Clinical Psychology - M.A.
- Clinical Psychology - Ph.D.
- Computer Science - M.A.
- Computer Science - M.S.
- Computer Science - Ph.D.
- Creative Writing - M.F.A.
- Criminology and Criminal Justice - M.A.
- English - M.A.
- English - Ph.D.
- English-Rhetoric and Composition - Ph.D.
- French - M.A.
- Geographic Information Science - M.GISC
- Geography - M.A.
- Geography - Ph.D.
- Geology - M.S.
- German - M.A.
- History - M.A.
- History - Ph.D.
- Integrated Life Sciences - B.S./M.D.
- Latin - M.A.
- Liberal Studies - L.S.M.
- Mathematics for Secondary Teachers - M.A.
- Philosophy - M.A.
- Physics - M.A.
- Physics - M.S.
- Physics - Ph.D.
- Political Science - M.A.
- Political Science - Ph.D.
- Psychological Science - M.A.
- Psychological Sciences - Ph.D.
- Public Administration - M.P.A.
- Pure Mathematics - M.A.
- Pure Mathematics - M.S.
- Pure Mathematics - Ph.D.
- Sociology - M.A.
- Sociology - Ph.D.
- Spanish - M.A.
- Teaching English as a Second Language - M.A.
- Translation - M.A.
- Translation Studies - Ph.D.

Certificates

Undergraduate Certificates
- Paralegal Studies
- Teaching English as a Foreign Language

Graduate Certificates
- Cyber Geographic Information Science
- Environmental Geographic Information Science
- Geographic Information Science
- Nonprofit Management
- Teaching English as a Second/Foreign Language

B.A. College General Requirements

Students complete the university’s Kent Core and diversity course requirements. Additional courses must be completed in the College General Requirements. Students should consult the College Office if they have questions concerning the applicability of specific coursework to the General Requirements. None of the courses listed as part of the College’s General Requirements may be taken pass/fail.

For the purposes of the General Requirements, students’ major departments are defined as the departments that house the major, field of concentration or interdisciplinary program. For students in double major and dual degree programs, the restrictions on the applicability of major coursework toward the General Requirements are applied to only one of their majors (generally the primary major).

Social Sciences

One additional course taken from the Kent Core Social Sciences courses in the following Arts and Sciences disciplines:
- Anthropology (ANTH).
- Applied Conflict Management (CACM)
- Geography (GEOG)
- Criminology and Justice Studies (CRIM)
- Political Science (POL)
- Psychology (PSYC)
• Sociology (SOC)

This course may not be from the student’s major.

Basic Sciences

One additional course taken from the Kent Core Natural Sciences courses in the following Arts and Sciences disciplines:

• Anthropology (ANTH)
• Biological Sciences (BSCI)
• Chemistry (CHEM)
• Geography (GEOG)
• Geology (GEOL)
• Physics (PHY)

This course may not be from the student’s major.

Mathematics and Critical Reasoning

MATH 14002 may be used to meet the requirement provided MATH 14001 and MATH 14002 were completed while students were enrolled in another college.

Foreign Language College Requirement

Students pursuing the Bachelor of Arts degree in the College of Arts and Sciences must complete 14-16 credit hours of foreign language.¹

To complete the requirement, students have the equivalent of Elementary I and II in any language, plus one of the following options:

1. Intermediate I and II of the same language ²
2. Elementary I and II of a second language
3. Any combination of two courses from the following list:

• MCLS 10001 INTRODUCTION TO STRUCTURAL CONCEPTS FOR LANGUAGE STUDENTS
• MCLS 20000 GLOBAL LITERACY AND CULTURAL AWARENESS
• MCLS 20091 VARIABLE CONTENT SEMINAR IN GLOBAL LITERACY: CASE STUDIES
• MCLS 21417 MULTICULTURALISM IN TODAY'S GERMANY (DIVG)
• MCLS 22217 DIVERSITY IN TODAY'S RUSSIA (DIVG)
• MCLS 23217 THE FRANCOPHONE EXPERIENCE (DIVG)
• MCLS 28404 THE LATIN AMERICAN EXPERIENCE (DIVG)
• MCLS 28405 THE SPANISH EXPERIENCE (DIVG)

¹ All students with prior foreign language experience should take the foreign language placement test to determine the appropriate level at which to start. Some students may begin beyond the Elementary I level and will complete the requirement with fewer credit hours and fewer courses. This may be accomplished by (1) passing a course beyond the Elementary I through Intermediate II level; (2) receiving credit through Credit by Exam (CBE), the College Level Examination Program (CLEP), the Advanced Placement (AP) exam or credit through the International Baccalaureate (IB) program; or (3) being designated a “native speaker” of a non-English language (consult with the College of Arts and Sciences Advising Office for additional information). When students complete the requirement with fewer than 14 credit hours and four courses, they will complete remaining credit hours with general electives.

² Certain majors, concentrations and minors may require specific languages, limit the languages from which a student may choose or require coursework through Intermediate II. Students who plan to pursue graduate study may need particular language coursework.

B.S. College General Requirements

Students complete the university’s Kent Core and diversity course requirements. Additional courses must be completed in the College General Requirements. Students should consult the College Office if they have questions concerning the applicability of specific coursework to the General Requirements. None of the courses listed as part of the College’s General Requirements may be taken pass/fail.

For the purposes of the General Requirements, students’ major departments are defined as the departments that house the major, field of concentration or interdisciplinary program. For students in double major and dual degree programs, the restrictions on the applicability of major coursework toward the General Requirements are applied to only one of their majors (generally the primary major).

Mathematics and Critical Reasoning

MATH 14002 may be used to meet the requirement provided MATH 14001 and MATH 14002 were completed while students were enrolled in another college.

Foreign Language College Requirement:

Foreign Language College Requirement

• Students pursuing the Bachelor of Science degree in the College of Arts and Sciences must complete 8 credit hours of foreign language.¹
• Minimum Elementary I and II of the same language

¹ All students with prior foreign language experience should take the foreign language placement test to determine the appropriate level at which to start. Some students may begin their university foreign language experience beyond the Elementary I level and will complete the requirement with fewer credit hours and fewer courses. This may be accomplished by: (1) passing a course beyond the Elementary I through Intermediate II level or (2) receiving credit through Credit by Exam (CBE), the College Level Examination Program (CLEP), the Advanced Placement (AP) exam or credit through the International Baccalaureate (IB) program; or (3) being designated a “native speaker” of a non-English language (consult with the College of Arts and Sciences Advising Office for additional information). When students complete the requirement with fewer than 8 credit hours and two courses, they will complete the remaining hours with general electives.

Dual Degrees

A program that combines two major fields of study in the same degree program is referred to as a double major program. An example of a double major program would be the combination of the English and history majors in the B.A. program in arts and sciences. Completion of a double major requires that students complete a minimum of 120 credit hours.

A program combining two majors in distinct degree programs is referred to as a dual degree program. An example of a dual degree program would be the combination of a philosophy major in the B.A. program with a chemistry major in the B.S. program in arts and sciences. Any combination involving degree programs in more than one college is...
considered to be a dual degree program even if both degrees bear the same title. For example, the combination of an English major in the B.A. program in arts and sciences with an art history major in the B.A. program in the arts is considered a dual degree program. Completion of a dual degree program requires that students complete a minimum of 140 total credit hours.

The College of Arts and Sciences generally will approve double majors and dual degrees within the college as long as there are at least 21 credit hours of coursework exclusively applied to each major or field of concentration. Certain major and degree combinations are specifically prohibited based upon departmental recommendations.

The option to pursue double majors and dual degrees continues subsequent to earning a B.A. or B.S. degree in the College of Arts and Sciences. For example, students who have earned a B.A. degree with an English major at Kent State University can have the completion of a second major such as sociology added to their transcript at a later time.

Requests for dual degrees between arts and sciences programs and programs in other colleges are considered on a case-by-case basis by the college office in consultation with the departmental units involved. Combinations involving programs in arts and sciences with related programs in the College of Education, Health, and Human Services generally are restricted.

**Foreign Language Requirements**

In general, students may elect any foreign language taught through the Department of Modern and Classical Language Studies or the Department of Pan-African Studies. However, certain majors, fields of concentration and minors require specific languages or limit the languages from which students may choose. In addition, students who plan to pursue graduate study may need particular languages for that study. In such cases, the students should seek the advice of the appropriate department before selecting a language.

The Department of Modern and Classical Language Studies offers courses of study beyond the minimum needed to meet the foreign language requirement in Arabic, Chinese, Greek (classical), Italian and Japanese; however no major is available for them at this time.

**Progress Toward Fulfillment**

Arts and sciences students are required to begin meeting the foreign language requirement by their third semester of full-time enrollment (that is, no later than upon completing 30 credit hours) and are required to continue to enroll for foreign language courses until the requirement has been completed. Students who transfer to the College of Arts and Sciences from other universities or from other programs at Kent State University with sophomore status are required to begin meeting the foreign language requirement by their second semester of full-time enrollment in the college and must continue to enroll for foreign language courses until the requirement has been completed. Students who fail to meet these stipulations risk unnecessary delays in the completion of their degree programs. The stipulation that arts and sciences students begin meeting the foreign language requirement by their third semester of full-time study applies not only to students with declared majors but also to undeclared students. This includes those students seeking admission to selective programs in other colleges who do not achieve admission to the selective program at the time they achieve sophomore status.

**Limitations on Applicability of Credits**

The following policies impose restrictions on the applicability of credit earned in certain categories of coursework toward meeting graduation requirements for arts and sciences students. Credit hours restricted under these policies will not be counted toward the 120 total credit hours or 42 upper-division credit hours graduation requirements.

**Variable Title Courses**

Students may earn credit toward graduation through special topics courses, Honors colloquia, seminars and other variable title courses. Such coursework may not be applied toward the general requirements of the college’s degree programs. Variable title coursework may not be counted toward major, field of concentration or minor program requirements unless specifically and formally allowed by the academic unit responsible for the program.

**Physical Education and ROTC**

Maximum 4 credit hours of Physical Activity, Wellness and Sport (PWS) courses or lower-division ROTC—Aerospace Studies (ASTU) and Military Studies (MSCI)—courses, or of the two combined, may be counted toward the 120 credit hours required for graduation. A maximum of 12 upper-division credit hours in ASTU and MSCI courses may be counted toward the 120 credit hours required for graduation by students actively pursuing the university’s Army and Air Force ROTC programs. These 12 upper-division credit hours may be counted in addition to the 4 lower-division credit hours permitted for ASTU/MSCI/PWS courses.

**Applied Music and Music Ensembles**

A maximum of 8 credit hours in Applied Music and Music Ensembles (MUS courses with a second digit of 5, 6 or 7) combined may be counted toward the 120 total credit hours or 42 upper-division credit hours graduation requirement. There is no limit on other music coursework.

**Nontraditional Coursework**

A maximum of 16 total credit hours of coursework from the following categories may be applied toward the 120 total credit hours and 42 upper-division credit hours graduation requirements. Moreover, no more than 8 credit hours of workshop credit may be applied toward this 16 credit hours limit. Credit hours earned in HONR 40099 are not included within this 16 credit hours limit.

**Internships, Field Placements, Practica**

Credit earned in internships, field placements, practica or courses with a similar experiential/applied nature is included within this 16 credit hours limitation. Such coursework may not be applied toward the General Requirements of the college’s degree programs. The year of clinical training required in the medical technology program, similar training in other Three-Plus-One programs, student teaching and other experiential components of the education minor, and study-abroad programs are exempted from this limitation.

**Individual Study**

Credit earned in individual study and research coursework is included within this 16 credit hours limitation. Individual study and research credits may not be applied to major, field of concentration or minor program requirements unless specifically and formally allowed by the department responsible for the major, field of concentration or minor.

**Workshops**

Credit earned in workshop courses (course numbers ending in XXX93) is limited to no more than 8 credit hours and is included within this 16
credit hours limitation. Workshop credit may not be applied to major, field of concentration or minor program requirements unless specifically and formally allowed by the academic unit responsible for the program.

**Mandatory Outcomes Assessment**

In addition to the other General Requirements of the college, candidates for an undergraduate degree in the College of Arts and Sciences are required, as a condition of graduation, to participate in an outcomes assessment. These outcomes assessments are conducted by each undergraduate degree program in the College of Arts and Sciences.

**Residence Requirements for Minors**

Students must complete at least two upper-division courses in the minor at Kent State on a graded basis (A-F). For information on the major Residence Requirements please visit the University Residence Requirements policy.

**Three-Plus-One Programs**

Students who choose to pursue Three-Plus-One programs take three years of preprofessional study at Kent State University, followed by a year or more of intensive professional training at an accredited professional school or clinical facility. Upon the satisfactory completion of this professional training, the B.S. degree from the College of Arts and Sciences at Kent State University is awarded. Students must earn 97 credit hours in a university. Appropriate transfer credit from other institutions may be included in these 97 credit hours, but the students must complete at least 42 credit hours in-residence at Kent State University, including the last 32 credit hours of the 97 credit hours requirement.

Students must have a minimum 2.000 GPA in all work taken at Kent State University. They must also complete with at least a 2.000 average all off-campus work taken to fulfill fourth-year requirements. In some fields, students may also be required to present other evidence of the satisfactory completion of the off-campus professional training.

Students must satisfy all degree requirements, including the B.S. General Requirements and field of concentration requirements, by a combination of credits earned at Kent State University and the professional school. The only exception is that the college’s foreign language requirement is waived for students who successfully complete a Three-Plus-One program.

Three-Plus-One programs are designed for students with a well-defined, specific, professional career goal. Currently, the College of Arts and Sciences offers a Three-Plus-One program in Medical Technology. Because of the intensive, professional focus of these programs, students pursuing them should work closely with their faculty advisors. Students who are interested in this program should consult the Department of Biological Sciences, 256 Cunningham Hall, for further information.

Please see the program requirements for the Medical Technology program offered under the College of Arts and Sciences.

**Upper-Division Coursework Policy**

Most undergraduate specialization is pursued through upper-division coursework. Upper-division courses are numbered 30000-49999. These courses require both greater familiarity with the subject matter and greater intellectual sophistication. Students are required to have completed the appropriate prerequisites in specified lower-division courses before entering upper-division courses. All degree programs in the College of Arts and Sciences require the successful completion of at least 42 upper-division credit hours of coursework.

**College of Arts and Sciences Faculty**

**Center for Comparative and Integrative Programs Faculty**

- Kessler, Chaya (2009), Associate Lecturer, M.A., Youngstown State University, 2005
- Parr Conroy, Amanda M. (2013), Assistant Professor, J.D., Cleveland State University, 2005
- Peterson, Mary S. (2016), Assistant Professor, J.D., Bowling Green State University, 1987

**Center for the Study of Gender and Sexuality Faculty**

- Holt, Suzanne L. (1984), Professor, Ph.D., Kent State University, 1987
- Merryman, Molly B. (1996), Associate Professor, Ph.D., Bowling Green State University, 1995
- Vachon, Lauren (2012), Assistant Professor, M.F.A., Kent State University, 2013

**Chemical Physics Interdisciplinary Program Faculty**

- Bos, Philip J. (1994), Professor, Ph.D., Kent State University, 1978
- Chien, Liang-Chy (1988), Professor, Ph.D., University of Southern Mississippi, 1988
- Hegmann, Torsten (2011), Associate Professor, Ph.D., Martin Luther University, 2001
- Hegmann, Elda (2011), Assistant Professor, Ph.D., Laval University, 2003
- Jakli, Antal I. (1989), Professor, Ph.D., University of Budapest, 1986
- Lavrentovich, Oleg D. (1992), Trustees Research Professor, Kiev University, 1990
- Palffy-Muhoray, Peter (1987), Professor
- Selinger, Jonathan V. (2005), Professor, Ph.D., Harvard College, 1989
- Selinger, Robin L.B. (2005), Professor, Ph.D., Harvard College, 1989
- Wei, Qi-Huo (2006), Associate Professor
- West, John L. (1984), Trustees Research Professor
- Yang, Deng-Ke (1989), Professor, Ph.D., University of Hawaii at Manoa, 1989
- Yokoyama, Hiroshi (2009), Professor, Ph.D., Tokyo International University, 1987

**Department of Anthropology Faculty**

- Eren, Metin (2016), Assistant Professor, Ph.D., Southern Methodist University, 2011
- Fotiou, Evgenia (2014), Assistant Professor, Ph.D, University of Wisconsin-Madison, 2010
- Lovejoy, Claude Owen (1968), Distinguished Professor, Ph.D., University of Massachusetts-Amherst, 1970
- Manahan, Thomas K. (2006), Associate Professor, Ph.D., Vanderbilt University, 2003
- Meindl, Richard (1979), Professor, Ph.D., University of Massachusetts-Amherst, 1979
- Perusek, David J. (1998), Associate Professor, L.S.M., Kent State University, 1989
- Raghanji, Mary Ann (2000), Professor, Ph.D., Kent State University, 2007
• Spurlock, Linda B. (1993), Associate Professor, Ph.D., Kent State University, 2001
• Stumpf-Carome, Jeanne M. (1994), Associate Professor, Ph.D., University of California-Berkeley, 1992
• Tosi, Anthony J. (2014), Assistant Professor, Ph.D., Columbia University, 2000

Department of Biological Sciences Faculty

• Bade, Darren L. (2006), Associate Professor, Ph.D., University of Wisconsin, 2004
• Bagavandoss, Paul (1993), Associate Professor, Ph.D., University of Michigan-Ann Arbor, 1986
• Bailey, Erin L. (2012), Assistant Professor, Ph.D., Kent State University, 2001
• Blackwood, Christopher B (2006), Associate Professor, Ph.D., Michigan State University, 2001
• Blank, James L. (1986), Professor and College Dean, Ph.D., Indiana University, 1982
• Breidenbaugh, Caralisa (2010), Lecturer, M.S., Youngstown State University, 2008
• Brennen, Michael J. (2004), Associate Lecturer, M.Ed., Edinboro University of Pennsylvania, 1985
• Caldwell, Heather (2007), Professor, Ph.D., Georgia State University, 2004
• Carlson, Chris R. (1991), Associate Professor, M.S., Michigan State University, 1981
• Casadesus Smith, Gemma (2014), Associate Professor, Ph.D., Tufts University, 2003
• Case, Andrea L. (2005), Associate Professor, Ph.D., University of Toronto, 2000
• Chen, Yijing (2014), Assistant Professor, Ph.D., University of Wisconsin-Madison, 1997
• Chung, Wilson (2011), Associate Professor, Ph.D., University of Amsterdam, 2003
• Clements, Robert J. (1997), Assistant Professor, Ph.D., Kent State University, 2004
• Costello, David M. (2014), Assistant Professor, Ph.D., University of Notre Dame, 2010
• Damron, Derek S. (2007), Professor, Ph.D., Kent State University, 1991
• De Szalay, Ferenc A. (1997), Associate Professor, Ph.D., University of California-Berkeley, 1995
• Delorme, Thierry A. (2004), Associate Professor, Ph.D., University of Lyon, 1997
• Ding, Qunxing (2007), Associate Professor
• Engohang-Ndong, Jean (2010), Assistant Professor
• Finer, Kim R. (1993), Professor, Ph.D., Texas A&M University, 1984
• Fraizer, Gail C. (2001), Associate Professor, Ph.D., University of California-Berkeley, 1983
• Freeman, Ernest J. (1990), Associate Professor and School Director, Ph.D., Kent State University, 1991
• Gerbig, Donald G. (1996), Associate Professor, Ph.D., University of Tennessee-Knoxville, 1991
• Glass, David J. (1984), Professor
• Grafton, Brian W. (1994), Associate Professor, Ph.D., Kent State University, 2004
• Groff, Chi-Hua (2009), Assistant Professor, Ph.D., Wayne State University, 1997
• Gupta, Sanhita (2009), Assistant Professor, Ph.D., Case Western Reserve University, 1998
• Hamilton, Robert IV (2005), Associate Professor, Ph.D., Rutgers, State University of New Jersey, 2006
• Hoeh, Walter R. (1998), Associate Professor, Ph.D., University of Michigan-Ann Arbor, 1991
• Huang, Songping D. (1998), Professor, Ph.D., Michigan State University, 1993
• Johnson, John D. (2007), Associate Professor, Ph.D., University of Colorado-Boulder, 2002
• Kershner, Mark W. (1999), Associate Professor, Ph.D., The Ohio State University, 1998
• Kim, Min Ho (2012), Assistant Professor, Ph.D., University of Toledo, 2002
• Kline, Douglas W. (1990), Professor, Ph.D., University of California-Davis, 1985
• Kooijman, Edgar (1998), Associate Professor, Ph.D., Utrecht University, 2006
• Koski, Gary K. (2010), Professor, Ph.D., Johns Hopkins University, 1995
• Leff, Adam A. (1994), Associate Professor, D.V.M., University of Georgia, 1991
• Leff, Laura G. (1994), Professor, Ph.D., University of Georgia, 1992
• Lehnert, Matthew S. (2012), Assistant Professor, Ph.D., University of Florida, 2010
• Lovell, John A. (1995), Associate Professor, Ph.D., Kent State University, 1993
• Marcinkiewicz, Jennifer L. (1995), Associate Professor
• McDonough, Jennifer A. (2006), Associate Professor
• Meek, Leah M. (1995), Associate Lecturer
• Mintz, Eric M. (2002), Professor, Ph.D., University of California-Santa Cruz, 1995
• Model, Michael A. (2002), Assistant Professor, Ph.D., University of Michigan-Ann Arbor, 1995
• Mou, Xiaozhen (2008), Associate Professor, Ph.D., University of Georgia, 2006
• Naji, Josephine W. (1988), Associate Professor, Ph.D., Kent State University, 1994
• Novak Barnett, Colleen M. (2009), Associate Professor, Ph.D., Michigan State University, 1999
• Piontkivska, Olena (2005), Associate Professor, Ph.D., Pennsylvania State University, 2003
• Popescu, Daniela C. (2013), Assistant Professor, Ph.D., Vanderbilt University, 2006
• Proffer, Tyre J. (1991), Professor, Ph.D., Michigan State University, 1985
• Redfearn, James C. (2006), Assistant Professor, Ph.D., Kent State University, 2016
• Rocha, Oscar J. (2004), Associate Professor, Ph.D., Pennsylvania State University, 1990
• Russell, Mary A. (2003), Associate Professor, Ph.D., The Ohio State University, 1996
• Shilling, Michael (2008), Assistant Professor, Ph.D., Kent State University, 2013
• Smith, Gregory A. (2014), Assistant Professor, Ph.D., University of Oklahoma, 2007
• Steele, Louise (2012), Assistant Professor, Ph.D., Case Western Reserve University, 2002
• Stone, Jonathan F. (2003), Assistant Professor, B.S., University of Akron, 1985
• Tinkler, Gregory P. (2013), Assistant Professor, Ph.D., Wake Forest University, 2005
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- Manley, Mark D. (1986), Professor, Ph.D., University of Wyoming, 1981
- Mann, Elizabeth K. (1998), Professor, Ph.D., University of Paris, 1992
- Margetis, Spyridon (1997), Professor, Ph.D., Goethe Universitat, 1991
- Minnick, Stephen A. (2003), Professor, Ph.D., Pennsylvania State University, 2003
- Montgomery, Timothy E. (1985), Associate Lecturer
- Petratos, Gerassimos G. (1994), Professor, Ph.D., American University, 1988
- Portman, John J. (2003), Associate Professor, Ph.D., University of Illinois-Urbana, 2000
- Quader, Khandker F. (1990), Professor, Ph.D., State University of New York at Stony Brook, 1983
- Schroeder, Almut (2001), Associate Professor
- Secaur, Jonathan M. (1980), Assistant Professor, Ph.D., Kent State University, 1994
- Sprunt, Samuel N. (1995), Professor, Ph.D., Massachusetts Institute of Technology, 1989
- Strickland, Michael (2013), Associate Professor, Ph.D., Duke University, 1997

Department of Political Science Faculty
- Banks, Christopher P. (2006), Professor, Ph.D., University of Virginia, 1995
- Barnes, Andrew S. (2001), Associate Professor and Department Chair, Ph.D., Princeton University, 1999
- Boyd-Swan, Casey (2015), Assistant Professor, Ph.D., Arizona State University, 2015
- Carbonell, Joel R. (2007), Assistant Professor, Ph.D., University of California-Riverside, 2007
- Cassell, Mark K. (1998), Professor, Ph.D., University of Wisconsin-Madison, 1998
- Claassen, Ryan L. (2005), Professor, Ph.D., University of California-Davis, 2005
- Ensley, Michael J. (2009), Associate Professor, Ph.D., Duke University, 2002
- Hawes, Daniel P. (2008), Associate Professor, Ph.D., Texas A&M University, 2008
- Hook, Steven W. (1996), Professor, Ph.D., University of South Carolina, 1993
- Mazzel, Julie M. (2004), Associate Professor, Ph.D., American University, 2006
- Molina, Anthony D. (2013), Assistant Professor, Ph.D., Cleveland State University, 2004
- Paar-Jakli, Gabriella (1991), Assistant Professor, Ph.D., Kent State University, 2010
• Robyn, Richard C. (1994), Associate Professor, Ph.D., Kent State University, 2000
• Stacher, Joshua A. (2008), Associate Professor
• Sykes, Vernon L. (2001), Associate Professor, Ph.D., University of Akron, 2001

**Department of Psychological Sciences Faculty**

- Ben-Porath, Yossef S. (1990), Professor, Ph.D., University of Minnesota-Twin Cities, 1989
- Betz, Brian D. (1991), Associate Professor, Ph.D., Ohio University, 1987
- Blasiman, Rachael N. (2010), Associate Professor, Ph.D., Case Western Reserve University, 2010
- Ciesla, Jeffrey (2007), Associate Professor, Ph.D., State University of New York at Buffalo, 2004
- Ciesla, Shannon (2007), Assistant Professor, Ph.D., Kent State University, 2013
- Coifman, Karin G. (2010), Associate Professor, Ph.D., Columbia University, 2008
- Cremeans-Smith, Julie K. (1998), Associate Professor, Ph.D., Kent State University, 2004
- Crowther, Janis H. (1980), Professor and Associate College Dean, Ph.D., University of Vermont, 1980
- DeCapito, Alberta L. (1985), Senior Lecturer
- Dunlosky, John T. (2004), Professor, Ph.D., University of Washington, 1993
- Flessner, Christopher A. (2011), Assistant Professor, Ph.D., University of Wisconsin-Milwaukee, 2008
- Folk, Jocelyn R. (1999), Associate Professor, Ph.D., University of South Carolina-Columbia, 1997
- Fountain, Stephen B. (1984), Professor, Ph.D., Johns Hopkins University, 1981
- Fox-Cardamone, Donna Lee (1990), Associate Professor, Ph.D., Miami University, 1990
- Fresco, David M. (2001), Professor, Ph.D., University of North Carolina-Chapel Hill, 1999
- Galati, Ashley R. (2013), Assistant Professor, Ph.D., University of Kentucky, 2013
- Gere, Judith (2013), Assistant Professor
- Grau, Josefina M. (1994), Associate Professor, Ph.D., University of Illinois-Chicago, 1992
- Gunstad, John J. (2005), Professor, Ph.D., Ohio University, 2002
- Hughes, Joel W. (2003), Professor, Ph.D., The Ohio State University, 2001
- Jasnow, Aaron (2011), Associate Professor, Ph.D., Georgia State University, 2002
- Jones, Bryan A. (2010), Assistant Professor, Ph.D., State University of New York at Stony Brook, 2007
- Joyner, Robin L. (2000), Associate Professor, Ph.D., Texas A&M University, 1998
- Keiller, Scott W. (1989), Assistant Professor, Ph.D., Kent State University, 1997
- Larwin, David A. (1985), Senior Lecturer, M.A., Kent State University, 1989
- Merriman, William E. (1985), Professor, Ph.D., University of Minnesota-Twin Cities, 1984
- Miller, Eric D. (1999), Associate Professor, Ph.D., University of Iowa, 1999
- Moore, Zachariah (2003), Assistant Professor, Ph.D., Kent State University, 2006
- Neal-Barnett, Angela M. (1989), Professor, Ph.D., DePaul University, 1988
- Rawson, Katherine A. (2004), Professor, Ph.D., University of Colorado-Boulder, 2004
- Riccio, David C. (1965), Professor
- Sato, Amy F. (2012), Assistant Professor, Ph.D., University of Wisconsin-Milwaukee, 2009
- Sciartelli, Sharon M. (2008), Associate Professor, Ph.D., Kent State University, 1995
- Sefcek, Jon A. (2011), Assistant Professor, Ph.D., University of Arizona, 2007
- Shepherd, James B. (1986), Assistant Professor, Ph.D., Kent State University, 1996
- Spitznagel, Mary Beth (2009), Associate Professor, Ph.D., Ohio University, 2003
- Tabak, Melanie (2003), Assistant Professor
- Thompson, Clarissa A. (2014), Associate Professor, Ph.D., The Ohio State University, 2008
- Tkacz, Sharon (1993), Associate Professor, Ph.D., Bowling Green State University, 1981
- Tomich, Patricia L. (1994), Associate Professor, Ph.D., Kent State University, 2000
- Updegraff, Alanna S. (2012), Assistant Professor, Ph.D., University of California-Los Angeles, 2003
- Updegraff, John A. (2004), Associate Professor, Ph.D., University of California-Los Angeles, 2002
- Van Dulmen, Manfred H. (2004), Professor, Ph.D., University of Minnesota-Twin Cities, 2001
- Wagor, Walter F. (2010), Professor
- Was, Christopher A. (2005), Associate Professor, Ph.D., University of Utah, 2005
- Wildman, Beth G. (1982), Professor, Ph.D., University of North Carolina-Chapel Hill, 1977
- Zaragoza, Maria S. (1984), Professor and Department Chair, Ph.D., Johns Hopkins University, 1984

**Department of Sociology Faculty**

- Adams, Richard E. (2007), Professor, Ph.D., Indiana University-Bloomington, 1989
- Berard, Timothy J. (2002), Associate Professor, Ph.D., Boston University, 2001
- Bergin, Tiffany (2013), Assistant Professor, Ph.D., University of Cambridge, 2011
- Bloch, Katrina R. (2008), Associate Professor, Ph.D., North Carolina State University, 2009
- Campbell, Beth A. (2005), Associate Lecturer
- Castellani, Brian C. (1993), Professor, Ph.D., Kent State University, 1997
- Chopko, Brian A. (2007), Associate Professor, Ph.D., University of Akron, 2007
- Drinkard, Allyson M. (2000), Assistant Professor, Ph.D., Kent State University, 2012
Courses

School of Peace and Conflict Studies Faculty

- Bleak, Jaquelyn K. (2014), Lecturer, M.S., George Mason University, 2012
- Cunningham, Karen D. (1990), Associate Professor, J.D., Washington and Lee University, 1986
- Hancock, Landon E. (2006), Associate Professor, Ph.D., George Mason University, 2003
- Koopman, Sara (2017), Assistant Professor, Ph.D., University of British Columbia, 2012
- Repicky, Theresa (2002), Associate Professor, Ph.D., Nova Southeastern University, 2006
- Solomon, Johanna (2017), Assistant Professor

College of Arts and Sciences

Biotechnology (BTEC)

BTEC 10210 INTRODUCTION TO BIOTECHNOLOGY 3 Credit Hours
Basic principles and applications of modern biotechnology, including recombinant DNA technology, microbial technology, fermentation, genetic engineering, plant and animal tissue culture and medical biotechnology. Lecture three hours weekly.
Prerequisite: BSCI 10120.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BTEC 40191 SEMINAR: RECENT DEVELOPMENTS IN BIOTECHNOLOGY 1 Credit Hour
Recent developments in biotechnology explored through the presentation and discussion of research articles and reviews in the biotechnology literature.
Prerequisite: BTEC 10210; BSCI 30140, 30171, 30156; CHEM 30284.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter
BTEC 40192  INTERNSHIP IN BIOTECHNOLOGY  2-9 Credit Hours
(Repeatable for credit)Work experience in a biotechnology laboratory. Registration requires approval of program director and is dependent on availability of internship sites. Written report of activities required.
Prerequisite: Biotechnology (BTEC) major.
Schedule Type: Practicum or Internship
Contact Hours: 2-9 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BTEC 40196  INDIVIDUAL INVESTIGATION IN BIOTECHNOLOGY (ELR)  2-9 Credit Hours
(Repeatable for credit)Research experience in biotechnology. Registration requires approval of program director and research director. Written report required.
Prerequisite: Biotechnology (BTEC) major.
Schedule Type: Individual Investigation
Contact Hours: 2-9 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

BTEC 40210  CASE STUDIES IN BIOTECHNOLOGY (WIC)  3 Credit Hours
Case studies used to explore biotechnology practice and the application of various technologies in industry and medicine. Emphasis placed on developing problem solving, information gathering, inductive reasoning and technical communication skills.
Prerequisite: BTEC 10210; BSCI 30140, 30171, 30156, 40158; CHEM 30284, 40248.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

BTEC 40220  BIOINFORMATICS  3 Credit Hours
(Cross-listed with BSCI 40220) Analysis of biological databases, including nucleic acid and protein sequence searching, multiple sequence alignment, protein classification, phylogenetic analysis, comparative genomics, proteomics, protein structure analysis.
Prerequisite: BSCI 30140 and BSCI 30156 and BSCI 40158.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BTEC 40463  MEDICAL BIOTECHNOLOGY  3 Credit Hours
(Cross-listed with BSCI 40463, BSCI 50463 and BSCI 70463) Medical Biotechnology provides a basic understanding of how living cells and cellular materials can be used for medical applications, particularly in the diagnosis and therapy of human diseases. Prerequisite: BSCI 30140
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Chemical Physics (CPHY)

CPHY 60199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2-6 hours in a single semester or distributed over two semesters if desired.
Prerequisite: Approval of adviser and Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CPHY 60299  THESIS II  2 Credit Hours
Thesis students must continually register each semester until all degree requirements are met.
Prerequisite: CPHY 60199 and Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CPHY 60498  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation. Credits earned may be applied toward meeting degree requirements if approved.
Prerequisite: Permission and Graduate standing.
Schedule Type: Research
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U

CPHY 62241  SOFT MATTER  3 Credit Hours
(Cross-listed with CPHY 72241) Lectures on soft materials, including binary fluid mixtures, polymers, colloids, thermotropic and lyotropic liquid crystals. Structures, defects, and textures of phases with orientational and partial translational order. Dynamics of phase transitions.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 62242  CHARACTERIZATION OF SOFT MATERIALS  4 Credit Hours
(Cross-listed with CPHY 72242) Basic techniques in characterization using X-ray scattering, neutron scattering, light scattering, NMR, optical microscopy, scanning electron microscopy, transmission electron and tunneling electron microscopy and ellipsometry. Laboratory measurements, error analysis, cell fabrication.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 2 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 62245  FUNDAMENTALS OF LIQUID CRYSTAL SCIENCE  4 Credit Hours
Basic liquid crystals structures and their main physical properties, such as visco-elastic, electric, magnetic and optical properties except the nature of their phase transitions. Also discussed is their interactions with surfaces and the structural defects that they can form.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CPHY 62248  LIQUID CRYSTAL OPTICS AND PHOTONICS  4 Credit Hours
(Cross-listed with CPHY 72248) Optics of cholesterol, liquid crystalline photonic bandgap materials, nonlinear optics of liquid crystals; optomechanical effects in liquid crystal elastomers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
CPHY 6249  LABVIEW FOR DATA ACQUISITION AND INSTRUMENT CONTROL  1 Credit Hour
(Cross-listed with CPHY 7249) Introduction to laboratory data acquisition and instrument control using LabView Software.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

CPHY 62335  ADVANCED LIQUID CRYSTALLINE AND POLYMERIC MATERIALS  4 Credit Hours
(Cross-listed with CPHY 72335) Liquid crystals and polymers are soft matters of two important disciplines of science and technology. They both have a similar history and are rich in physical and optical properties useful for fundamental and applied research. This course introduces students to recent advances in liquid crystals and polymers with emphasis on structure-property relationships, physical and optical properties, and their applications.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 62450  LIQUID CRYSTAL OPTICS I: THEORY  2 Credit Hours
(Slashed with CPHY 72450) Provides an introduction to optical phenomena with an emphasis on liquid crystals, from geometrical optics to Maxwell's equations. Basic principles are used to analyze and solve optics problems arising in liquid crystal engineering.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CPHY 62452  LIQUID CRYSTAL OPTICS II: OPTICAL SYSTEMS  2 Credit Hours
(Slashed with CPHY 72452) Focuses on the study of practical optical systems with an emphasis on liquid crystals. Starting with the understanding of basic optical components such as lenses, mirrors, filters and polarizers, students study the principles of optical system design. Practical concepts and techniques for the implementation of optical instruments and displays will be mastered through lectures and lab work.
Prerequisite: CPHY 62450 and Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 62454  LIQUID CRYSTAL OPTICS III: APPLICATIONS  1 Credit Hour
(Slashed with CPHY 72454) Focuses on the study of practical optical systems for liquid crystal optical devices. Fundamental optical characteristics of liquid crystal displays and the standard methods of characterization are studied in the lab.
Prerequisite: CPHY 62450 and Graduate standing.
Corequisite: CPHY 62452.
Schedule Type: Laboratory
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CPHY 62460  LIQUID CRYSTAL MATERIALS SCIENCE  2 Credit Hours
(Slashed with CPHY 72460) Familiarizes students with the basic, underlying chemical concepts in liquid crystal science. These concepts include molecular structures and properties of liquid crystal molecules, miscibility rules and micro-segregation of chemically incompatible molecular segments, physical and electronic properties of aromatic compounds including heterocycles and fluorinated aromatics, properties of aliphatic and perfluorinated hydrocarbons, unsaturation, and chirality. Other aspects that will be covered in later sections of this course relate to auxiliary and novel materials used in liquid crystal devices such as polymers, carbon nanomaterials, metal and semiconductor nanoparticles, and photo-responsive organic materials.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CPHY 62462  LIQUID CRYSTAL SCIENCE: PHYSICAL PROPERTIES  3 Credit Hours
(Slashed with CPHY 72462) Basics of liquid crystal defects and their behavior in magnetic and electric fields. Pre/Graduate standing.
Prerequisite: CPHY 62460.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 62640  LIQUID CRYSTAL, POLYMER AND COLLOID COMPOSITES  4 Credit Hours
(Cross-listed with CPHY 72640) Interdisciplinary science of systems consisting of liquid crystal, polymer and colloid. Statistical physics of composite systems, mixing free energy, phase separation principle, phase diagrams and phase separation dynamics. States, structures and free energies of liquid crystal, polymer and colloidal systems. Polymer dispersed liquid crystals (PDLCs), polymer stabilized liquid crystals (PSCTs) and their applications. Laboratory experiments on composite systems and fabrication of PDLC and PSCT light shutters.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 62643  LIQUID CRYSTAL APPLICATIONS  4 Credit Hours
(Cross-listed with CPHY 72643) Apply knowledge of liquid crystals and optics to the design of liquid crystal electro-optical devices. Emphasis is on modeling of devices and the use of that modeling to optimize device characteristics. Several particular device designs are considered to familiarize the student with the state of the art in liquid crystal displays and other electro-optical applications of liquid crystals and to prepare them to advance the art in future designs.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
CPHY 62647  STRUCTURED FLUIDS  3 Credit Hours
(Cross-listed with CPHY 72647) The basics of fluids having internal structures, such as long range orientational order and or one and two dimensional positional order. Materials include thermotropic smectic, lamellar lyotropic and columnar liquid crystals, soap films, fluid foams, fluid fibers and Langmuir monolayers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 62650  COMPUTATIONAL MATERIALS SCIENCE  3 Credit Hours
(Cross-listed with CPHY 72650) Materials modeling at the classical (i.e. non-quantum) level. Monte Carlo methods; molecular dynamics simulation; mesoscale models; numerical methods; case studies.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 62651  NANOBIOTECHNOLOGY  3 Credit Hours
(Cross-listed with CPHY 72651) This interdisciplinary course presents the concepts, principles and the state-of-the-arts of nanotechnologies and their applications in biological and biomedical science and engineering. Focus is on the fundamental physical principles and engineering technologies of device miniaturization and system integration for bioapplications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 64491  SEMINAR: LIQUID CRYSTALS  1 Credit Hour
(Repeatable for credit) (Cross-listed with CPHY 74491) Discussion of current literature or original research in liquid crystals. Participation by students, faculty and guests.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

CPHY 64495  SPECIAL TOPICS IN CHEMICAL PHYSICS  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with CPHY 74495) Topic to be announced when scheduled.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CPHY 65002  LIQUID CRYSTAL DEVICE ENGINEERING I  2 Credit Hours
(Slashed with CPHY 75002) Introduction to liquid crystal device technology including a hands-on investigation of the component parts of LCDs and how the devices function. Covers the basics of liquid crystals as related to LC technology; examples of current LC technology with an emphasis on the fundamental science behind the technology and hands-on characterization of it; and the consideration of next generation LC device technology, such as 3D displays and optical devices.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CPHY 65004  LIQUID CRYSTAL DEVICE ENGINEERING II  3 Credit Hours
(Slashed with CPHY 75004) Provides an introduction to LC device design including a hands on look at the designs of devices, the basic modeling tools used in 1D and 2D devices, and the consideration of the modeling and effect of defects in LC devices.
Prerequisite: CPHY 65002 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 65006  LIQUID CRYSTAL DEVICE PROTOTYPING  2 Credit Hours
(Slashed with CPHY 75006) Liquid crystal device prototyping; introduction to liquid crystal device manufacturing methods.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 65008  LIQUID CRYSTAL DEVICE CONSTRUCTION  1 Credit Hour
(Slashed with CPHY 75008) Students acquire the knowledge and experience in basic techniques and procedures for the construction of liquid crystal cells. Based on the cleanroom techniques, ITO glass handling, film deposition, surface alignment treatment and cell assembly experienced, students are prepared for successive lab courses and the capstone project.
Prerequisite: Graduate standing.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

CPHY 65010  LIQUID CRYSTAL CHARACTERIZATION  2 Credit Hours
(Slashed with CPHY 75010) Focuses on experimental techniques which are used to characterize liquid crystals and liquid crystal devices. The students will learn principles and uses of characterization and test equipment to measure physical properties of liquid crystal materials and test the performance of liquid crystal cells.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 65012  LIQUID CRYSTAL DEVICE TESTING  2 Credit Hours
(Slashed with CPHY 75012) Focuses on experimental techniques which are used to test liquid crystal devices. Students will use advanced equipment in the Liquid Crystal Institute Clean Room Facility to measure the response and evaluate the performance of liquid crystal devices.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 65020  LIQUID CRYSTAL ANALOG ELECTRONICS  2 Credit Hours
(Slashed with CPHY 75020) Familiarizes students with both theory and laboratory experiments on analog electronics for liquid crystal devices. Key topics are circuit analysis, operational amplifiers and data acquisition, analysis and equipment control using LabView.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter
CPHY 65022 LIQUID CRYSTAL DIGITAL ELECTRONICS 2 Credit Hours
(Slashed with CPHY 75022) Familiarizes students with both theory and laboratory experiments on digital electronics for liquid crystal displays. Key topics are AD, DA and logic circuits, microcontrollers and digital communications.
Prerequisite: CPHY 65020 and Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 65022 SCIENTIFIC COMMUNICATION 1 Credit Hour
(Slashed with CPHY 75032) Catalog Description: Course aims to help graduate students in STEM fields improve their skills in scientific writing and presentations. Activities include a mock panel review of scientific proposals. Each student will produce a final paper which could serve as the introductory chapter of a thesis or dissertation. Prerequisite: Graduate Standing
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

CPHY 65008 MASTER'S PROJECT: ENGINEERING APPLICATIONS OF LIQUID CRYSTALS 6 Credit Hours
Offers an opportunity for students to carry out a project that aims to develop a liquid crystal device for a particular application, experiencing the complete development process from the field analysis, idea generation, concept design, feasibility study, implementation and testing.
Prerequisite: CPHY 62460 or CPHY 72460; and CPHY 62462 or CPHY 72462; and CPHY 62450 or CPHY 72450; and CPHY 62452 or CPHY 72452; and CPHY 62454 or CPHY 72454; and CPHY 65008 or CPHY 75008; and CPHY 65022 or CPHY 75022 and Graduate standing.
Schedule Type: Master's Project
Contact Hours: 6 other
Grade Mode: Standard Letter-IP

CPHY 72245 FUNDAMENTALS OF LIQUID CRYSTAL SCIENCE 4 Credit Hours
Basic liquid crystals structures and their main physical properties, such as visco-elastic, electric, magnetic and optical properties, except the nature of their phase transitions. It also discusses their interactions with surfaces and the structural defects that they can form.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CPHY 62249 LIQUID CRYSTAL OPTICS AND PHOTONICS 4 Credit Hours
(Cross-listed with CPHY 62248) Optics of cholesterics, liquid crystalline photonic bandgap materials, nonlinear optics of liquid crystals; optomechanical effects in liquid crystal elastomers.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CPHY 72244 LABVIEW FOR DATA ACQUISITION AND INSTRUMENT CONTROL 1 Credit Hour
(Cross-listed with CPHY 62249) Introduction to laboratory data acquisition and instrument control using Labview software.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

CPHY 72335 ADVANCED LIQUID CRYSTALLINE AND POLYMERIC MATERIALS 4 Credit Hours
(Cross-listed with CPHY 62335) Liquid crystals and polymers are soft matters of two important disciplines of science and technology. They both have a similar history and are rich in physical and optical properties useful for fundamental and applied research. This course introduce students to recent advances in liquid crystals and polymers with emphasis on structure-property relationships, physical and optical properties, and their applications.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 72240 LIQUID CRYSTAL OPTICS I: THEORY 2 Credit Hours
(Slashed with CPHY 62450) Provides an introduction to optical phenomena with an emphasis on liquid crystals, from geometrical optics to Maxwell's equations. Basic principles are used to analyze and solve optics problems arising in liquid crystal engineering.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
CPHY 72452  LIQUID CRYSTAL OPTICS II: OPTICAL SYSTEMS  2 Credit Hours
(Slashed with CPHY 62452) Focuses on the study of practical optical systems with an emphasis on liquid crystals. Starting with the understanding of basic optical components such as lenses, mirrors, filters and polarizers, students study the principles of optical system design. Practical concepts and techniques for the implementation of optical instruments and displays will be mastered through lectures and lab work.
Prerequisite: CPHY 72450 and Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 72454  LIQUID CRYSTAL OPTICS III: APPLICATIONS  1 Credit Hour
(Slashed with CPHY 62454) Focuses on the study of practical optical systems for liquid crystal optical devices. Fundamental optical characteristics of liquid crystal displays and the standard methods of characterization are studied in the lab.
Prerequisite: CPHY 72450 and Doctoral standing.
Corequisite: CPHY 72452.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

CPHY 72460  LIQUID CRYSTAL MATERIALS SCIENCE  2 Credit Hours
(Slashed with CPHY 62460) Familiarizes students with the basic, underlying chemical concepts in liquid crystal science. These concepts include molecular structures and properties of liquid crystal molecules, miscibility rules and micro-segregation of chemically incompatible molecular segments, physical and electronic properties of aromatic compounds including heterocycles and fluorinated aromatics, properties of aliphatic and perfluorinated hydrocarbons, unsaturation, and chirality. Other aspects that will be covered in later sections of this course relate to auxiliary and novel materials used in liquid crystal devices such as polymers, carbon nanomaterials, metal and semiconductor nanoparticles, and photo-responsive organic materials.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CPHY 72462  LIQUID CRYSTAL SCIENCE: PHYSICAL PROPERTIES  3 Credit Hours
(Slashed with CPHY 62462) Basics of liquid crystal defects and their behavior in magnetic and electric fields. Pre/
Prerequisite: Doctoral standing.
Corequisite: CPHY 72460.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 72464  LIQUID CRYSTAL, POLYMER AND COLLOID COMPOSITES  4 Credit Hours
(Cross-listed with CPHY 62640) Interdisciplinary science of systems consisting of liquid crystal, polymer and colloid. Statistical physics of composite systems, mixing free energy, phase separation principle, phase diagrams and phase separation dynamics. States, structures and free energies of liquid crystal, polymer and colloidal systems. Polymer dispersed liquid crystals (PDLCs), polymer stabilized liquid crystals (PSLCs) and their applications. Laboratory experiments on composite systems and fabrication of PDLC and PSLC light shutters.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

CPHY 72643  LIQUID CRYSTAL APPLICATIONS  4 Credit Hours
(Cross-listed with CPHY 62643) Apply knowledge of liquid crystals and optics to the design of liquid crystal electro-optical devices. Emphasis is on modeling of devices and the use of that modeling to optimize device characteristics. Several particular device designs are considered to familiarize the student with the state of the art in liquid crystal displays and other electro-optical applications of liquid crystals and to prepare them to advance the art in future designs.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CPHY 72647  STRUCTURED FLUIDS  3 Credit Hours
(Cross-listed with CPHY 62647) The basics of fluids having internal structures, such as long range orientational order and or one and two dimensional positional order. Such materials include thermotropic smectic, lamellar lyotropic and columnar liquid crystals, soap films, fluid foams, fluid fibers and Langmuir monolayers.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 72650  COMPUTATIONAL MATERIALS SCIENCE  3 Credit Hours
(Cross-listed with CPHY 62650) Materials modeling at the classical (i.e. non-quantum) level. Monte Carlo methods; molecular dynamics simulation; mesoscale models; numerical methods; case studies.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 72651  NANOBIO TECHNOLOGY  3 Credit Hours
(Cross-listed with CPHY 62651) This interdisciplinary course presents the concepts, principles and the state-of-the-arts of nanotechnologies and their applications in biological and biomedical science and engineering. Focus is on the fundamental physical principles and engineering technologies of device miniaturization and system integration for bioapplications.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CPHY 74491  SEMINAR: LIQUID CRYSTALS  1 Credit Hour
(Repeatable for credit) (Cross-listed with CPHY 64491) Discussion of current literature or original research in liquid crystals. Participation by students, faculty and guests.
Prerequisite: Special approval and Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

CPHY 74495  SPECIAL TOPICS IN CHEMICAL PHYSICS  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with CPHY 64495) Topic to be announced when scheduled.
Prerequisite: Special approval and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CPHY 75002  LIQUID CRYSTAL DEVICE ENGINEERING I  2 Credit Hours
(Slashed with CPHY 65002) Introduction to liquid crystal device technology including a hands-on investigation of the component parts of LCDs and how the devices function. Covers the basics of liquid crystals as related to LC technology; examples of current LC technology with an emphasis on the fundamental science behind the technology and hands-on characterization of it; and the consideration of next generation LC device technology, such as 3D displays and optical devices.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CPHY 75004  LIQUID CRYSTAL DEVICE ENGINEERING II  3 Credit Hours
Provides an introduction to LC device design including a hands on look at the designs of devices, the basic modeling tools used in 1D and 2D devices, and the consideration of the modeling and effect of defects in LC devices.
Prerequisite: CPHY 75002 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CPHY 75006  LIQUID CRYSTAL DEVICE PROTOTYPING  2 Credit Hours
(Slashed with CPHY 65006) Liquid crystal device prototyping; an introduction to liquid crystal device manufacturing methods.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 75008  LIQUID CRYSTAL DEVICE CONSTRUCTION  1 Credit Hour
(Slashed with CPHY 65008) Students acquire the knowledge and experience in basic techniques and procedures for the construction of liquid crystal cells. Based on the cleanroom techniques, ITO glass handling, film deposition, surface alignment treatment and cell assembly experienced, students are prepared for successive lab courses and the capstone project.
Prerequisite: Doctoral standing.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

CPHY 75010  LIQUID CRYSTAL CHARACTERIZATION  2 Credit Hours
(Repeatable for credit) (Slashed with CPHY 65010) Focuses on experimental techniques which are used to characterize liquid crystals and liquid crystal devices. The students will learn principles and uses of characterization and test equipment to measure physical properties of liquid crystal materials and test the performance of liquid crystal cells.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 75012  LIQUID CRYSTAL DEVICE TESTING  2 Credit Hours
(Repeatable for credit) (Slashed with CPHY 65012) Focuses on experimental techniques which are used to test liquid crystal devices. Students will use advanced equipment in the Liquid Crystal Institute Clean Room Facility to measure the response and evaluate the performance of liquid crystal devices.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 75020  LIQUID CRYSTAL ANALOG ELECTRONICS  2 Credit Hours
(Repeatable for credit) (Slashed with CPHY 65020) Familiarizes students with both theory and laboratory experiments on analog electronics for liquid crystal devices. Key topics are circuit analysis, operational amplifiers and data acquisition, analysis and equipment control using LabView.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 75022  LIQUID CRYSTAL DIGITAL ELECTRONICS  2 Credit Hours
(Repeatable for credit) (Slashed with CPHY 65022) Familiarizes students with both the theory and laboratory experiments on digital electronics for liquid crystal displays. Key topics are AD, DA and logic circuits, microcontrollers and digital communications.
Prerequisite: CPHY 75020 and Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

CPHY 75032  SCIENTIFIC COMMUNICATION  1 Credit Hour
(Repeatable for credit) (Slashed with CPHY 75032) Course helps to graduate students in STEM fields improve their skills in scientific writing and presentations. Activities include a mock panel review of scientific proposals. Each student will produce a final paper which could serve as the introductory chapter of a thesis or dissertation. Prerequisites: Doctoral standing
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

CPHY 80199  DISSERTATION I  15 Credit Hours
(Repeatable for credit) Doctoral dissertation for which registration in at least two semesters is required, first of which will be semester in which dissertation work is begun, and continuing until the completion of 30 hours.
Prerequisite: Special approval and Doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP
CPHY 80299 DISSERTATION II 15 Credit Hours
(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met. Doctoral standing. 
Prerequisite: Completion of 30 hours of CPHY 80199.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CPHY 80498 RESEARCH 1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for doctoral student who has not yet passed candidacy exam. Credit earned may be applied toward degree.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

Integrated Life Science (ILS)

ILS 21091 INTEGRATED LIFE SCIENCES SEMINAR I 2 Credit Hours
(Repeatable for credit) Seminar for first-year students in Kent State/NEOUCOM program to provide correlation of natural sciences, social sciences and humanities with medical sciences.
Prerequisite: Integrated Life Sciences (ILS) major.
Schedule Type: Seminar
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory

ILS 21092 INTEGRATED LIFE SCIENCES SEMINAR II (ELR) 2 Credit Hours
Seminar for first-year students in Kent State/NEOUCOM program to provide correlation of natural sciences, social sciences and humanities with medical sciences.
Prerequisite: ILS 21091 and Integrated Life Sciences major.
Schedule Type: Seminar
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory

ILS 30392 PSYCHOLOGICAL HELPING SKILLS FOR MEDICINE (ELR) 3 Credit Hours
Basic strategies for helping persons in crisis. Includes guided self exploration of attitudes values and personality styles.
Prerequisite: Integrated Life Sciences majors.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter IP
Attributes: Experiential Learning Requirement

ILS 32092 INTEGRATED LIFE SCIENCES SEMINAR IV (ELR) 2 Credit Hours
Continuation of ILS 32091.
Prerequisite: ILS 21091, 21092 and 32091 and Integrated Life Sciences majors.
Schedule Type: Seminar
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

ILS 40392 PRACTICUM IN MEDICAL PSYCHOLOGY (ELR) 3 Credit Hours
Community mental health through community agency field placement. Observation and participation in interviewing crisis intervention and community consultation. Didactic exposure to community mental health theory.
Prerequisite: Integrated Life Sciences majors.
Schedule Type: Lecture, Practicum or Internship
Contact Hours: 3 lecture
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

NEUR 10100 SEMINAR IN NEUROSCIENCE 1 Credit Hour
Seminar in Neuroscience provides an overview of the neuroscience field including: areas of neuroscience research, foundational principles in neuroscience, current questions and techniques, career possibilities, and examples of research being conducted by neuroscience faculty at Kent State.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter/IP

NEUR 30100 NEUROSCIENCE I 3 Credit Hours
Neuroscience I will cover basic principles in neuroscience from the cellular to systems levels. After completion of the course students will have a basic understanding of how the nervous system is organized, electrophysiology properties of neurons, sensory systems, and motor pathways.
Prerequisite: BSCI 30140.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
NEUR 30200 NEUROSCIENCE II 3 Credit Hours
Neuroscience II will build off of the principles taught in Neuroscience I by providing more depth and breadth to the functioning of the nervous system. After completion of the course students will have a more complete understanding of the neuroanatomy, neurophysiology, and neural circuitry involved in sensory processing, motor control, and higher order cognitive functioning.
Prerequisite: NEUR 30100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

NEUR 30300 EXPERIMENTAL METHODS IN NEUROSCIENCE 1 Credit Hour
Experimental Methods in Neuroscience is the accompanying laboratory course to Neuroscience II. This course will provide a greater depth of understanding into and hand-on experience with the principles discussed in the lecture course. After completion of this course, students will be fluent in the major research techniques used in this discipline. The major topics covered include: Electrophysiology, Neuroanatomy, Learning & Memory, the Neuromuscular Junction, and Sensory Perception.
Prerequisite: Minimum C grade in NEUR 30100.
Pre/corequisite: NEUR 30200.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter

NEUR 40192 INTERNSHIP IN NEUROSCIENCE (ELR) 3-12 Credit Hours
Work experience and training in neuroscience under the supervision of appropriate personnel in a government agency, nonprofit organization or business. Maximum of 6 credit hours to count toward neuroscience degree as upper division elective hours.
Prerequisite: NEUR 30200 and special approval.
Schedule Type: Practicum or Internship
Contact Hours: 9-36 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

NEUR 40195 SPECIAL TOPICS IN NEUROSCIENCE 1-3 Credit Hours
Special topic in Neuroscience.
Prerequisite: NEUR 30200.
Schedule Type: Laboratory, Lecture, Combined Lecture and Lab
Contact Hours: 1-3 lecture, 2-6 lab
Grade Mode: Standard Letter

NEUR 40196 INDIVIDUAL INVESTIGATION IN NEUROSCIENCE 1-3 Credit Hours
Research study under the guidance of a Neuroscience faculty member.
Prerequisite: NEUR 30200
Schedule Type: Laboratory
Contact Hours: 3-9 lab
Grade Mode: Standard Letter

Center for Comparative and Integrative Programs
Arts and Sciences (AS)

AS 10095 SPECIAL TOPICS 1-5 Credit Hours
(Repeatable for credit) This program, administered by the dean, is intended to encourage interdisciplinary study to cover areas not treated adequately in traditional coursework and to make available promptly the new and significant experience of the faculty.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

AS 20071 INTRODUCTION TO GENDER AND SEXUALITY STUDIES 3 Credit Hours
Provides an introduction to the interdisciplinary study of gender and sexuality, with particular focus on the tenants of the field (e.g., intersectionality, anti-oppression, social justice).
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

AS 30092 INTERNSHIP (ELR) 1-12 Credit Hours
(Repeatable for a maximum of 12 credit hours) Students participate in internships under the direction of a faculty member.
Prerequisite: Special approval.
Schedule Type: Practicum or Internship
Contact Hours: 3-36 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

AS 30095 SPECIAL TOPICS 1-5 Credit Hours
(Repeatable for credit) This program, administered by the dean, is intended to encourage interdisciplinary study to cover areas not treated adequately in traditional coursework and to make available promptly the new and significant experience of the faculty.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter
AS 30171 THEORIES OF GENDER AND SEXUALITY 3 Credit Hours
Provides students the opportunity to explore in finer detail the theories and approaches used in the study of gender and sexuality (including feminisms, queer theory, critical theories, intersectionality, anti-oppression, social justice), and to address the influence of such theoretical approaches in further research on the subjects of gender and sexuality and by informing social change and deliberations by individuals and movements concerning gender and sexuality.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

AS 30195 STUDY ABROAD: SPECIAL TOPICS (ELR) 1-3 Credit Hours
(Repeatable for credit) This course may be offered in conjunction with an academic study abroad opportunity.
Prerequisite: Special approval.
Schedule Type: Field Experience
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

AS 30196 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for credit) Registration requires prior approval from the College of Arts and Sciences office.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter

AS 30295 STUDY AWAY: SPECIAL TOPICS (ELR) 1-3 Credit Hours
(Repeatable for credit) This course may be offered in conjunction with an academic domestic study away opportunity.
Prerequisite: Special approval.
Schedule Type: Field Experience
Contact Hours: 3-9 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

AS 30798 GENDER AND SEXUALITY RESEARCH FORUM (ELR) 3 Credit Hours
Allows students to do research in areas of gender and sexuality that connects to their own interests, which will be presented in public settings such as panels and presentations.
Prerequisite: None.
Schedule Type: Lecture, Research
Contact Hours: 1 lecture, 2 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

AS 40095 SPECIAL TOPICS 1-5 Credit Hours
(Repeatable for credit) This program, administered by the dean, is intended to encourage interdisciplinary study, to cover areas not treated adequately in traditional coursework and to make available promptly the new and significant experience of the faculty.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

AS 41099 CAPSTONE IN GENDER AND SEXUALITY STUDIES (ELR) 3 Credit Hours
Students will be expected to design and implement an individualized exploration that demonstrates the interactions of theory and application, ideas and practice, and is reflective of the tenets of the interdisciplinary field of gender and sexuality.
Prerequisite: None.
Schedule Type: Lecture, Research
Contact Hours: 1 lecture, 2 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

AS 43001 LEGAL INFORMATION SOURCES AND SERVICES 3 Credit Hours
(Cross-listed with AS 53001 and AS 73001 and LIS 60619 and LIS 80619) Fundamentals of legal research methods and major sources of American legal literature in print and electronic formats as used in other disciplines. Students learn how to formulate a research plan based on legal analysis of issues using relevant, authoritative legal resources.
Prerequisite: Senior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

AS 50095 SPECIAL TOPICS 1-5 Credit Hours
(Repeatable for credit) Topic to be announced in the schedule of classes booklet. Repeated registration permitted when content varies.
Prerequisite: Graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

AS 50096 INDIVIDUAL INVESTIGATION 1-6 Credit Hours
(Repeatable for credit) Pursuit of a subject matter beyond normal course coverage, supervised by a graduate faculty member.
Prerequisite: Graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-6 other
Grade Mode: Standard Letter

AS 53001 LEGAL INFORMATION SOURCES AND SERVICES 3 Credit Hours
(Cross-listed with AS 43001 and AS 73001 and LIS 60619 and LIS 80619) Fundamentals of legal research methods and major sources of American legal literature in print and electronic formats as used in other disciplines. Students learn how to formulate a research plan based on legal analysis of issues using relevant, authoritative legal resources.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

AS 61000 METHODS AND APPROACHES TO MULTIDISCIPLINARY STUDIES 3 Credit Hours
Methods and approaches to graduate-level multidisciplinary studies.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
AS 61001  LIBERAL STUDIES RESEARCH PAPER  1-3 Credit Hours
Learning to write a graduate-level research paper.
Prerequisite: Graduate standing and special approval.
Schedule Type: Seminar
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter-IP

AS 61095  LIBERAL STUDIES SEMINAR  3 Credit Hours
(Repeatable for credit) An interdisciplinary seminar designed for candidates in the liberal studies program. Topics will vary.
Prerequisite: None.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

AS 61098  LIBERAL STUDIES ESSAY  3 Credit Hours
(Repeatable for credit) The preparation of an essay of approximately 50 pages on a topic related to the student's program of study for the Master of Liberal Studies degree.
Prerequisite: Graduate standing and special approval.
Schedule Type: Research
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

AS 70095  SPECIAL TOPICS  1-5 Credit Hours
(Repeatable for credit) (Cross-listed with AS 40095 and AS 50095) Topic to be announced in the schedule of classes booklet.
Prerequisite: Doctoral standing; special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

AS 70096  INDIVIDUAL INVESTIGATION  1-6 Credit Hours
(Repeatable for credit) Pursuit of a subject matter beyond normal course coverage, supervised by a graduate faculty member.
Prerequisite: Doctoral standing.
Schedule Type: Individual Investigation
Contact Hours: 1-6 other
Grade Mode: Standard Letter

AS 73001  LEGAL INFORMATION SOURCES AND SERVICES  3 Credit Hours
(Cross-listed with AS 43001 and AS 53001 and LIS 60619 and LIS 80619) Fundamentals of legal research methods and major sources of American legal literature in print and electronic formats as used in other disciplines. Students learn how to formulate a research plan based on legal analysis of issues using relevant, authoritative legal resources.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Integrative Studies (IGST)

IGST 40099  SENIOR PROJECT (ELR) (WIC)  1-3 Credit Hours
(Repeatable twice for credit) Senior Project is a thesis or independent study done under the supervision of a faculty advisor. Students need written approval of faculty advisor, faculty member's unit, or director of the Center for Comparative and Integrative Programs in order to enroll in this course.
Prerequisite: Senior standing in a multidisciplinary program in the Center for Comparative and Integrative Programs; and special approval.
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement, Writing Intensive Course

IGST 40192  INTERNSHIP IN INTEGRATIVE STUDIES (ELR)  3-6 Credit Hours
(Repeatable for credit) Internship.
Prerequisite: Special approval from the Director of the Center for Comparative and Integrative Programs.
Schedule Type: Practicum or Internship
Contact Hours: 9-18 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

Jewish Studies (JWST)

JWST 11001  INTRODUCTION TO JEWISH STUDIES  3 Credit Hours
Introductory exploration and examination of the diversity of Jewish life, culture, religion and society from antiquity to the present.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JWST 20011  INTRODUCTION TO THE HEBREW BIBLE OR OLD TESTAMENT  3 Credit Hours
Introduces students to the modern study of the Hebrew Bible (Old Testament) and the history and religion of ancient Israel. Designed to help students to understand the development of the Hebrew Bible in its ancient context. The course approaches the Hebrew Bible from historical, comparative, literary, anthropological and archeological perspectives in an effort to illuminate the world of its authors. No prior knowledge of the Bible, Judaism or Christianity is required.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JWST 30092  INTERNSHIP IN JEWISH STUDIES (ELR)  3-6 Credit Hours
(Repeatable for credit) Internship in Jewish studies.
Prerequisite: Special approval.
Schedule Type: Practicum or Internship
Contact Hours: 9-18 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement
JWST 30100  JEWISH WOMEN IN THE MODERN WORLD  3 Credit Hours
This course explores the lives and experiences of Jewish women from diverse communities and traditions, in relation to a wide array of divergent cultural contexts within the modern world.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JWST 30200  JEWS, BASEBALL AND AMERICAN SPORTS  3 Credit Hours
The course chronicles the experience of Jewish players and performers in American sports. The course explores the issues of religious and ethnic prejudice that Jewish athletes endured, challenged and overcame.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JWST 30300  CHILDREN OF THE HOLOCAUST: PERPETRATORS AND VICTIMS  3 Credit Hours
This course will examine the dramatic effect on children who got caught up in the Holocaust (whether as victims, perpetrators, heroes, rescuers or survivors) and the impact these children had on the Holocaust and on history.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JWST 40095 SPECIAL TOPICS IN JEWISH STUDIES  3 Credit Hours
(Repeatable for credit) Special topics in Jewish studies.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JWST 40096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) Individualized investigation.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 3-9 other
Grade Mode: Standard Letter

Paralegal Studies (PLST)

PLST 18000  INTRODUCTION TO PARALEGAL STUDIES AND PROFESSIONAL ETHICS  3 Credit Hours
An overview of the legal system and the role of a paralegal professional. Includes legal terminology, types of laws, research, litigation, interviewing and office management.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 28001 LEGAL RESEARCH AND WRITING  3 Credit Hours
In-depth analysis of the legal research process, development of legal writing skills, opportunities to utilize research and writing skills are integrated into the course.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 28003  FAMILY LAW AND PROCEDURE  3 Credit Hours
Designed to acquaint the student with family law substance and practice. Covers definitions, terminology, topical areas and the philosophy underlying family law practice.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 28004 PRINCIPLES AND PRACTICE OF LITIGATION  3 Credit Hours
Provides an introduction to the rules of civil procedure, statutes of limitation, and discovery. Included in this course is a discussion of the role of the paralegal in preparation for litigation.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 28007  ESTATE AND PROBATE ADMINISTRATION  3 Credit Hours
A study of legal principles applicable to wills, organization and jurisdiction of probate court, estate administration in probate and tax considerations in estate administration.
Prerequisite: PLST 18000.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 35001 ENVIRONMENTAL LAW FOR PARALEGALS  3 Credit Hours
Acquaints the student with the various federal and state statutes, administrative rules and case law that govern environmental regulation. International environmental law is also studied.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 35003 HEALTH LAW  3 Credit Hours
Designed to acquaint the student with the various federal and state statutes, administrative rules and case law that govern healthcare regulation. International environmental law is also studied.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 3505 LABOR AND EMPLOYMENT LAW FOR PARALEGALS  3 Credit Hours
Provides a foundation in the areas of labor law, employment law, and employment discrimination law. Requires in-depth study of constitutional, statutory, administrative, and case law at both the federal and state level.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PLST 35007   ENERGY AND NATURAL RESOURCES LAW  3 Credit Hours
Acquaints the student with the various sources of law that govern energy production and the harvesting of natural resources in the United States. Statutory, administrative, and case law at the federal and state levels are explored.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 36792   INTERNSHIP IN PARALEGAL (ELR)  3-12 Credit Hours
(Repeatable for credit) Work experience under direction of supervising faculty member in the following entities: private law firms, legal service/legal aid offices, law departments or corporations and government agencies.
Prerequisite: PLST 18000 and 28001 and 28004.
Schedule Type: Practicum or Internship
Contact Hours: 21-84 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

PLST 38003   ADMINISTRATIVE LAW AND PROCESS  3 Credit Hours
The substantive and procedural aspects of administrative law are covered in this course. Specific topics include the regulation of public utilities, transportation agencies, employment, food and drugs and the environment.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 38005   TORT LAW  3 Credit Hours
Focus is on tort and personal injury law. Specific topics include intentional torts, negligent torts, strict liability, vicarious liability, product liability and business torts. Defenses to tort and product liability are also discussed.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 38006   APPLIED LEGAL RESEARCH AND LITIGATION (WIC)  3 Credit Hours
Provides for intense case analysis and preparation of argumentative memorandum, including writing of factual memoranda, file summaries and advocacy letters.
Prerequisite: PLST 28001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PLST 42701   EVIDENCE AND E-DISCOVERY  3 Credit Hours
Addresses the various issues concerning the use of evidence in the pre-trial, trial, and post-trial phases of litigation. The course will address the traditional rules and issues associated with litigation practice as well as the new issues concerning electronic discovery of evidence and the use of that evidence.
Prerequisite: PLST 28001; and PLST 28004.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 42705   BANKRUPTCY LAW I: BASIC FUNDAMENTALS  3 Credit Hours
Provides an outlay of the fundamentals of bankruptcy law including the basic rules of the Chapter 7, Chapter 11, and Chapter 13 forms of bankruptcy. This course will also cover other topics such as the bankruptcy petition, the role of the bankruptcy trustee, and discharge from bankruptcy.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 42706   BANKRUPTCY LAW II: CREDITOR-DEBTOR RELATIONS  3 Credit Hours
Addresses issues not addressed in PLST 42705 including Chapter 9, Chapter 12, and Chapter 15 bankruptcy as well as the problems associated with gaining and collecting on a judgment. International bankruptcy issues will also be addressed.
Prerequisite: PLST 42705.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 42708   REAL ESTATE LAW  3 Credit Hours
Provides a general outlay of real estate law in the United States. Students will learn the substantive and procedural aspects of gaining and protecting property rights. Real estate contracts, financing, zoning, and landlord-tenant issues will also be covered.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 48002   CONTRACT LAW  3 Credit Hours
(Slashed with PLST 58002) Intended to provide the student with an in-depth analysis of basic contract law as such related to contact information, performance and remedies. Also intended to familiarize the student with the sources of law that define contracts with an emphasis on reading and understanding case law. The student also develops a vocabulary of legal terms so that the student may assist the legal practitioner in the representation of clients in business transactions and in disputes.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 48300   LAW OF CORPORATIONS AND OTHER ASSOCIATIONS  3 Credit Hours
Covers the formation, operation and dissolution of various kinds of business organizations. Subjects covered include sole proprietorships, corporations, partnerships, the law of agency and employment agreements.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

College of Arts and Sciences  27
PLST 48401 PATENT LAW 3 Credit Hours
Provides the student with an in-depth analysis of the law pertaining to patents, stressing the ability of the owner to protect their rights through filing, registration and use. International issues concerning registration, use, and trade agreements are also covered.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 48403 PATENT PROSECUTION 3 Credit Hours
Students learn to craft patent claims in various types of patent applications that would be submitted to the U.S. Patent and Trademark Office. Students also learn the mechanics of various types of patent applications including traditional applications, provisional applications, divisional applications and continuing applications. Students also gain an understanding of the various post-grant proceedings.
Prerequisite: PLST 48401 and Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 48404 COPYRIGHT LAW I 3 Credit Hours
(Slashed with PLST 58404) Intended to provide the student with an in-depth analysis of the foundations of the law pertaining to copyrights. Stresses the ability of the owner to protect such rights through use and registration. Also discusses the links to patent law, trademark law and the law of trade secrets.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PLST 48407 TRADEMARK LAW 3 Credit Hours
(Slashed with PLST 58407) Intended to provide the student with an in-depth analysis of the law pertaining to trademarks and trade secrets. The course will stress the ability of the owner to protect such rights through use and registration. The course will also discuss the links to patent law and copyright law.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Religion (REL)

REL 11020 INTRODUCTION TO WORLD RELIGIONS (DIVG) (ELR) (KHUM) 3 Credit Hours
A study of the religious impulse as it manifests itself in the plurality of beliefs, practices and institutions of the world religions.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Experiential Learning Requirement, Kent Core Humanities, Transfer Module Humanities

REL 12020 INTRODUCTION TO NEW TESTAMENT LITERATURE 3 Credit Hours
This course introduces students to the literature of the New Testament and to the early Christian communities in which the works were formulated. Of focused interest will be the critical study of the content of the texts, with close consideration of the historical and literary influences on the composition and reception of the gospel traditions as regards their presentations of the life, ministry and person of Jesus, and the letters of Paul. The post-Pauline pastoral epistles, and various later works included in the collection will be briefly examined.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

REL 21021 MOSES, JESUS AND MOHAMMAD (DIVG) (ELR) (KHUM) 3 Credit Hours
An in-depth exploration of Judaism, Christianity and Islam, considering the circumstances of each tradition's beginnings, the influence of the identified founder, and the cultural diversities evident in the history of each of the distinctive religious traditions, as well as the interconnectedness and influence of each of three religions upon the others. The course will conclude with a consideration of the contemporary situations faced by the traditions including their engagements with modernity and one another as global historic traditions in a changing world.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

REL 31065 COMPARATIVE RELIGIOUS EXPERIENCE 3 Credit Hours
Examination of the phenomena of religious experience, its structure, ramifications and expression in myth and ritual.
Prerequisite: REL 11020 or REL 21021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
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<tr>
<th>Course Code</th>
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<tr>
<td>REL 31075</td>
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<td>REL 31091</td>
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<tr>
<td>REL 40095</td>
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<td>REL 40096</td>
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<td>REL 41010</td>
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<td>REL 51091</td>
<td>SEMINAR IN ADVANCED COMPARATIVE RELIGION</td>
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<td>LGBT 20020</td>
<td>INTRODUCTION TO LESBIAN, GAY, BISEXUAL,</td>
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<td>TRANSGENDER AND QUEER STUDIES</td>
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<td>LGBT 30196</td>
<td>INDIVIDUAL INVESTIGATION IN LGBTQ STUDIES</td>
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<td>LGBT 30995</td>
<td>SPECIAL TOPICS IN LGBTQ STUDIES</td>
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<tr>
<td>LGBT 40192</td>
<td>PRACTICUM IN LGBTQ STUDIES (ELR)</td>
<td>3-6</td>
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</table>

**Prerequisites:**
- REL 11020 or REL 21021.
- Junior standing; and special approval.
- None.
- Graduate standing.
- Special approval.

**Grade Mode:**
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LGBT 40201  INTRODUCTION TO TRANSGENDER STUDIES  3 Credit Hours
Serves as an introduction to transgender studies, which addresses theories, practices, laws and other cultural expressions of sexed embodiments, gender identity and gender expression.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LGBT 40202  QUEER THEORY  3 Credit Hours
Explores theories related to sexual orientation, gender expression and gender identity.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LGBT 41198  LGBTQ RESEARCH METHODS (ELR)  3 Credit Hours
Explores different qualitative and quantitative methodologies through applied research on LGBTQ-related topics.
Prerequisite: None.
Schedule Type: Lecture, Research
Contact Hours: 1 lecture, 2 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

Women's Studies (WMST)

WMST 20095  SPECIAL TOPICS IN WOMEN'S STUDIES  1-5 Credit Hours
(Repeatable for credit when topic varies) Study of particular contemporary figures, events and social practices or phenomenon as they relate to women's studies. This includes women and war, women and work, and women and interpersonal violence.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

WMST 20193  VARIABLE TITLE WORKSHOP IN WOMEN'S STUDIES  1-6 Credit Hours
(Repeatable for credit) Workshop focused on a specific topic within women's studies.
Prerequisite: None.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

WMST 30000  COLLOQUIUM IN WOMEN'S STUDIES (DIVD)  3 Credit Hours
A critical investigation of the position and category of women from a cross-cultural, historical and interdisciplinary perspective with special emphasis on major themes and issues in women's studies. Issues including race, ethnicity and sexuality will be addressed.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

WMST 30001  FEMINIST THEORY  3 Credit Hours
An examination of important historical and contemporary works of feminist theory and their influence on the development of feminist thought and practice in the U.S. and worldwide. Issues including race, ethnicity and sexuality will be addressed.
Prerequisite: Junior standing and ENG 21022 or ENG 33013 or ENG 33014 or COMM 35912 or WMST 20095 or WMST 30000 or WMST 30095 or WMST 30100 or PHIL 31040 or CRIM 37411 or PAS 33110 or PAS 37100 or PAS 37200 or HIST 31075 or GER 41332 or POL 40470 or SOC 42315.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

WMST 30095  SPECIAL TOPICS IN WOMEN'S STUDIES II  1-5 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in women's studies organized around historical and theoretical issues and movements. This includes contemporary feminist theory, suffragist movement and third wave feminism.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

WMST 30100  HISTORY OF WOMEN IN THE UNITED STATES  3 Credit Hours
(Cross-listed with HIST 31075) An exploration of the political, economic, social, intellectual, and cultural forces that have shaped women's lives, women's thought, perceptions of womanhood, and feminism for 1607 to the present in what is now the United States.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

WMST 30196  WOMEN STUDIES INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) The design and completion of a scholarly research project related to women's studies, and the presentation of findings at the end of the term. Typically a capstone course for those completing the women's studies minor. Arrangements must be made in the semester prior to registration.
Prerequisite: Special approval of faculty member and department.
Schedule Type: Individual Investigation
Contact Hours: 3-9 other
Grade Mode: Standard Letter

WMST 40095  SPECIAL TOPICS IN WOMEN'S STUDIES III  1-5 Credit Hours
(Repeatable for credit when topic varies) Informed study of critical issues in women's studies from an international or global perspective.
Prerequisite: WMST 30000 or WMST 30001.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

WMST 40193  VARIABLE TITLE WORKSHOP IN WOMEN'S STUDIES  1-6 Credit Hours
(Repeatable for credit) Workshop focused on a specific topic within women's studies.
Prerequisite: None.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory
WMST 40992 PRACTICUM IN WOMEN'S STUDIES (ELR) 3 Credit Hours
(Repeatable for credit) An assignment at a private, public or nonprofit organization that centers on women's issues such as education health and policy making. Arrangements must be made in the semester prior to registration.
Prerequisite: Permission.
Schedule Type: Practicum or Internship
Contact Hours: 9 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

Department of Anthropology

Anthropology (ANTH)

ANTH 18230 INTRODUCTION TO FORENSIC ANTHROPOLOGY 3 Credit Hours
 Forensic anthropology is the application of biological anthropology in a medico-legal context. The tools of archaeology and biological anthropology are used to discover, recover and identify human remains. Topics include human osteology, determining the biological profile (sex, age, ancestry and stature), facial reconstruction, establishing a positive i.d., trauma to bone, stages of decomposition, the role of insects in decomposition, and issues of mass graves.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 18231 ISSUES IN HUMAN EVOLUTION (KBS) (KLAB) 1 Credit Hour
Introduction to basic evolutionary theory with a focus on the emergence and progressive development of the human species during the last five million years. Includes related topics such as primate behavior and human variation.
Prerequisite: ANTH 18630.
Schedule Type: Laboratory
Contact Hours: 1 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences Lab, Transfer Module Natural Sciences

ANTH 18232 INTRODUCTION TO FORENSIC GENETICS 3 Credit Hours
Forensic genetics is a field in which the properties of proteins and nucleic acids (genes) are utilized to identify the person that produced them; for example, whose DNA is on a gun trigger? This is the first in a two-course series. This course provides a foundation in basic genetic principles and methods relevant to criminal investigation and victim identification. Topics include introduction and history of molecular forensics, crime scene evidence, serology (blood, semen, saliva), blood spatter, chromosome structure, principles of inheritance, linkage and crossing over, microsatellites (STRs), DNA extraction methods, standard PCR, capillary electrophoresis, mitochondrial DNA, sex chromosomes, basic population genetics, and CODIS database.
Prerequisite: ANTH 18230 or ANTH 18630
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 18295 SPECIAL TOPICS ANTHROPOLOGY 3 Credit Hours
(Repeatable for credit) Special Topics in Anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

ANTH 18300 HUMAN EVOLUTION (KBS) 3 Credit Hours
This introductory course in cultural anthropology examines the culture concept, the diverse ways of life found in communities around the world, and attempts by anthropologists and other social scientists to understand the commonalities underlying our diversity. It explores how individual lives are shaped by broader cultural and social forces, how people create meaning, and the nature of power relations. Students will gain insight into the potential of anthropological findings to help resolve contemporary human problems.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Natural Sciences

ANTH 18420 ARCHAEOLOGY: ANCIENT LIVES AND CULTURES (DIVG) (KSS) 3 Credit Hours
Archaeology is the study of the human past using material remains. The themes of time change and human diversity will be emphasized as students learn about ancient societies and how they teach us about ourselves.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

ANTH 18630 HUMAN EVOLUTION (KBS) 3 Credit Hours
Laboratory study of primate and human anatomy; human paleontology; Mendelian, molecular and human genetics; and primate behavior, ecology and conservation.
Pre/corequisite: ANTH 18630.
Schedule Type: Laboratory
Contact Hours: 1 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, Transfer Module Natural Sciences

ANTH 28095 SPECIAL TOPICS ANTHROPOLOGY 3 Credit Hours
(Repeatable for credit) Special Topics in Anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

ANTH 28300 INTRODUCTION TO FORENSIC GENETICS 3 Credit Hours
Forensic genetics is a field in which the properties of proteins and nucleic acids (genes) are utilized to identify the person that produced them; for example, whose DNA is on a gun trigger? This is the first in a two-course series. This course provides a foundation in basic genetic principles and methods relevant to criminal investigation and victim identification. Topics include introduction and history of molecular forensics, crime scene evidence, serology (blood, semen, saliva), blood spatter, chromosome structure, principles of inheritance, linkage and crossing over, microsatellites (STRs), DNA extraction methods, standard PCR, capillary electrophoresis, mitochondrial DNA, sex chromosomes, basic population genetics, and CODIS database.
Prerequisite: ANTH 18230 or ANTH 18630
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ANTH 38095 SPECIAL TOPICS IN ANTHROPOLOGY 3 Credit Hours
Special topics in anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled.
Prerequisite: Junior standing or above.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 38096 INDIVIDUAL INVESTIGATION IN ANTHROPOLOGY (ELR) 1-3 Credit Hours
(Repeatable for credit) Readings and/or research supervised by a member of the anthropology staff.
Prerequisite: Permission.
Schedule Type: Individual Investigation
Contact Hours: 3 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

ANTH 38292 FIELD WORK IN CULTURAL ANTHROPOLOGY (ELR) 3 Credit Hours
(Repeatable for credit) Practical experience carrying out field research in cultural anthropology under the supervision of members of the anthropology faculty.
Prerequisite: ANTH 18210 or SOC 12050.
Schedule Type: Field Experience
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ANTH 38480 ARCHAEOLOGICAL ANALYSIS (ELR) (WIC) 3 Credit Hours
Methods necessary for the description and laboratory analysis of prehistoric remains. Course will include laboratory exercises as well as class lectures.
Prerequisite: ANTH 18420.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

ANTH 38490 QUANTITATIVE ANTHROPOLOGY 3 Credit Hours
Introduces the quantitative description of numerical data, provides an understanding of the basis of probability theory and statistical inference and acquaints the student with the role of computers in anthropology.
Prerequisite: ANTH 18420 or 18630 or 38630.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 38680 PRIMATE SOCIETIES 3 Credit Hours
This course will be a survey of the behavior of living primates. Topics covered include reproductive and foraging strategies, social structure and primate conservation. Antecedent human behavior will also be considered.
Prerequisite: ANTH 18630 or 38630.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 38212 KINSHIP AND SOCIAL ORGANIZATION (DIVG) 3 Credit Hours
(Cross-listed with ANTH 58212) This course teaches students the anthropological approaches to the study of religious beliefs and practices, as well as the role of religion in bringing about social change. Topics covered include: ritual, myth, witchcraft, sorcery, shamanism, syncretism, secularism and fundamentalism. Students will appreciate the diversity of ways in which religion is manifested cross-culturally and understand the different roles that religious beliefs play in human life. Students with Junior standing or above may request that the prerequisite be waived.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48023 FORENSIC ARCHAEOLOGY FIELD SCHOOL (ELR) 3 Credit Hours
(Repeatable for credit) This course provides students with practical experience in archaeological fieldwork in the context of a mock crime scene. Students will excavate a complex burial feature. Surface survey, excavation and recording techniques, field drawing, and processing of bones and artifacts will be taught.
Prerequisite: ANTH 18230 or ANTH 18630.
Schedule Type: Field Experience, Laboratory, Lecture
Contact Hours: 1 lecture, 3 lab, 3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ANTH 48095 SPECIAL TOPICS IN ANTHROPOLOGY 3 Credit Hours
(Repeatable for credit) (Cross-listed with ANTH 58095) Offered irregularly when unusual resources and/or opportunities permit. Topic announced when scheduled.
Prerequisite: Special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

ANTH 48093 VARIABLE TITLE WORKSHOP IN ANTHROPOLOGY 1-6 Credit Hours
(Repeatable for credit) (Cross-listed with ANTH 58093) Classroom discussions and field study activity focused on professional and disciplinary concerns. Specific content varies with workshop group.
Prerequisite: Special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

ANTH 48150 RELIGION: A SEARCH FOR A MEANING 3 Credit Hours
(Repeatable for credit) This course teaches students the anthropological approaches to the study of religious beliefs and practices, as well as the role of religion in bringing about social change. Topics covered include: ritual, myth, witchcraft, sorcery, shamanism, syncretism, secularism and fundamentalism. Students will appreciate the diversity of ways in which religion is manifested cross-culturally and understand the different roles that religious beliefs play in human life. Students with Junior standing or above may request that the prerequisite be waived.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48221 PEOPLE AND CULTURE OF AMAZONIA 3 Credit Hours
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global
ANTH 48214  POLITICS OF CULTURE (ELR) (WIC)  3 Credit Hours
(Slashed with ANTH 58214) Addresses the way in which culture has been politicized, and looks at such issues as cultural relativism and objectivity in anthropological studies with reference to specific peoples and geographic areas.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

ANTH 48220  CULTURAL ECOLOGY  3 Credit Hours
(Cross-listed with ANTH 58220) Analysis of the relationship between socio-cultural systems and the physical-biological environment.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48225  ARCHAEOLOGY OF DEATH  3 Credit Hours
(Cross-listed with ANTH 58225) From excavations of prehistoric burial mounds to studies of colonial gravestones, the archaeology of death has always occupied a prominent place in anthropological research. The course explores approaches to diverse meanings of life and death.
Prerequisite: ANTH 18420.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48230  SOCIO-CULTURAL CHANGE  3 Credit Hours
(Cross-listed with ANTH 58230) Analysis of institutional change where peoples of different cultures are in sustained contact.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48245  PSYCHOLOGICAL ANTHROPOLOGY (DIVG)  3 Credit Hours
(Slashed with 58245) Overview of psychological anthropology. Includes comparative cross-cultural socialization and personality development; group and national character; relationship of personality to politics, social and occupational roles, and recent explorations of the relationship between culture and cognition. Examines contributions by leading figures, from Freud, Boas, Benedict, and Whorf through modern studies of spatial cognition and navigation.
Prerequisite: ANTH 18210 or PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

ANTH 48250  MEDICAL ANTHROPOLOGY (DIVG)  3 Credit Hours
(Cross-listed with ANTH 58250) This course teaches students the central concepts and methods of medical anthropology, treating illness and healing as biocultural, political and experiential phenomena. The course considers both the specificity of local medical cultures and the complex interactions among the environment, human behavior and political and economic policies that shape them. The course will sensitize students to cultural issues in sickness and health care, and provide some critical analytic concepts and tools. Students with JUNIOR standing or above may request that the prerequisite be waived.
Prerequisite: ANTH 18210 or ANTH 18630.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

ANTH 48262  PEOPLES AND CULTURES OF AMAZONIA (DIVG)  3 Credit Hours
(Slashed with ANTH 58262) This course introduces students to the cultural traditions of Lowland South American peoples. Through a variety of ethnographic readings and films students will explore key anthropological themes such as the relationship between ‘nature’ and ‘culture’, gender relations, violence, anthropological ethics and the impacts of colonialism and globalization. Topics covered include: cosmology, personhood, ritual practices, sorcery, shamanism, gender and indigenous activism. Students with Junior standing or above may request that the prerequisite be waived.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global
ANTH 48300  ADVANCED FORENSIC GENETICS  3 Credit Hours
(slash with ANTH 58300) Forensic genetics is a field in which the properties of proteins and nucleic acids (genes) are utilized to identify the person that produced them. This is the second in a two-course series, and it focuses on the analysis and interpretation of molecular forensic data, as used in criminal investigations. Topics include quantitative PCR, capillary electrophoresis and electrophoretic artifacts, CODIS database, familial searches, low-copy DNA, mixture deduction, forensic statistics, missing persons, paternity tests, mass disaster identifications, quality control, accreditations and validations, courtroom testimony, legal challenges to DNA typing, and new approaches and technologies.
Prerequisite: ANTH 28300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48360  ANTHROPOLOGY OF GENDER AND SEXUALITY (DIVG)  3 Credit Hours
(Slash with ANTH 58360) This course examines how people experience gender—what it means to be a man or woman—and sexuality in a variety of historical and cultural contexts. It explores how gender and sexuality intersect with other categories such as race, social class, and other markers of self and societal status. Students will gain a greater sense of the diversity of human social practices and beliefs regarding gender and sexuality across cultures. Students with Junior standing or above may request that the prerequisite be waived.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

ANTH 48425  ANCIENT MESOAMERICA  3 Credit Hours
(Cross-listed with ANTH 58425) Comparative analysis of Mesoamerican societies from the arrival of the first Americans over 10,000 years ago to European colonization in the 16th century A.D., including major pre-Columbian civilizations.
Prerequisite: ANTH 18420.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48440  ARCHAEOLOGY OF ANCIENT OHIO  3 Credit Hours
(Cross-listed with ANTH 58440) Cultural evolution and human-environmental relationships in the ancient Ohio region documenting an 11,000 year period from initial occupation to the beginning of European written history.
Prerequisite: ANTH 18420.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48450  STATES AND EMPIRES  3 Credit Hours
(Cross-listed with ANTH 58450) This course presents a comparative analysis of both old and new world case histories to explore definitions, causal explanations and organizational parameters associated with prehistoric state and empire level societies.
Prerequisite: ANTH 18420.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48492  ARCHAEOLOGICAL FIELD METHODS (ELR)  3 Credit Hours
(Repeatable for a maximum of 18 credit hours) (Cross-listed with ANTH 58492) Field and laboratory techniques in archaeological research.
Prerequisite: Special approval.
Schedule Type: Field Experience, Lecture
Contact Hours: 1.66 lecture, 4 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ANTH 48495  SPECIAL TOPICS IN ARCHAEOLOGY  3 Credit Hours
Special topics in anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled. Prerequisite: ANTH 18420
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48623  HUMAN VARIATION  3 Credit Hours
(Cross-listed with ANTH 58623) A detailed anthropological examination of the causes and extent of modern human variability.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

ANTH 48630  PACIFIC ISLAND CULTURES (DIVG)  3 Credit Hours
Peoples and characteristics of culture areas of Pacific Islands, including Polynesia, Melanesia and Micronesia with analysis of several representative cultures from these areas.
Prerequisite: ANTH 18210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

ANTH 48692  FIELD WORK IN BIOLOGICAL ANTHROPOLOGY (ELR)  3 Credit Hours
(Repeatable for credit) (Cross-listed with ANTH 58692) Can be applied to any bioanth field of study and off-campus activity, ranging from museum work to U.S. and international research projects.
Prerequisite: Special approval.
Schedule Type: Field Experience
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

ANTH 48695  SPECIAL TOPICS IN BIOLOGICAL ANTHROPOLOGY  3 Credit Hours
Special topics in anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled. Prerequisite: ANTH 18630
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 48810  HUMAN PALEONTOLOGY  3 Credit Hours
(Cross-listed with ANTH 58810) Study of primate fossils of the Miocene and Pliocene to include the origins of humans and their earliest ancestors.
Prerequisite: ANTH 18630.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
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<tr>
<td>ANTH 48820</td>
<td>HUMAN MUSCULO-SKELETAL SYSTEM</td>
<td>3</td>
<td>Lecture</td>
<td>ANTH 18630 or 38630 or BSCI 30156.</td>
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<tr>
<td>ANTH 48830</td>
<td>HUMAN BEHAVIORAL ECOLOGY AND EVOLUTION (DIVG)</td>
<td>3</td>
<td>Lecture</td>
<td>ANTH 18630 or 38630 or 38680 or BSCI 10120.</td>
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<td>ANTH 48835</td>
<td>PRIMATE ECOLOGY AND CONSERVATION</td>
<td>3</td>
<td>Lecture</td>
<td>ANTH 18630 or 38630 or 38680 or BSCI 10120.</td>
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<tr>
<td>ANTH 48840</td>
<td>NATURAL SELECTION IN PERSPECTIVE</td>
<td>3</td>
<td>Lecture</td>
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</tr>
<tr>
<td>ANTH 58023</td>
<td>FORENSIC ARCHAEOLOGY FIELD SCHOOL</td>
<td>3</td>
<td>Lecture, Lab</td>
<td>Graduate Standing.</td>
</tr>
<tr>
<td>ANTH 58093</td>
<td>VARIABLE TITLE WORKSHOP IN ANTHROPOLOGY</td>
<td>1-6</td>
<td>Workshop</td>
<td>Graduate standing.</td>
</tr>
<tr>
<td>ANTH 58095</td>
<td>SPECIAL TOPICS IN ANTHROPOLOGY</td>
<td>3</td>
<td>Lecture</td>
<td>Graduate standing.</td>
</tr>
<tr>
<td>ANTH 58125</td>
<td>KINSHIP AND SOCIAL ORGANIZATION</td>
<td>3</td>
<td>Lecture</td>
<td>Graduate standing.</td>
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<tr>
<td>ANTH 58214</td>
<td>POLITICS OF CULTURE</td>
<td>3</td>
<td>Lecture</td>
<td>Graduate standing.</td>
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<tr>
<td>ANTH 58220</td>
<td>CULTURAL ECOLOGY</td>
<td>3</td>
<td>Lecture</td>
<td>Graduate standing.</td>
</tr>
<tr>
<td>ANTH 58225</td>
<td>ARCHAEOLOGY OF DEATH</td>
<td>3</td>
<td>Lecture</td>
<td>Graduate standing.</td>
</tr>
<tr>
<td>ANTH 58230</td>
<td>SOCIO-CULTURAL CHANGE</td>
<td>3</td>
<td>Lecture</td>
<td>Graduate standing.</td>
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</tbody>
</table>

**Contact Hours:**

Schedule Type: Lecture, Field Experience, Laboratory, Lecture, Workshop

Grade Mode: Standard Letter
ANTH 58245  PSYCHOLOGICAL ANTHROPOLOGY  3 Credit Hours
(Slashed with 48245) Overview of psychological anthropology. Includes comparative cross-cultural socialization and personality development; group and national character; relationship of personality to politics, social and occupational roles, and recent explorations of the relationship between culture and cognition. Examines contributions by leading figures, from Freud, Boas, Benedict, and Whorf through modern studies of spatial cognition and navigation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58250  MEDICAL ANTHROPOLOGY  3 Credit Hours
(Cross-listed with ANTH 48250) This course teaches students the central concepts and methods of medical anthropology, treating illness and healing as biocultural, political and experiential phenomena. The course considers both the specificity of local medical cultures and the complex interactions among the environment, human behavior and political and economic policies that shape them. The course will sensitivize students to cultural issues in sickness and health care, and provide some critical analytic concepts and tools.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58262  PEOPLES AND CULTURES OF AMAZONIA  3 Credit Hours
(Slashed with ANTH 48262) This course introduces students to the cultural traditions of Lowland South American peoples. Through a variety of ethnographic readings and films students will explore key anthropological themes such as the relationship between 'nature' and 'culture', gender relations, violence, anthropological ethics and the impacts of colonialism and globalization. Topics covered include: cosmology, personhood, ritual practices, sorcery, shamanism, gender and indigenous activism.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58295  SPECIAL TOPICS IN CULTURAL ANTHROPOLOGY  3 Credit Hours
Special topics in anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58300  ADVANCED FORENSIC GENETICS  3 Credit Hours
(Slashed with ANTH 48300) Forensic genetics is a field in which the properties of proteins and nucleic acids (genes) are utilized to identify the person that produced them. This is the second in a two-course series, and it focuses on the analysis and interpretation of molecular forensic data, as used in criminal investigations. Topics include quantitative PCR, capillary electrophoresis and electrophoretic artifacts, NRC and ISFG recommendations, CODIS database, familial searches, low-copy DNA, mixture deduction, forensic statistics, missing persons, paternity tests, mass disaster identifications, quality control, accreditations and validations, courtroom testimony, legal challenges to DNA typing, and new approaches and technologies.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58360  ANTHROPOLOGY OF GENDER AND SEXUALITY  3 Credit Hours
(Slashed with ANTH 48360) This course examines how people experience gender – what it means to be a man or woman – and sexuality in a variety of historical and cultural contexts. It explores how gender and sexuality intersect with other categories such as race, social class, and other markers of self and societal status. Students will gain a greater sense of the diversity of human social practices and beliefs regarding gender and sexuality across cultures.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58425  ANCIENT MESOAMERICA  3 Credit Hours
(Cross-listed with ANTH 48425) Comparative analysis of Mesoamerican societies from the arrival of the first Americans over 10,000 years ago to European colonization in the 16th century A.D., including major pre-Columbian civilizations.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58440  ARCHAEOLOGY OF ANCIENT OHIO  3 Credit Hours
(Cross-listed with ANTH 48440) Cultural evolution and human-environmental relationships in the ancient Ohio region documenting an 11,000 year period from initial occupation to the beginning of European written history.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58450  STATES AND EMPIRES  3 Credit Hours
(Cross-listed with ANTH 48450) This course presents a comparative analysis of both Old and New World case histories to explore definitions, causal explanations and organizational parameters associated with prehistoric state and empire level societies.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ANTH 58492    ARCHAEOLOGICAL FIELD METHODS    3 Credit Hours
(Repeatable 6 times for credit) (Cross-listed with ANTH 48492) Field and laboratory techniques in archaeological research.
Prerequisite: Graduate standing.
Schedule Type: Field Experience, Lecture
Contact Hours: 1.66 lecture, 4 other
Grade Mode: Standard Letter

ANTH 58495    SPECIAL TOPICS IN ARCHAEOLOGY    3 Credit Hours
Special topics in archaeology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58623    HUMAN VARIATION    3 Credit Hours
(Cross-listed with ANTH 48623) A detailed anthropological examination of the causes and extent of modern human variability.
Prerequisite: Approval of project and faculty sponsor, Graduate standing.
Schedule Type: Field Experience
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory

ANTH 58692    FIELD WORK IN BIOLOGICAL ANTHROPOLOGY    3 Credit Hours
(Repeatable for credit) (Cross-listed with ANTH 48692) Can be applied to any bioanth field of study and off-campus activity, ranging from museum work to U.S. and international research projects.
Prerequisite: Approval of project and faculty sponsor, Graduate standing.
Schedule Type: Field Experience
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58695    SPECIAL TOPICS IN BIOLOGICAL ANTHROPOLOGY    3 Credit Hours
Special topics in anthropology offered irregularly when unusual resources or opportunities exist. Topic announced when scheduled.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58810    HUMAN PALEONTOLOGY    3 Credit Hours
(Cross-listed with ANTH 48810) Study of primate fossils of the Miocene and Pliocene to include the origins of humans and their earliest ancestors.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58820    HUMAN MUSCULO-SKELETAL SYSTEM    3 Credit Hours
(Cross-listed with ANTH 48820) A largely hands-on course introducing the study of human anatomy for students interested in biological anthropology and archaeology. Topics include skeletal and functional anatomy, biomechanics, and estimation of age and sex from isolated bones.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58830    HUMAN BEHAVIORAL ECOLOGY AND EVOLUTION    3 Credit Hours
(Cross-listed with ANTH 48830) How "unique" is human behavior? Using an evolutionary perspective we will explore the evolution of human mating systems and parental investment.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58835    PRIMATE ECOLOGY AND CONSERVATION    3 Credit Hours
(Cross-listed with ANTH 48835) Study of the geographic distribution and evolutionary ecology of prosimians, monkeys and apes and human and climatic effects on their long-term survival.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 58840    NATURAL SELECTION IN PERSPECTIVE    3 Credit Hours
(Cross-listed with ANTH 48840) The course provides an in-depth introduction into the theory of natural selection by reading both Darwin's original work and recent interpretations.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 68091    RESEARCH SEMINAR IN ANTHROPOLOGICAL THEORY    3 Credit Hours
(Repeatable for credit) An opportunity for advanced students to follow up personal theoretical interests based upon a previously established foundation in theory.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ANTH 68093    VARIABLE TITLE WORKSHOP IN ANTHROPOLOGY    1-6 Credit Hours
(Repeatable for credit) Classroom presentations and field study focused on professional and disciplinary concerns. Specific content varies with workshop group.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

ANTH 68095    SPECIAL TOPICS IN ANTHROPOLOGY    3 Credit Hours
(Repeatable for credit) Offered irregularly when unusual resources and/or opportunities permit. A. in Anthropology. Graduate standing.
Prerequisite: 6 graduate hours toward M.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 68096    INDIVIDUAL INVESTIGATION    1-3 Credit Hours
(Repeatable for credit) Readings and/or research supervised by member of graduate faculty. Petition form available in the anthropology department office.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP
ANTH 68098 RESEARCH 1-15 Credit Hours
(Repeatable for credit) Research or individual investigation. Repeated registration permitted. Petition form available in the anthropology department office.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP

ANTH 68199 THESIS I 2-6 Credit Hours
Thesis student must register for total of 6 hours, 2 to 6 hours in a single semester, or distributed over several semesters if desired.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

ANTH 68230 PROBLEMS IN CULTURAL ANTHROPOLOGY 3 Credit Hours
Basic graduate course in cultural anthropology required of all M.A. candidates. Course deals with major topics within this subdiscipline of anthropology.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 68257 BIOANTHROPOLOGICAL DATA ANALYSIS I 5 Credit Hours
(Cross-listed with BMS 78637) Examination of methods of univariate and bivariate experimental design. This survey emphasizes tests of hypothesis and estimation techniques with both classical and nonparametric procedures.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

ANTH 68299 THESIS II 2 Credit Hours
Prerequisite: ANTH 68199 and Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

ANTH 68316 PROBLEMS IN CULTURAL ANTHROPOLOGY 3 Credit Hours
Basic graduate course in cultural anthropology required of all M.A. candidates. Course deals with major topics within this subdiscipline of anthropology.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 68430 PROBLEMS IN WORLD PREHISTORY 3 Credit Hours
Basic graduate course in prehistoric archaeology required of all M.A. candidates.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ANTH 68637 BIOANTHROPOLOGICAL DATA ANALYSIS II 3 Credit Hours
(Cross-listed with BMS 78638) This survey of multivariate analysis in anthropology includes one-sample data exploration, multiple sample problems and regression methods. It also includes computer application.
Prerequisite: ANTH 68637 (same course as BMS 78638).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

department of biological sciences

Biological Sciences (BSCI)

BSCI 10001 HUMAN BIOLOGY (KBS) 3 Credit Hours
Study of the scientific method and life's properties, emphasizing human biology. Topics include energy, genetics, reproduction, development disease, nutrition and physical fitness in humans. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

BSCI 10002 LIFE ON PLANET EARTH (KBS) 3 Credit Hours
Explores the fascinating breadth of life on Earth including the unique ecology and survival strategies of animals, plants and microbes in their natural habitats. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences
BSCI 10003 LABORATORY EXPERIENCE IN BIOLOGY (KBS) (KLAB) 1 Credit Hour
Introductory college-level laboratory in biology for non-majors. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Pre/corequisite: BSCI 10001 or 10002.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

BSCI 10005 ANATOMY FOR VETERINARY TECHNICIANS 5 Credit Hours
Comparison and identification of anatomy and basic physiological functions of domestic animals: skeletal, muscles, integumentary, special sense organs, respiratory, digestive, urinary, reproductive, mammary glands, endocrine, nerves, circulatory, immune. Lecture 4 hours, laboratory 3 hours weekly. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: None.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 other
Grade Mode: Standard Letter

BSCI 10110 BIOLOGICAL DIVERSITY (KBS) (KLAB) 4 Credit Hours
This introductory course examines the biodiversity of life from its origins to present-day prokaryotes and eukaryotes; their behavior, ecology, and reproduction. Students must earn a final grade of at least C- in order to meet prerequisites for selected upper-division BSCI courses.
Prerequisite: None.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science

BSCI 10120 BIOLOGICAL FOUNDATIONS (KBS) (KLAB) 4 Credit Hours
This introductory course examines the organization of life from subcellular biochemistry and molecular biology, to genetics, bioenergetics and system homeostasis. Three hours of lecture and three hours of lab weekly. Students must earn a final grade of at least C- in order to meet prerequisites for selected upper-division BSCI courses.
Prerequisite: None.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science

BSCI 10195 SPECIAL TOPICS IN BIOLOGY 1-3 Credit Hours
(Repeatable for credit) Selected subjects and/or themes in biology.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

BSCI 11010 FOUNDATIONAL ANATOMY AND PHYSIOLOGY I (KBS) (KLAB) 3 Credit Hours
Anatomy and physiology to include organization of the human body, cells, tissues, organs and systems, integumentary, skeletal, muscular and respiratory systems and overviews of the nervous and circulatory system. This course is taught on Kent State’s regional campuses for associate degree programs. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: Special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 2 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

BSCI 11020 FOUNDATIONAL ANATOMY AND PHYSIOLOGY II (KBS) (KLAB) 3 Credit Hours
Anatomy and physiology of the circulatory, digestive, urinary, nervous, endocrine and reproductive systems. This course is taught on Kent State’s regional campuses for associate degree programs. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: BSCI 11010 and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 2 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

BSCI 16001 HORTICULTURAL BOTANY 3 Credit Hours
To provide students with an understanding of the basic anatomy and physiology and growth characteristics of plants. Offered only at the Geauga and Salem campuses. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: None.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 20019 BIOLOGICAL STRUCTURE AND FUNCTION 4 Credit Hours
Basic design of human systems emphasizing the physiochemical and cellular bases of organ-system structure, function and development. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biology minor.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
### BSCI 20021  BASIC MICROBIOLOGY  3 Credit Hours
Principles of microorganisms having a direct relationship on the health and well-being of humans. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Prerequisite:** BSCI 20019; or BSCI 21010; or BSCI 10005; or BSCI 11010; or ATTR 25057; or EXSC 25057; and CHEM 10050 or 10052 or 10055 or 10060.
- **Schedule Type:** Lecture
- **Contact Hours:** 3 lecture
- **Grade Mode:** Standard Letter

### BSCI 20022  BASIC MICROBIOLOGY LABORATORY  1 Credit Hour
Laboratory experience in microbiology. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Corequisite:** BSCI 20021.
- **Schedule Type:** Laboratory
- **Contact Hours:** 3 lab
- **Grade Mode:** Standard Letter

### BSCI 20195  SPECIAL TOPICS IN BIOLOGY  1-3 Credit Hours
(Repeatable for credit) Selected subjects and/or themes in Biology.
- **Prerequisite:** special approval.
- **Schedule Type:** Lecture
- **Contact Hours:** 1-3 lecture
- **Grade Mode:** Standard Letter

### BSCI 20196  INTRODUCTION TO INDIVIDUAL INVESTIGATION  1-2 Credit Hours
(Repeatable for credit) Introduction to research in the biological sciences under the direction of a BSCI faculty mentor. Departmental and faculty mentor approvals required.
- **Prerequisite:** 8 hours of BSCI courses with a minimum grade of C (2.000) in those courses.
- **Schedule Type:** Individual Investigation
- **Contact Hours:** 1-2 other
- **Grade Mode:** Satisfactory/Unsatisfactory-IP

### BSCI 21010  ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)  4 Credit Hours
Anatomy, physiological chemistry, cytology, tissues, and homeostatic mechanisms of the integumentary, skeletal, nervous, muscular, and sensory systems. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Prerequisite:** None.
- **Schedule Type:** Combined Lecture and Lab
- **Contact Hours:** 3 lecture, 3 lab
- **Grade Mode:** Standard Letter
- **Attributes:** Kent Core Basic Sciences, Kent Core Basic Sciences Lab

### BSCI 21020  ANATOMY AND PHYSIOLOGY II  4 Credit Hours
Anatomy and physiological processes as related to the following organ systems: endocrine, circulatory, respiratory, digestive, urinary and reproductive. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Prerequisite:** BSCI 21010.
- **Schedule Type:** Combined Lecture and Lab
- **Contact Hours:** 3 lecture, 3 lab
- **Grade Mode:** Standard Letter

### BSCI 26002  ECOLOGICAL PRINCIPLES OF PEST MANAGEMENT  3 Credit Hours
Basic principles of integrated pest management, pesticide application, pest identification and environmental effects. Lecture three hours weekly; offered only at the Salem Campus. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Prerequisite:** BSCI 16001.
- **Schedule Type:** Lecture
- **Contact Hours:** 3 lecture
- **Grade Mode:** Standard Letter

### BSCI 26003  PLANT IDENTIFICATION AND SELECTION I  3 Credit Hours
Identification and selection of horticulturally important plant species. Emphasis on woody species, shrubs and trees. Lecture two hours weekly, lab three hours weekly. Offered only at the Salem Campus. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Prerequisite:** HORT 16001 and BSCI 16001.
- **Schedule Type:** Laboratory, Lecture
- **Contact Hours:** 2 lecture, 3 lab
- **Grade Mode:** Standard Letter

### BSCI 26004  PLANT IDENTIFICATION AND SELECTION II  3 Credit Hours
Identification and selection of horticulturally important plant species. Emphasis on herbaceous species, ground covers and vines. Lecture two hours weekly, lab three hours weekly. Offered only at the Salem Campus. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
- **Prerequisite:** BSCI 16001 and HORT 16001.
- **Schedule Type:** Laboratory, Lecture
- **Contact Hours:** 2 lecture, 3 lab
- **Grade Mode:** Standard Letter
BSCI 30050  HUMAN GENETICS  3 Credit Hours
Modern concepts of genetics applicable to the human including examination of genetically related diseases and their societal implications. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: 8 credit hours of biology [BSCI] courses; and 3 credit hours of chemistry [CHEM] courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30156  CAREER PATHWAYS IN BIOLOGY  1 Credit Hour
Orients students toward various career pathways in the biological sciences.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

BSCI 30150  HUMAN GENETICS  3 Credit Hours
Consists of hands-on experiments with modern computational and molecular biology experimental approaches.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Corequisite: BSCI 30156.
Schedule Type: Laboratory
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30171  GENERAL MICROBIOLOGY  4 Credit Hours
Principles of organic mechanisms for expression and transmission of traits as studied in molecules, cells, organisms and populations.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades; and CHEM 10060 and 10062.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30207  PLANT PHYSIOLOGY  4 Credit Hours
Principles of organic mechanisms for expression and transmission of traits as studied in molecules, cells, organisms and populations.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30130  HUMAN PHYSIOLOGY  3 Credit Hours
Investigation of the cell as the fundamental unit of life with an emphasis on the relationship between cellular structure and function. Three-hour lecture and three-hour lab weekly.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades; and 4 credit hours of chemistry [CHEM] courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30140  CELL BIOLOGY  4 Credit Hours
Investigation of the cell as the fundamental unit of life with an emphasis on the relationship between cellular structure and function. Three-hour lecture and three-hour lab weekly.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades; and CHEM 10060 and 10062.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 30156  ELEMENTS OF GENETICS  3 Credit Hours
Principles of organic mechanisms for expression and transmission of traits as studied in molecules, cells, organisms and populations.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades; and MATH 10772 or MATH 10775 or MATH 11009 or MATH 11101 or MATH 12001 or MATH 12002 or MATH 12021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30171  GENERAL MICROBIOLOGY  4 Credit Hours
Principles of organic mechanisms for expression and transmission of traits as studied in molecules, cells, organisms and populations.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades; and CHEM 10060, 10061, 10062, and 10063.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30156  CAREER PATHWAYS IN BIOLOGY  1 Credit Hour
Orients students toward various career pathways in the biological sciences.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

BSCI 30130  HUMAN PHYSIOLOGY  3 Credit Hours
Investigation of the cell as the fundamental unit of life with an emphasis on the relationship between cellular structure and function. Three-hour lecture and three-hour lab weekly.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30120  GENERAL PLANT BIOLOGY LABORATORY  1 Credit Hour
Laboratory and greenhouse exercises in general plant biology. Corequisite: BSCI 30270
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Laboratory
Contact Hours: 1 lab
Grade Mode: Standard Letter

BSCI 30274  FORESTRY  3 Credit Hours
Management of the forest resource within appropriate environmental constraints for sustained use relative to watershed protection, lumber production, recreation and wildlife.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30275  LOCAL FLORA (ELR)  4 Credit Hours
Identification and field study of local plants: native, naturalized and cultivated. Two-hour lecture and six-hour lab weekly.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 6 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

BSCI 30277  ECONOMIC BOTANY  2 Credit Hours
Modern concepts of genetics applicable to the human including examination of genetically related diseases and their societal implications. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: 8 credit hours of biology [BSCI] courses; and 3 credit hours of chemistry [CHEM] courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 30360  GENERAL ECOLOGY  4 Credit Hours
Principles of ecology based on field studies of local plant and animal communities. Lecture three hours, lab three hours weekly.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30361  BIOGEOGRAPHY  3 Credit Hours
Geographical distribution of biotic communities with special reference to North America and to their environmental control.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30362  INTRODUCTION TO BIOLOGY OF THE TROPICS  3 Credit Hours
Biology and conservation of tropical ecosystems and organisms.
Prerequisite: BSCI majors and Junior or Senior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30517  HUMAN ANATOMY  4 Credit Hours
An intensive investigation of the anatomy and development of the human body.
Prerequisite: Senior standing and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 30518  VERTEBRATE ANATOMY  4 Credit Hours
Concepts and methods of functional morphology. Comparative study of vertebrate organs and systems: skeletal, muscular, digestive, respiratory, circulatory, urogenital, nervous and endocrine. Lecture three hours, lab three hours weekly.
Prerequisite: BSCI 10110 or 10120 with a minimum grade of C-.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30519  VERTEBRATE EMBRYOLOGY AND DEVELOPMENTAL ANATOMY  4 Credit Hours
Gametogenesis, fertilization, embryogenesis, organogenesis, normal/abnormal embryological development; emphasizing mammal; amphibian, bird illustrating general principles and concepts. Laboratory studies of frog, chick, pig developmental anatomy. Three one hour lectures and one three hour lab.
Prerequisite: BSCI 20001 or 30518 and 30140.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 30520  INTRODUCTION TO NEUROSCIENCE  3 Credit Hours
Basic principles in neuroscience from the cellular to systems level. Covers how the nervous system is organized, how it detects sensory stimuli to create a mental representation of their environment and output pathways by which the nervous system can control movement, hormone levels and physiological processes.
Prerequisite: BSCI 30140.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 30560  INVERTEBRATE ZOOLOGY  4 Credit Hours
Survey of the animal kingdom emphasizing evolutionary developments. Three-hour lecture and three-hour lab weekly.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 30580  ENTOMOLOGY  4 Credit Hours
Classification, biology and ecology of the principal groups of insects. Lecture three hours, lab three hours weekly.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades; and 10 hours of biology (BSCI) courses.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 40020  BIOLOGY OF AGING  3 Credit Hours
(Slashed with BSCI 50020) Current theories of aging; changes at the cellular level associated with aging in humans; course covers the normal aging process, dysfunction, and diseases of the elderly categorized by body systems. This course may not be used to fulfill major or minor requirements in the following programs: BA Biology, BS Biology, BS Botany, BS Environmental and Conservation Biology, BS Medical Technology, BS Biotechnology, BS Zoology, and the Biological Sciences minor.
Prerequisite: BSCI 20019; or BSCI 21010 and BSCI 21020; or BSCI 11010 and BSCI 11020; or ATTR 25057 and ATTR 25058; or EXSC 25057 and EXSC 25058.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40104  INTRODUCTION TO BEEKEEPING  2 Credit Hours
(Cross-listed with BSCI 50104) Covers basic beekeeping practices and provides students with an in-depth understanding of the honey bee colony through participation in hands-on activities, observation and experimentation.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades; and Junior or Senior standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

BSCI 40142  BIOENERGETICS  3 Credit Hours
(Cross-listed with BSCI 50142 and BSCI 70142) Lecture and discussion of respiration and photosynthesis, their origin, development and control in living systems. Concepts are introduced from fundamental principles. Lecture three hours weekly.
Prerequisite: BSCI 30140 and CHEM 20481 or 30481.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 40143  EUKARYOTIC CELL BIOLOGY  3 Credit Hours
Current survey of the structure and function of eukaryotic cells, including recent advances in research technology. Lecture three hours weekly.
Prerequisite: BSCI 30140 and CHEM 20481 or 30481.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40146  DEVELOPMENTAL BIOLOGY  3 Credit Hours
(Slashed with BSCI 50146 and BSCI 70146) Fundamental concepts and paradigms of development as exemplified by major model organisms. Examines our modern understanding of the molecular, cellular and genetic basis of developmental biology.
Prerequisite: Senior standing, B or better in BSCI 30156 and BSCI 30140.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40147  DEVELOPMENTAL NEUROBIOLOGY  3 Credit Hours
(Slashed with BSCI 50147 and BSCI 70147) Covers fundamental principles in developmental neurobiology, including molecular and cellular processes involved in the formation of the vertebrate central nervous system.
Prerequisite: BSCI 30140 and Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40148  PRINCIPLES OF INFECTIOUS DISEASE  3 Credit Hours
(Slashed with BSCI 50148 and BSCI 70148) Basic principles of infectious disease, with emphasis on major human pathogens including protozoa, bacteria, and viruses. Topics include infection establishment, spread within the host, pathology, immunity, and host behavior.
Prerequisite: BSCI 30171; and CHEM 10060; and CHEM 10061; and CHEM 10062; and CHEM 10063.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40150  MOLECULAR MECHANISMS OF DISEASE: CANCER  3 Credit Hours
(Cross-listed with BSCI 50150 and BSCI 70150) Explores the current understanding of molecular and cellular mechanisms of disease processes, including new technologies and modern strategies in the forefront of future biomedical research. Emphasis on a review of primary literature.
Prerequisite: Junior or Senior standing; BSCI 30156 and BSCI 30140.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40151  MECHANISMS OF DISEASE: OBESITY AND RELATED METABOLIC DISEASES  3 Credit Hours
(Slashed with BSCI 50151 and BSCI 70171) Addresses obesity from multiple angles, including health and disease process, underlying physiology and cell and molecular biology, and the role of behavior. Emphasis on a review of primary literature to discuss obesity causes, consequences, and treatments.
Prerequisite: BSCI 10120 with a minimum C- grade; and BSCI 30130 or BSCI 40430.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40152  MOLECULAR MECHANISMS OF DISEASE: NEUROLOGICAL DISORDERS  3 Credit Hours
(Slashed with BSCI 50152 and BSCI 70152) Major concepts and theoretical principles underlying neurological disorders.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades and Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40154  DIABETES AND CARDIOVASCULAR DISEASE  3 Credit Hours
(Slashed with BSCI 50154 and BSCI 70154) Physiological aspects of diabetes and cardiovascular disease, including associated pathologies and therapies.
Prerequisite: BSCI 40430; or BSCI 30140 and BSCI 30130.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40157  NEUROBIOLOGY OF DRUG ADDICTION  3 Credit Hours
(Slashed with BSCI 50157 and BSCI 70157) Introduction to neural structures, circuitry, and chemistry underlying drug addiction, major categories of drugs of abuse, and how brain cells and circuits are modified in response to addictive drugs.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades and Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40158  MOLECULAR BIOLOGY  3 Credit Hours
Molecular genetics, DNA and RNA structure, chromosomes, DNA replication, recombination, genetic transcription and translation, gene expression, current concepts and technologies.
Prerequisite: BSCI 30140 and 30156.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40159  MOLECULAR BIOLOGY LABORATORY (ELR) (WIC)  3 Credit Hours
Experience in research methods for studying cellular and molecular processes in plant and animal systems.
Prerequisite: BSCI 30140 and 30156.
Schedule Type: Laboratory
Contact Hours: 6 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

BSCI 40160  MARINE BIOLOGY  3 Credit Hours
(Slashed with BSCI 50160 and BSCI 70160) Natural history and ecology of marine organisms, with emphasis on life in coastal habitats.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 40162  SOIL BIOLOGY  3 Credit Hours  
(Shared with BSCI 50162 and BSCI 70162) The ecology and physiology of organisms that live in soil, including microbes, plants and animals. The physical and chemical aspects of soil are introduced to understand how organisms in soils impact nutrient cycles and ecosystem development.  
Prerequisite: Junior or Senior standing and BSCI 10110 and BSCI 10120 with minimum C grades.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BSCI 40163  EVOLUTION  3 Credit Hours  
(Cross-listed with BSCI 50163 and BSCI 70163) History of evolutionary theory, the evidences of evolution, the evolutionary forces and the products of these forces. Lecture three hours weekly.  
Prerequisite: BSCI 30156 and 4 hours of biology (BSCI) courses.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BSCI 40166  ENVIRONMENTAL SENSOR TECHNOLOGY  2 Credit Hours  
(Shared with BSCI 50166 and BSCI 70166) Provides learning experiences in the field of environmental wireless sensor technology for performing both isolated and collaborative tasks. Students will use practical tools for WST design.  
Prerequisite: Special approval.  
Schedule Type: Lecture  
Contact Hours: 2 lecture  
Grade Mode: Standard Letter

BSCI 40170  STREAM BIOLOGY  3 Credit Hours  
(Shared with BSCI 50170 and BSCI 70170) Identification, biology and ecology of stream-inhabiting organisms. Lecture two hours, lab three hours weekly.  
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C grades.  
Schedule Type: Laboratory, Lecture  
Contact Hours: 2 lecture, 1 lab  
Grade Mode: Standard Letter

BSCI 40174  IMMUNOLOGY  3 Credit Hours  
(Cross-listed with BSCI 50174 and BSCI 70174) Survey of the mammalian host responses to self and non-self with emphasis on the cellular and molecular mechanisms by which innate and acquired immunity result. Experimental design and data analyses are related to current methodologies used to study immunology. Lectures 3 hours weekly.  
Prerequisite: BSCI 30171 and CHEM 10060, 10061, 10062 and 10063.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BSCI 40192  INTERNSHIP IN BIOLOGICAL SCIENCES (ELR)  3-12 Credit Hours  
(Repeatable for credit) Work experience and training in the biological sciences under the supervision of appropriate personnel in a government agency, nonprofit organization or business. Maximum of 4 credit hours to count toward BSCI degrees as upper-division elective hours.  
Prerequisite: 18 hours of biology and 2.750 minimum GPA in biology (BSCI) coursework and special approval.  
Schedule Type: Practicum or Internship  
Contact Hours: 3-12 other  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement

BSCI 40193  VARIABLE TITLE WORKSHOP IN BIOLOGICAL SCIENCES  1-6 Credit Hours  
(Repeatable for credit) Topics to be offered will meet specific needs in the biological sciences. S u graded.  
Prerequisite: Permission.  
Schedule Type: Workshop  
Contact Hours: 1-6 other  
Grade Mode: Satisfactory/Unsatisfactory

BSCI 40195  SPECIAL TOPICS IN BIOLOGY  1-3 Credit Hours  
(Repeatable for credit) (Cross-listed with BSCI 50195 and BSCI 70195) Special topics in biology.  
Prerequisite: 18 hours of biology (BSCI) coursework and special approval of instructor.  
Schedule Type: Laboratory, Lecture  
Contact Hours: 1-3 lecture, 2-6 lab  
Grade Mode: Standard Letter-IP

BSCI 40196  INDIVIDUAL INVESTIGATION (ELR)  1-3 Credit Hours  
(Repeatable for credit) Research study under the direction of a BSCI faculty mentor. May be repeated; however, a maximum of 6 credit hours count toward BSCI degrees as upper-division elective hours. Departmental and faculty mentor approvals required.  
Prerequisite: A minimum BSCI grade average of 2.750 and at least 18 credit hours of BSCI coursework.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Standard Letter-IP  
Attributes: Experiential Learning Requirement

BSCI 40199  SENIOR HONORS THESIS (ELR)  1-10 Credit Hours  
(Repeatable for credit) Honors thesis research project completed during the senior year with BSCI faculty mentor and research committee. Maximum of 4 credit hours to count toward BSCI degrees as upper-division elective hours.  
Prerequisite: Departmental faculty mentor and honors college approval.  
Schedule Type: Senior Project/Honors Thesis  
Contact Hours: 1-10 other  
Grade Mode: Standard Letter-IP  
Attributes: Experiential Learning Requirement

BSCI 40220  BIOINFORMATICS  3 Credit Hours  
(Cross-listed with BTEC 40220) Analysis of biological databases, including nucleic acid and protein sequence searching, multiple sequence alignment, protein classification, phylogenetic analysis, comparative genomics, proteomics and protein structure analysis.  
Prerequisite: BSCI 30140 and BSCI 30156 and BSCI 40158.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
BSCI 40221 ECOLOGICAL GENOMICS  3 Credit Hours
(Slashed with BSCI 50221 and BSCI 70221) Covers principles, concepts and techniques of ecological genomics, emphasizing the application of genomics to ecology and biogeochemistry and using genomic, metagenomic and metatranscriptomic data.
Prerequisite: BSCI 30140; and BSCI 30156; and BSCI 30360.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40242 SEMINAR ON MEDICAL PRACTICE FOR UNDERSERVED POPULATIONS  2 Credit Hours
(Slashed with BSCI 50242). Course will introduce students to primary care and medical practice in rural and urban settings. Physicians and other healthcare practitioners from rural and urban settings will serve as invited speakers in this seminar. Preference for registration will be given to students following the Baccalaureate-MD program with junior standing and minimum 3.500 overall GPA.
Prerequisite: Special approval.
Schedule Type: Seminar
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory

BSCI 40272 PLANT ANATOMY  4 Credit Hours
(Slashed with BSCI 50272 and BSCI 70272) Development and structure of cells, tissues and tissue systems of seed plants. Both vegetative and reproductive structures of angiosperms will be emphasized. Lecture two hours, lab six hours weekly.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 6 lab
Grade Mode: Standard Letter

BSCI 40273 INTRODUCTION TO MYCOLOGY  3 Credit Hours
(Slashed with BSCI 50273 and BSCI 70273) Introduces key features defining the fungi. Topics include anatomical and morphological features, reproductive strategies, identification, and community interactions.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40274 PLANT COMMUNITIES OF OHIO  3 Credit Hours
(Slashed with BSCI 50274 and BSCI 70274) Designed to familiarize students with the range of plant communities within Ohio by relating plant identification to biological, hydrological, geological, and climatic forces.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40275 PLANT SYSTEMATICS AND EVOLUTION  4 Credit Hours
(Slashed with BSCI 50275 and BSCI 70275) Introduction to vascular plant diversity, with a focus on flowering plants. Students will learn characteristics of vascular plants and how to identify major plant groups. Lecture three hours weekly, lab two hours weekly.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 40292 INTERNSHIP IN PRIMARY CARE FOR THE UNDERSERVED (ELR)  2 Credit Hours
(Slashed with BSCI 50292) Students will be placed in internships in urban or rural healthcare settings. Registration preference will be given to students following the Baccalaureate/M.D. pathway and who have junior standing and a minimum 3.500 overall GPA.
Prerequisite: Special approval.
Schedule Type: Practicum or Internship
Contact Hours: 6 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

BSCI 40341 STEM CELL BIOLOGY: PRINCIPLES AND APPLICATIONS  3 Credit Hours
(Slashed with BSCI 50341 and BSCI 70341) Examination of stem cells from various tissues, molecular mechanism of stem cell differentiation, and use of stem cells in clinical applications.
Prerequisite: BSCI 30140.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40360 ICHTHYOLOGY  4 Credit Hours
Basic biology, natural history, behavior and ecology of the fishes. Three hour lecture and three hour lab weekly.
Prerequisite: Junior standing, grade of C- or better in both BSCI 10110 and BSCI 10120.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 40363 MICROBIAL ECOLOGY  3 Credit Hours
(Slashed with BSCI 50363 and BSCI 70363) Microbial interactions with their biotic and abiotic environment; control of distribution and physiological activities; biochemical cycles; current techniques; emphasis on bacteria in aquatic systems.
Prerequisite: BSCI 30171 and BSCI 30360.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40364 LIMNOLOGY  3 Credit Hours
(Cross-listed with BSCI 50364 and BSCI 70364) The study of the principles of aquatic ecology with emphasis on lakes and reservoirs.
Prerequisite: BSCI 30360.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40365 FIELD METHODS IN ORNITHOLOGY  3 Credit Hours
(Slashed with BSCI 50365 and BSCI 70365) Habitat-based survey of Ohio birds. Field-based lectures and activities cover location, observation and identification of birds and their songs, as well as bird ecology and behavior.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 40368 WETLAND ECOLOGY AND MANAGEMENT (ELR) 4 Credit Hours
(Slashed with BSCI 50368 and BSCI 70368) Lecture, laboratory and field study of the principles of wetland ecology including adaptations of the biota to environmental conditions, comparison among different wetland habitat types and habitat management. Lecture 3 hours, lab 3 hours weekly.
Prerequisite: BSCI 10110 and 10120 with minimum C- grades; and 10 hours of biology (BSCI) coursework.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

BSCI 40374 CONSERVATION BIOLOGY (ELR) 4 Credit Hours
(Cross-listed with BSCI 50374 and BSCI 70374) Provides a critical analysis of the factors that threaten biological diversity in the biosphere and the consequences on biological processes and quality of life.
Prerequisite: BSCI 30360.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

BSCI 40375 ENVIRONMENTAL BIOLOGY AND MANAGEMENT 4 Credit Hours
(Slashed with BSCI 50375 and BSCI 70375) Introduction to current concepts in applied ecology and ecosystem management. Students will learn aspects of ecosystem management and restoration including: 1) how environmental factors affect organism survival and ecosystem structure, 2) how human impacts such as pollution, habitat fragmentation, introduction of invasive species affect ecosystems, and 3) the use of ecological principles and methods to restore and manage ecosystems.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades; and BSCI 30360.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

BSCI 40376 TROPICAL FIELD BIOLOGY AND CONSERVATION (ELR) 5 Credit Hours
(Slashed with BSCI 50376 and BSCI 70376) Introduction to major issues in tropical ecology and conservation including the threats to the biological diversity of tropical ecosystems resulting from human activities. Students learn how to apply modern field-observation techniques to generate and test problem-solving hypotheses.
Prerequisite: Junior or Senior standing; and BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 6 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

BSCI 40430 ANIMAL PHYSIOLOGY 3 Credit Hours
Physiologic principles and concepts.
Prerequisite: BSCI 30140; CHEM 10060, 10061, 10062 and 10063.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40431 NEUROENDOCRINOLOGY 2 Credit Hours
Integrative processes of how the central nervous system (primarily the hypothalamus) regulates autonomic, reproductive and metabolic activities, and how peripheral endocrine signals regulate brain activity.
Prerequisite: BSCI 10110 and BSCI 10120 with minimum C- grades.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 40432 ENDOCRINOLOGY 3 Credit Hours
(Cross-listed with BSCI 50432 and BSCI 70432) Principles of endocrine regulation of physiological and metabolic processes. Morphological and functional interrelationships between systems. Lecture three hours.
Prerequisite: BSCI 30130 or BSCI 40430.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40433 MAMMALIAN PHYSIOLOGY I 3 Credit Hours
Physiology of the endocrine, nervous, and reproductive systems.
Prerequisite: BSCI 30140 and CHEM 10060 and CHEM 10061 and CHEM 10062 and CHEM 10063; and CHEM 20481 or 30481.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40434 MAMMALIAN PHYSIOLOGY II 3 Credit Hours
Physiology of cardiovascular, renal, respiratory and digestive systems. Lecture three hours.
Prerequisite: BSCI 30140 and CHEM 10060 and CHEM 10061 and CHEM 10062 and CHEM 10063; and CHEM 20481 or 30481.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 40450 BIOLOGICAL CLOCKS 2 Credit Hours
(Cross-listed with BSCI 50450 and BSCI 70450) Topics covered include the characteristics of biological clocks, their ecology, molecular biology, and neurobiology, the function and organization of sleep, and the medical implications of biological rhythmicity.
Prerequisite: BSCI 30156; and BSCI 30520 or 40430 or 40433 or PSYC 41363.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 40460 ADVANCED HUMAN PHYSIOLOGY 3 Credit Hours
(Slashed with BSCI 50460 and BSCI 70460) Major concepts and theoretical principles of human physiology, including nervous, endocrine, cardiovascular, respiratory, renal, gastrointestinal and reproductive systems.
Prerequisite: BSCI 30140 and Junior standing.
Corequisite: BSCI 40462.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 40462 ADVANCED HUMAN PHYSIOLOGY: READINGS AND CASE STUDIES 1 Credit Hour
(Slashed with BSCI 50462 and BSCI 70462) Designed to complement the lecture course in Advanced Human Physiology. Students will read primary literature in physiology and work independently and in groups to apply their knowledge to solving case studies. 
**Prerequisite:** BSCI 30140 and Junior standing. 
**Corequisite:** BSCI 40460. 
**Schedule Type:** Lecture 
**Contact Hours:** 1 lecture 
**Grade Mode:** Standard Letter

BSCI 40463 MEDICAL BIOTECHNOLOGY 3 Credit Hours
(Slashed with BSCI 50463 and BSCI 70463) (Cross-listed BTEC 40463) Medical Biotechnology provides a basic understanding of how living cells and cellular materials can be used for medical applications, particularly in the diagnosis and therapy of human diseases. 
**Prerequisite:** BSCI 30140. 
**Schedule Type:** Lecture 
**Contact Hours:** 3 lecture 
**Grade Mode:** Standard Letter

BSCI 40515 ANIMAL BEHAVIOR 3 Credit Hours
Explores the evolution of various animal behaviors, the functions they might serve, and the interplay among the social, ecological and physiological mechanisms that regulate their occurrence. 
**Prerequisite:** BSCI 10110 and BSCI 10120 with minimum C- grades; 6 additional hours of biology (BSCI) courses. 
**Schedule Type:** Lecture 
**Contact Hours:** 3 lecture 
**Grade Mode:** Standard Letter

BSCI 40517 MEDICAL HISTOLOGY 3 Credit Hours
(Slashed with BSCI 50517 and BSCI 70517) Study of the microscopic and submicroscopic structure of the human body in relation to function. Lecture two hours, lab three hours weekly. 
**Prerequisite:** BSCI 10110 and BSCI 10120 with minimum C- grades; and BSCI 30140. 
**Schedule Type:** Laboratory, Lecture 
**Contact Hours:** 2 lecture, 3 lab 
**Grade Mode:** Standard Letter

BSCI 40519 HORMONES AND BEHAVIOR 3 Credit Hours
(Slashed with BSCI 50519 and BSCI 70519) Current concepts of hormone and behavior interactions across species. 
**Prerequisite:** BSCI 10110 and BSCI 10120 with minimum C- grades and Junior standing. 
**Schedule Type:** Lecture 
**Contact Hours:** 3 lecture 
**Grade Mode:** Standard Letter

BSCI 40520 BEHAVIORAL EVOLUTION (WIC) 3 Credit Hours
(Cross-listed with BSCI 50520 and BSCI 70520) Examination of how behavior contributes to survival and reproduction in an ecological context. We consider how behavior may have evolved in a wide range of animals. 
**Prerequisite:** BSCI 40163. 
**Schedule Type:** Lecture 
**Contact Hours:** 3 lecture 
**Grade Mode:** Standard Letter 
**Attributes:** Writing Intensive Course

BSCI 40525 WILDLIFE RESOURCES (ELR) 3 Credit Hours
(Slashed with BSCI 50525 and BSCI 70525) Ecological parameters are discussed relative to the preservation and management of wild animal populations. Aesthetic, economic and environmental values are discussed. Lecture three hours weekly. 
**Prerequisite:** BSCI 10110 and BSCI 10120 with minimum C- grades; plus 4 hours of biology (BSCI) coursework. 
**Schedule Type:** Lecture 
**Contact Hours:** 3 lecture 
**Grade Mode:** Standard Letter 
**Attributes:** Experiential Learning Requirement

BSCI 40556 VERTEBRATE ZOOLOGY 4 Credit Hours
(Slashed with BSCI 50556 and BSCI 70556) Field approach to identification and natural history of all Ohio vertebrates except birds. Lecture three hours, lab and field three hours weekly. 
**Prerequisite:** BSCI 10110 and BSCI 10120 with minimum C- grades; and 4 hours of biology (BSCI) coursework. 
**Schedule Type:** Laboratory, Lecture 
**Contact Hours:** 3 lecture, 3 lab 
**Grade Mode:** Standard Letter

BSCI 40581 ANIMAL PARASITOLOGY 4 Credit Hours
(Slashed with BSCI 50581) Morphology, physiology, life-histories, systematics and economic importance of parasites. Lecture two hours lab, six hours weekly. 
**Prerequisite:** BSCI 10110 and BSCI 10120 with minimum C- grades; and 4 hours of biology (BSCI) coursework. 
**Schedule Type:** Laboratory, Lecture 
**Contact Hours:** 2 lecture, 6 lab 
**Grade Mode:** Standard Letter

BSCI 40600 WRITING IN THE BIOLOGICAL SCIENCES (WIC) 1 Credit Hour
Writing-intensive course taken with a 3- or 4-credit-hour upper-division biology course. This course may be used to satisfy the writing-intensive course requirement with approval of major department. 
**Prerequisite:** Biology (BSCI) major and Junior standing. 
**Schedule Type:** Lecture 
**Contact Hours:** 1 lecture 
**Grade Mode:** Standard Letter 
**Attributes:** Writing Intensive Course

BSCI 41110 BIOPHOTONICS 3 Credit Hours
(Slashed with BSCI 51110; Cross-listed with CHEM 41010 and CHEM 41010 and PHY 41010 and PHY 51010). Interdisciplinary overview of the basics of biophotonics; application of biophotonic techniques to probe biological samples. Introduction to the foundations of optics and photonics and how the molecular structure of organic molecules translates into unique photonic properties and targeting in biological cells or tissue. Preparation of fluorescent materials, advanced spectroscopy and cell visualization using regular and confocal fluorescence microscopy. 
**Prerequisite:** Special approval. 
**Schedule Type:** Combined Lecture and Lab 
**Contact Hours:** 1 lecture, 6 lab 
**Grade Mode:** Standard Letter
BSCI 41120 BIOLOGICAL LIGHT MICROSCOPY 3 Credit Hours
(Slashed with BSCI 51120 and BSCI 71120) Theoretical and practical information on the operation of optical microscopes, the application of transmission and fluorescence microscopy to biological specimens, and analysis of microscopic images.
Prerequisite: BSCI 30140.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50020 BIOLOGY OF AGING 3 Credit Hours
(Cross-listed with BSCI 40020) Current theories of aging; changes at the cellular level associated with aging in humans; course covers the normal aging process, dysfunction, and diseases of the elderly by body systems.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50104 INTRODUCTION TO BEEKEEPING 2 Credit Hours
Covers basic beekeeping practices and provides students with an in-depth understanding of the honey bee colony through participation in hands-on activities, observation and experimentation. This course may not be used to fulfill degree requirements in the MS or MA Biology programs.
Prerequisite: Graduate Standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 2 lab
Grade Mode: Standard Letter

BSCI 50105 CAREER PATHWAYS IN BIOLOGY 1 Credit Hour
This course orients students to graduate studies and to various career pathways in the biological sciences. Students will learn about a variety of possible careers, and prepare application materials needed to enter the workforce or apply to additional graduate programs.
Prerequisite: Graduate Standing and special approval.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

BSCI 50142 BIOENERGETICS 3 Credit Hours
(Cross-listed with BSCI 40142 and BSCI 70142) Lecture and discussion of respiration and photosynthesis, their origin development and control in living systems. Concepts are introduced from fundamental principles. Lecture three hours weekly.
Prerequisite: BSCI 40430 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50143 EUKARYOTIC CELL BIOLOGY 3 Credit Hours
(Cross-listed with BSCI 40143 and BSCI 70143) Current survey of the structure and function of eukaryotic cells, including recent advances in research technology. Lecture three hours weekly.
Prerequisite: BSCI 40430 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50146 DEVELOPMENTAL BIOLOGY 3 Credit Hours
(Cross-listed with BSCI 40146 and BSCI 70146) Fundamental concepts and paradigms of development as exemplified by major model organisms. This course will examine our modern understanding of the molecular, cellular and genetic basis of developmental biology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50147 DEVELOPMENTAL NEUROBIOLOGY 3 Credit Hours
(Slashed with BSCI 40147 and BSCI 70147) Covers fundamental principles in developmental neurobiology, including molecular and cellular processes involved in the formation of the vertebrate central nervous system.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50148 PRINCIPLES OF INFECTIOUS DISEASE 3 Credit Hours
(Slashed with BSCI 40148 and BSCI 70148) Basic principles of infectious disease, with emphasis on major human pathogens including protozoa, bacteria, and viruses. Topics include infection establishment, spread within the host, pathology, immunity, and host behavior.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50150 MOLECULAR MECHANISMS OF DISEASE: CANCER 3 Credit Hours
(Cross-listed with BSCI 40150 and BSCI 70150) Explores the current understanding of molecular and cellular mechanisms of disease processes, including new technologies and modern strategies in the forefront of future biomedical research. Emphasis on a review of primary literature.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50151 MECHANISMS OF DISEASE: OBESITY AND RELATED METABOLIC DISEASES 3 Credit Hours
(Cross-listed with BSCI 40151 + BSCI 70171) Addresses obesity from multiple angles, including health and disease process, underlying physiology and cell and molecular biology, and the role of behavior. Emphasis on a review of primary literature to discuss obesity causes, consequences and treatments.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50152 MOLECULAR MECHANISMS OF DISEASE: NEUROLOGICAL DISORDERS 3 Credit Hours
(Slashed with BSCI 40152 and BSCI 70152) Major concepts and theoretical principles underlying neurological disorders.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 50154  DIABETES AND CARDIOVASCULAR DISEASE  3 Credit Hours
(Slashed with BSCI 40154 and BSCI 70154) This course covers physiological aspects of diabetes and cardiovascular disease, including associated pathologies and therapies.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50157  NEUROBIOLOGY OF DRUG ADDICTION  3 Credit Hours
(Slashed with BSCI 40157 and BSCI 70157) Introduction to neural structures, circuitry, and chemistry underlying drug addiction, main categories of drugs of abuse, and how brain cells and circuits are modified in response to addictive drugs.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50158  MOLECULAR BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40158 and BSCI 70158) Molecular genetics, DNA and RNA structure, chromosomes DNA replication, recombination, genetic transcription and translation, gene expression, current concepts and technologies.
Prerequisite: BSCI 30156 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50159  MOLECULAR BIOLOGY LABORATORY  3 Credit Hours
(Cross-listed with BSCI 40159 and BSCI 70159) Experience in research methods for studying cellular and molecular processes in plant and animal systems.
Prerequisite: Graduate standing and special approval from instructor.
Schedule Type: Laboratory
Contact Hours: 9 lab
Grade Mode: Standard Letter

BSCI 50160  MARINE BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40160 and BSCI 70160) Natural history and ecology of marine organisms, with emphasis on life in coastal habitats. Lecture three hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50162  SOIL BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40162 and BSCI 70162) The ecology and physiology of organisms that live in soil, including microbes, plants and animals. The physical and chemical aspects of soil are introduced to understand how organisms in soils impact nutrient cycles and ecosystem development.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50163  EVOLUTION  3 Credit Hours
Discussion of the history of evolutionary theory, the evidence of evolution the evolutionary forces and the products of those forces.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50166  ENVIRONMENTAL SENSOR TECHNOLOGY  2 Credit Hours
(Slashed with BSCI 40166 and BSCI 70166) Provides learning experiences in the field of environmental wireless sensor technology for performing both isolated and collaborative tasks. Students will use practical tools for WST design.
Prerequisite: Graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 50170  STREAM BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40170 and BSCI 70170) Identification, biology and ecology of stream-inhabiting organisms. Lecture two hours, laboratory three hours weekly. Graduate standing.
Prerequisite: BSCI 10181 and 10182.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 50174  IMMUNOLOGY  3 Credit Hours
(Cross-listed with BSCI 40174 and BSCI 70174) Survey of the mammalian host responses to self and non-self with emphasis on the cellular and molecular mechanisms by which innate and acquired immunity result. Experimental design and data analyses are related to current methodologies used to study immunology. Lecture three hours weekly. Graduate standing.
Prerequisite: BSCI 30171 and CHEM 10060, 10061 and 10062.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50193  VARIABLE TITLE WORKSHOP IN BIOLOGICAL SCIENCES  1-6 Credit Hours
(Repeatable for credit)Topics to be offered will meet specific needs in the biological sciences.
Prerequisite: Permission and Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

BSCI 50195  SPECIAL TOPICS IN BIOLOGY  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BSCI 40195 and BSCI 70195) Special topics in biology.
Prerequisite: Special approval of instructor and Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 1-3 lecture, 2-6 lab
Grade Mode: Standard Letter-IP

BSCI 50196  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BSCI 40196 and BSCI 70196) Individual investigation in biology.
Prerequisite: Special approval of instructor and graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP
BSCI 50221  ECOCOLOGICAL GENOMICS  3 Credit Hours
(Slashed with BSCI 40221 and BSCI 70221) Covers principles, concepts and techniques of ecological genomics, emphasizing the application of genomics to ecology and biogeochemistry and using genomic, metagenomic, and metatranscriptomic data.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50242  SEMINAR ON MEDICAL PRACTICE FOR UNDERSERVED POPULATIONS  2 Credit Hours
(Slashed with BSCI 40242). Course will introduce students to primary care and medical practice in rural and urban settings. Physicians and other healthcare practitioners from rural and urban settings will serve as invited speakers in this seminar. Preference for registration will be given to students following the MA-MD program.
Prerequisite: Graduate standing and special approval.
Schedule Type: Seminar
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory

BSCI 50272  PLANT ANATOMY  4 Credit Hours
(Cross-listed with BSCI 40272 and BSCI 70272) Development and structure of cells, tissues and tissue systems of seed plants. Both vegetative and reproductive structures of angiosperms will be emphasized. Lecture two hours, laboratory six hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 50273  INTRODUCTION TO MYCOLOGY  3 Credit Hours
(Slashed with BSCI 40273 and BSCI 70273) Introduces the key features defining the fungi. Topics include anatomical and morphological features, reproductive strategies, identification, and community interactions.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50274  PLANT COMMUNITIES OF OHIO  3 Credit Hours
(Slashed with BSCI 40274 and BSCI 70274) Designed to familiarize students with the range of plant communities within Ohio by relating plant identification to biological, hydrological, geological, and climatic forces.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50275  PLANT SYSTEMATICS AND EVOLUTION  4 Credit Hours
(Cross-listed with BSCI 40275 and BSCI 70275) Introduction to vascular plant diversity, with a focus on flowering plants. Students will learn characteristics of vascular plants and how to identify major plant groups. Lecture three hours weekly, lab two hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 50292  INTERNSHIP IN PRIMARY CARE FOR THE UNDERSERVED  2 Credit Hours
Students will be placed in internships in urban or rural healthcare settings. Preference will be given to students following the MA-MD program.
Prerequisite: Graduate Standing and special approval.
Schedule Type: Practicum or Internship
Contact Hours: 6 other
Grade Mode: Standard Letter

BSCI 50341  STEM CELL BIOLOGY: PRINCIPLES AND APPLICATIONS  3 Credit Hours
(Slashed with BSCI 40341 and BSCI 70341) Examination of stem cells from various tissues, molecular mechanism of stem cell differentiation, and use of stem cells in clinical applications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50360  ICHTHYOLOGY  4 Credit Hours
(Cross-listed with BSCI 40360 and 70360) Basic biology, natural history, behavior and ecology of the fishes. Three hour lecture and three hour lab weekly.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 50363  MICROBIAL ECOLOGY  3 Credit Hours
(Cross-listed with BSCI 40363 and BSCI 70363) Microbial interactions with their biotic and abiotic environment; control of distribution and physiological activities; emphasis on bacteria in aquatic systems. Graduate standing.
Prerequisite: BSCI 30171, 30360.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50364  LIMNOLOGY  3 Credit Hours
(Cross-listed with BSCI 40364 and BSCI 70364) The study of the principles of aquatic ecology with emphasis on lakes and reservoirs.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50365  FIELD METHODS IN ORNITHOLOGY  3 Credit Hours
(Slashed with BSCI 40365 and BSCI 70365) Habitat-based survey of Ohio birds. Field-based lectures and activities cover location, observation and identification of birds and their songs, as well as bird ecology and behavior.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 50368 WETLAND ECOLOGY AND MANAGEMENT 4 Credit Hours
(Cross-listed with BSCI 40368 and BSCI 70368) Lecture, laboratory and field study of the principles of wetland ecology including adaptations of the biota to environmental conditions, comparison among different wetland habitat types and habitat management. Lecture 3 hours lab 3 hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 50370 ECOLOGICAL AND EVOLUTIONARY GENETICS 2 Credit Hours
(Cross-listed with BSCI 70370) Genetic and genomic approaches to studying ecology and evolution in populations and communities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 50371 EVOLUTIONARY BIOLOGY 2 Credit Hours
(Cross-listed with BSCI 70371) Theoretical and experimental approaches to studying evolution from genes to populations and communities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 50372 COMMUNITIES AND ECOSYSTEMS 2 Credit Hours
(Cross-listed with BSCI 70372) Theory and experimental approaches to studying community and ecosystem ecology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 50373 POPULATION AND COMMUNITY ECOLOGY 2 Credit Hours
(Cross-listed with BSCI 70373) Theory and experimental approaches to studying population and community ecology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 50374 CONSERVATION BIOLOGY 4 Credit Hours
(Cross-listed with BSCI 40374 and BSCI 70374) Provides a critical analysis of the factors that threaten biological diversity in the biosphere and the consequences on biological processes and quality of life.
Prerequisite: BSCI 30360 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BSCI 50375 ENVIRONMENTAL BIOLOGY AND MANAGEMENT 4 Credit Hours
(Cross-listed with BSCI 40375 and BSCI 70375) Introduction to current concepts in applied ecology and ecosystem management. Students will learn aspects of ecosystem management and restoration including: 1) how environmental factors affect organism survival and ecosystem structure, 2) how human impacts such as pollution, habitat fragmentation, introduction of invasive species affect ecosystems, and 3) the use of ecological principles and methods to restore and manage ecosystems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BSCI 50376 TROPICAL FIELD BIOLOGY AND CONSERVATION 5 Credit Hours
(Cross-listed with BSCI 40376 and BSCI 70376) Introduction to major issues in tropical ecology and conservation including the threats to the biological diversity of tropical ecosystems resulting from human activities. Students learn how to apply modern field-observation techniques to generate and test problem-solving hypotheses.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 6 lab
Grade Mode: Standard Letter

BSCI 50432 ENDOCRINOLOGY 3 Credit Hours
(Cross-listed with BSCI 40432 and BSCI 70432) Principles of endocrine regulation of physiological and metabolic processes. Morphological and functional interrelationships between systems. Lecture three hours weekly.
Prerequisite: BSCI 40430 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50433 MAMMALIAN PHYSIOLOGY I 3 Credit Hours
Physiology of the endocrine, nervous, and reproductive systems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50434 MAMMALIAN PHYSIOLOGY II 3 Credit Hours
Physiology of cardiovascular, renal, respiratory and digestive systems. Lecture three hours.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50450 BIOLOGICAL CLOCKS 2 Credit Hours
(Cross-listed with BSCI 40450 and BSCI 70450) Topics covered include the characteristics of biological clocks, their ecology, molecular biology, and neurobiology, the function and organization of sleep, and the medical implications of biological rhythmicity. Students enrolling at the graduate level should have some background in neurobiology and genetics.
Prerequisite: Graduate standing.
Corequisite: BSCI 50451.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
BSCI 50451  CURRENT TOPICS IN BIOLOGICAL CLOCKS RESEARCH 1 Credit Hour
(Cross-listed with BSCI 70451) Discussion of current research literature in the area of research on biological clocks.
Prerequisite: Graduate standing.
Corequisite: BSCI 50450.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter-S/U

BSCI 50460  ADVANCED HUMAN PHYSIOLOGY  3 Credit Hours
(Slashed with BSCI 40460 and BSCI 70460) Major concepts and theoretical principles of human physiology, including nervous, endocrine, cardiovascular, respiratory, renal, gastrointestinal and reproductive systems.
Prerequisite: Graduate standing.
Corequisite: BSCI 50462.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50462  ADVANCED HUMAN PHYSIOLOGY: READINGS AND CASE STUDIES  1 Credit Hour
(Slashed with BSCI 40462 and BSCI 70462) Designed to complement the lecture course in Advanced Human Physiology. Students will read primary literature in physiology and work independently and in groups to apply their knowledge to solving case studies.
Prerequisite: Graduate standing.
Corequisite: BSCI 50460.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BSCI 50463  MEDICAL BIOTECHNOLOGY  3 Credit Hours
(Slashed with BSCI 40463 and BSCI 70463) (Cross-listed with BTEC 40463) Medical Biotechnology provides a basic understanding of how living cells and cellular materials can be used for medical applications, particularly in the diagnosis and therapy of human diseases.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50450  CURRENT TOPICS IN BIOLOGICAL CLOCKS RESEARCH 1 Credit Hour
(Cross-listed with BSCI 70450) Discussion of current research literature in the area of research on biological clocks.
Prerequisite: Graduate standing.
Corequisite: BSCI 50450.
Schedule Type: Seminar
Contact Hours: 1 lecture
Grade Mode: Standard Letter-S/U

BSCI 50460  ADVANCED HUMAN PHYSIOLOGY  3 Credit Hours
(Slashed with BSCI 40460 and BSCI 70460) Major concepts and theoretical principles of human physiology, including nervous, endocrine, cardiovascular, respiratory, renal, gastrointestinal and reproductive systems.
Prerequisite: Graduate standing.
Corequisite: BSCI 50462.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50462  ADVANCED HUMAN PHYSIOLOGY: READINGS AND CASE STUDIES  1 Credit Hour
(Slashed with BSCI 40462 and BSCI 70462) Designed to complement the lecture course in Advanced Human Physiology. Students will read primary literature in physiology and work independently and in groups to apply their knowledge to solving case studies.
Prerequisite: Graduate standing.
Corequisite: BSCI 50460.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BSCI 50463  MEDICAL BIOTECHNOLOGY  3 Credit Hours
(Slashed with BSCI 40463 and BSCI 70463) (Cross-listed with BTEC 40463) Medical Biotechnology provides a basic understanding of how living cells and cellular materials can be used for medical applications, particularly in the diagnosis and therapy of human diseases.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50519  HORMONES AND BEHAVIOR  3 Credit Hours
(Cross-listed with BSCI 40519 and BSCI 70519) Current concepts of hormone and behavior interactions across species.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50520  BEHAVIORAL EVOLUTION  3 Credit Hours
(Cross-listed with BSCI 40520 and BSCI 70520) Examination of how behavior contributes to survival and reproduction in an ecological context. We consider how behavior may have evolved in a wide range of animals. Students enrolled at the graduate level in the course are expected to have had a course in evolution.
Prerequisite: Graduate standing and special approval.
Corequisite: BSCI 50522.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50522  READINGS IN BEHAVIORAL EVOLUTION  1 Credit Hour
(Cross-listed with BSCI 70522) Graduate reading course designed to give experience leading discussions and writing proposals. Students enrolled at the graduate level are expected to have had a course in evolution.
Prerequisite: Graduate standing and special approval.
Corequisite: BSCI 50520.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-S/U

BSCI 50525  WILDLIFE RESOURCES  3 Credit Hours
(Cross-listed with BSCI 40525 and BSCI 70525) Ecological parameters are discussed relative to the preservation and management of wild animal populations. Aesthetic economic and environmental values are discussed. Lecture three hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50556  VERTEBRATE ZOOLOGY  4 Credit Hours
(Cross-listed with BSCI 40556 and BSCI 70556) Field approach to identification and natural history of all Ohio vertebrates except birds. Lecture three hours, laboratory and field three hours weekly.
Prerequisite: 4 hours of biology and Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 50515  ANIMAL BEHAVIOR  3 Credit Hours
Explores the evolution of various animal behaviors, the functions they might serve, and the interplay among the social, ecological and physiological mechanisms that regulate their occurrence.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 50517  MEDICAL HISTOLOGY  3 Credit Hours
(Cross-listed with BSCI 40517 and BSCI 70517) Study of the microscopic and submicroscopic structure of the human body in relation to function. Lecture two hours, laboratory three hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 50558  VERTEBRATE ZOOLOGY  4 Credit Hours
(Cross-listed with BSCI 40558 and BSCI 70556) Field approach to identification and natural history of all Ohio vertebrates except birds. Lecture three hours, laboratory and field three hours weekly.
Prerequisite: 4 hours of biology and Graduate standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter
BSCI 51110  BIOPHOTONICS  3 Credit Hours
(Slash-listed with BSCI 41110; Cross-listed with CHEM 41010 and CHEM 51010 and PHY 41010 and PHY 51010) Interdisciplinary overview of the basics of biophotonics and application of biophotonic techniques to probe biological samples. Introduction to the foundations of optics and photonics and how the molecular structure of organic molecules translates into unique photonic properties and targeting in biological cells or tissue. Preparation of fluorescent materials, advanced spectroscopy and cell visualization using regular and confocal fluorescence microscopy.
Prerequisite: Graduate standing and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 6 lab
Grade Mode: Standard Letter

BSCI 51120  BIOLOGICAL LIGHT MICROSCOPY  3 Credit Hours
(Slash-listed with BSCI 41120 and BSCI 71120) Theoretical and practical information on the operation of optical microscopes, the application of transmission and fluorescence microscopy to biological specimens, and analysis of microscopic images.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 60080  EXPERIMENTAL METHODS IN BIOLOGY  2 Credit Hours
The development of hypotheses, principles of experimental design and methods of gathering and evaluating data.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 60103  BIOLOGICAL STATISTICS  3 Credit Hours
(Slash-listed with BSCI 70103) Principles of experimental design and statistical analysis and how to choose and interpret statistical tests using biological data sets.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 60144  SELECTED READINGS IN EUKARYOTIC CELL BIOLOGY  1 Credit Hour
(Cross-listed with BSCI 70144) Directed readings in cell and molecular biology from the primary and review literature will be presented and discussed by the students. Corequisite: BSCI 50143
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BSCI 60145  MEDICAL GENOMICS  3 Credit Hours
(Cross-listed with BSCI 80145) Explores the relationship and contribution of genetics and genomics to healthcare issues, including disease susceptibility and therapeutic efficacy. Up-to-date genomics concepts and their applications to health care and the challenges of personalized medicine including genetic analyses (e.g., linkage and estimating population risks), ethical issues in genetic testing and therapy, genetic basis of disease processes (e.g., neurological, cardiovascular and neoplastic diseases) and epigenetic processes (that may link the environment to the risk of chronic diseases) are covered. This course requires an understanding of genetics and physiology; students should contact the Department of Biological Sciences to determine if they have the requisite prior training.
Prerequisite: Graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 60184  RESPONSIBLE CONDUCT IN RESEARCH AND TEACHING- BIOLOGICAL SCIENCES  2 Credit Hours
(Slash-listed with BSCI 70184) Educates biology graduate students in central aspects of the responsible and effective conduct of research and teaching. Topics include appropriate conduct in the laboratory, effective presentations and issues related to proposal and manuscript preparation and review.
Prerequisite: Graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter-S/U

BSCI 60191  SEMINAR IN BIOLOGY  1 Credit Hour
(Repeatable for credit) Departmental seminar required of all graduate students.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 60198  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits earned may be applied toward degree requirements if department approves.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 60199  THESIS I  2-6 Credit Hours
Thesis students must register for a minimum of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Special approval and Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 60299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: BSCI 60199 and Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP
BSCI 60391 SEMINAR IN ECOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BSCI 70391) Seminar on topics in animal and plant ecology. Credits earned may be applied to degree if department approves.
Prerequisite: Special approval of instructor and Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 60431 NEUROENDOCRINOLOGY 2 Credit Hours
Role of the central nervous system in the regulation of hormonal and vegetative functions and structure function relationships between brain and pituitary with modern views of neuroendocrine regulation. Methods for study of neuroendocrine relationships is discussed.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 60440 CELLULAR AND MOLECULAR SIGNALING 3 Credit Hours
(Cross-listed with BSCI 70440 and BMS 60440 and BMS 70440)
The relevant and current topics associated with cellular signaling is covered. Topics include receptor pharmacology, classes and regulation, transcription factors, cell cycle signaling and cell-cell communication.
Prerequisite: BSCI 4/5/70143 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 60462 NEUROBIOLOGY: SYSTEMS AND BEHAVIOR 4 Credit Hours
(Slashed with BSCI 80462; Cross-listed with BMS 60462 and BMS 70462) Provides broad coverage of the parts of the central nervous system and how they integrate sensory information, drive motor function and regulate behavior.
Prerequisite: BMS 60729 or BMS 70729 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BSCI 60491 SEMINAR IN PHYSIOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BSCI 70491) Credits may be applied toward degree if department approves.
Prerequisite: Special approval of instructor and Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 70103 BIOLOGICAL STATISTICS 3 Credit Hours
(Slashed with BSCI 60103) Principles of experimental design and statistical analysis, and how to choose and interpret statistical tests using biological data sets.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70142 BIOENERGETICS 3 Credit Hours
(Cross-listed with BSCI 40142 and BSCI 50142) Lecture and discussion of respiration and photosynthesis, their origin development and control in living systems. Concepts are introduced from fundamental principles. Lecture three hours weekly.
Prerequisite: BSCI 40430 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70143 EUKARYOTIC CELL BIOLOGY 3 Credit Hours
(Cross-listed with BSCI 40143 and BSCI 70143) Current survey of the structure and function of eukaryotic cells, including recent advances in research technology. Lecture three hours weekly.
Prerequisite: BSCI 40430 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70144 SELECTED READINGS IN EUKARYOTIC CELL BIOLOGY 1 Credit Hour
(Cross-listed with BSCI 60144) Directed readings in cell and molecular biology from the primary and review literature will be presented and discussed by the students.
Prerequisite: Doctoral standing.
Corequisite: BSCI 70143.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BSCI 70146 DEVELOPMENTAL BIOLOGY 3 Credit Hours
(Cross-listed with BSCI 40146 and BSCI 50146) Fundamental concepts and paradigms of development as exemplified by major model organisms. This course will examine our modern understanding of the molecular, cellular and genetic basis of developmental biology.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70147 DEVELOPMENTAL NEUROBIOLOGY 3 Credit Hours
(Slashed with BSCI 40147 and BSCI 50147) Covers fundamental principles in developmental neurobiology, including molecular and cellular processes involved in the formation of the vertebrate central nervous system.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70148 PRINCIPLES OF INFECTIOUS DISEASE 3 Credit Hours
(Slashed with BSCI 40148 and BSCI 50148) Basic principles of infectious disease, with emphasis on major human pathogens including protozoa, bacteria, and viruses. Topics include infection establishment, spread within the host, pathology, immunity, and host behavior.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BSCI 70150  MOLECULAR MECHANISMS OF DISEASE: CANCER  3 Credit Hours
(Cross-listed with BSCI 40150 and BSCI 50150) Explores the current understanding of molecular and cellular mechanisms of disease processes, including new technologies and modern strategies in the forefront of future biomedical research. Emphasis on a review of primary literature.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70151  MECHANISMS OF DISEASE: OBESITY AND RELATED METABOLIC DISEASES  3 Credit Hours
(Cross-listed with BSCI 40151 + BSCI 50171) Addresses obesity from multiple angles, including health and disease process, underlying physiology and cell and molecular biology, and the role of behavior. Emphasis on a review of primary literature to discuss obesity causes, consequences and treatments.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70152  MOLECULAR MECHANISMS OF DISEASE: NEUROLOGICAL DISORDERS  3 Credit Hours
(Slashed with BSCI 40152 and BSCI 50152) Major concepts and theoretical principles underlying neurological disorders.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70154  DIABETES AND CARDIOVASCULAR DISEASE  3 Credit Hours
(Slashed with BSCI 40154 and BSCI 50154) This course covers physiological aspects of diabetes and cardiovascular disease, including associated pathologies and therapies.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70157  NEUROBIOLOGY OF DRUG ADDICTION  3 Credit Hours
(Slashed with BSCI 40157 and BSCI 50157) Introduction to neural structures, circuitry, and chemistry underlying drug addiction, main categories of drugs of abuse, and how brain cells and circuits are modified in response to addictive drugs.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70158  MOLECULAR BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40158 and BSCI 50158) Molecular genetics, DNA and RNA structure, chromosomes, DNA replication, recombination, genetic transcription and translation, gene expression, current concepts and technologies.
Prerequisite: BSCI 30156 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70159  MOLECULAR BIOLOGY LABORATORY  3 Credit Hours
(Cross-listed with BSCI 40159 and BSCI 50159) Experience in research methods for studying cellular and molecular processes in plant and animal systems.
Prerequisite: Doctoral standing and special approval from instructor.
Schedule Type: Laboratory
Contact Hours: 9 lab
Grade Mode: Standard Letter

BSCI 70160  MARINE BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40160 and BSCI 50160) Natural history and ecology of marine organisms, with emphasis on life in coastal habitats. Lecture three hours weekly.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70162  SOIL BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40162 and BSCI 50162) The ecology and physiology of organisms that live in soil, including microbes, plants and animals. The physical and chemical aspects of soil are introduced to understand how organisms in soils impact nutrient cycles and ecosystem development.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70163  EVOLUTION  3 Credit Hours
(Cross-listed with BSCI 40163 and BSCI 50163) Discussion of the history of evolutionary theory, the evidence of evolution, the evolutionary forces and the products of those forces. Doctoral standing.
Prerequisite: BSCI 30156 plus 4 hours of biology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70166  ENVIRONMENTAL SENSOR TECHNOLOGY  2 Credit Hours
(Slashed with BSCI 40166 and BSCI 50166) Provides learning experiences in the field of environmental wireless sensor technology for performing both isolated and collaborative tasks. Students will use practical tools for WST design.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 70170  STREAM BIOLOGY  3 Credit Hours
(Cross-listed with BSCI 40170 and BSCI 50170) Identification, biology and ecology of stream-inhabiting organisms. Lecture two, laboratory three hours weekly.
Prerequisite: BSCI 10181 and 10182 and Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 1 lab
Grade Mode: Standard Letter
BSCI 70174 IMMUNOLOGY 3 Credit Hours
(Cross-listed with BSCI 40174 and BSCI 50174) Survey of the mammalian host responses to self and non-self with emphasis on the cellular and molecular mechanisms by which innate and acquired immunity result. Experimental design and data analyses are related to current methodologies used to study immunology. Lecture three hours weekly.
Doctoral standing.
Prerequisite: BSCI 30171 and CHEM 10060, 10061 and 10062.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70184 RESPONSIBLE CONDUCT IN RESEARCH AND TEACHING-BIOLOGICAL SCIENCES 2 Credit Hours
(Slashed with BSCI 50184) Educates biology graduate students in central aspects of the responsible and effective conduct of research and teaching. Topics include appropriate conduct in the laboratory, effective presentations and issues related to proposal and manuscript preparation and review.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter-S/U

BSCI 70191 SEMINAR IN BIOLOGY 1 Credit Hour
(Repeatable for credit) Departmental seminar required of all graduate students.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 70193 VARIABLE TITLE WORKSHOP IN BIOLOGICAL SCIENCES 1-6 Credit Hours
(Repeatable for credit) Topics to be offered will meet specific needs in the biological sciences.
Prerequisite: Special approval and Doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

BSCI 70195 SPECIAL TOPICS IN BIOLOGY 1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BSCI 40195 and BSCI 50195)
Prerequisite: Special approval of instructor and Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 1-3 lecture, 2-6 lab
Grade Mode: Standard Letter-IP

BSCI 70196 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BSCI 40196 and BSCI 50196)
Prerequisite: Special approval of instructor and doctoral standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

BSCI 70221 ECOLOGICAL GENOMICS 3 Credit Hours
(Slashed with BSCI 40221 and BSCI 50221) Covers principles, concepts and techniques of ecological genomics, emphasizing the application of genomics to ecology and biogeochemistry and using genomic, metagenomic and metatranscriptomic data.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70272 PLANT ANATOMY 4 Credit Hours
(Cross-listed with BSCI 40272 and BSCI 50272) Development and structure of cells, tissues and tissue systems of seed plants. Both vegetative and reproductive structures of angiosperms will be emphasized. Lecture two hours, laboratory six hours weekly.
Prerequisite: Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 0 lab
Grade Mode: Standard Letter

BSCI 70273 INTRODUCTION TO MYCOLOGY 3 Credit Hours
(Slashed with BSCI 40273 and BSCI 50273) Introduces the key features defining the fungi. Topics include anatomical and morphological features, reproductive strategies, identification, and community interactions.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70274 PLANT COMMUNITIES OF OHIO 3 Credit Hours
(Slashed with BSCI 40274 and BSCI 50274) Designed to familiarize students with the range of plant communities within Ohio by relating plant identification to biological, hydrological, geological, and climatic forces.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70275 PLANT SYSTEMATICS AND EVOLUTION 4 Credit Hours
(Cross-listed with BSCI 40275 and BSCI 50275) Introduction to vascular plant diversity; with a focus on flowering plants. Students will learn characteristics of vascular plants and how to identify major plant groups. Lecture three hours weekly, lab two hours weekly.
Prerequisite: Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 70341 STEM CELL BIOLOGY: PRINCIPLES AND APPLICATIONS 3 Credit Hours
(Slashed with BSCI 40341 and BSCI 50341) Examination of stem cells from various tissues, molecular mechanism of stem cell differentiation, and use of stem cells in clinical applications.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70360 ICHTHYOLOGY 4 Credit Hours
(Cross-listed with BSCI 40360 and BSCI 50360) Basic biology, natural history, behavior and ecology of the fishes. Three hour lecture and three hour lab weekly.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter
BSCI 70363 MICROBIAL ECOLOGY 3 Credit Hours
(Cross-listed with BSCI 40363 and BSCI 50363) Microbial interactions with their biotic and abiotic environment; control of distribution and physiological activities; emphasis on bacteria in aquatic systems.
Doctoral standing.
Prerequisite: BSCI 30171, 30360.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70364 LIMNOLOGY 3 Credit Hours
(Cross-listed with BSCI 40364 and BSCI 50364) The study of the principles of aquatic ecology with emphasis on lakes and reservoirs.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70365 FIELD METHODS IN ORNITHOLOGY 3 Credit Hours
(Slashied with BSCI 40365 and BSCI 50365) Habitat-based survey of Ohio birds. Field-based lectures and activities cover location, observation and identification of birds and their songs, as well as bird ecology and behavior.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70368 WETLAND ECOLOGY AND MANAGEMENT 4 Credit Hours
(Cross-listed with BSCI 40368 and BSCI 50368) Lecture, laboratory and field study of the principles of wetland ecology including adaptations of the biota to environmental conditions, comparison among different wetland habitat types and habitat management. Lecture 3 hours, lab 3 hours weekly.
Prerequisite: Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter

BSCI 70370 ECOLOGICAL AND EVOLUTIONARY GENETICS 2 Credit Hours
(Cross-listed with BSCI 50370) Genetic and genomic approaches to studying ecology and evolution in populations and communities.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 70371 EVOLVOLUTIONARY BIOLOGY 2 Credit Hours
(Cross-listed with BSCI 50371) Theoretical and experimental approaches to studying evolution from genes to populations and communities.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 70372 COMMUNITIES AND ECOSYSTEMS 2 Credit Hours
(Cross-listed with BSCI 50372) Theory and experimental approaches to studying community and ecosystem ecology.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 70373 POPULATION AND COMMUNITY ECOLOGY 2 Credit Hours
(Cross-listed with BSCI 50373) Theory and experimental approaches to studying population and community ecology.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 70374 CONSERVATION BIOLOGY 4 Credit Hours
(Cross-listed with BSCI 40374 and BSCI 50374) Provides a critical analysis of the factors that threaten biological diversity in the biosphere and the consequences on biological processes and quality of life.
Prerequisite: BSCI 30360 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BSCI 70375 ENVIRONMENTAL BIOLOGY AND MANAGEMENT 4 Credit Hours
(Cross-listed with BSCI 40375 and BSCI 50375) Introduction to current concepts in applied ecology and ecosystem management. Students will learn aspects of ecosystem management and restoration including: 1) how environmental factors affect organism survival and ecosystem structure, 2) how human impacts such as pollution, habitat fragmentation, introduction of invasive species affect ecosystems, and 3) the use of ecological principles and methods to restore and manage ecosystems.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BSCI 70376 TROPICAL FIELD BIOLOGY AND CONSERVATION 5 Credit Hours
(Cross-listed with BSCI 40376 and BSCI 50376) Introduction to major issues in tropical ecology and conservation including the threats to the biological diversity of tropical ecosystems resulting from human activities. Students learn how to apply modern field-observation techniques to generate and test problem-solving hypotheses.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 6 lab
Grade Mode: Standard Letter

BSCI 70391 SEMINAR IN ECOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BSCI 60391) Seminar on topics in animal and plant ecology. Credits earned may be applied to degree if department approves.
Prerequisite: Special approval of instructor and Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 70431 NEUROENDOCRINOLOGY 2 Credit Hours
Role of the central nervous system in the regulation of hormonal and vegetative functions; structure function relationships between brain and pituitary with modern views of neuroendocrine regulation. Methods for study of neuroendocrine relationships is discussed.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
BSCI 70432  ENDOCRINOLOGY  3 Credit Hours
(Cross-listed with BSCI 40432 and BSCI 40432) Principles of endocrine regulation of physiological and metabolic processes. Morphological and functional interrelationships between systems. Lecture three hours weekly.
Prerequisite: BSCI 40430 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70433  MAMMALIAN PHYSIOLOGY I  3 Credit Hours
Physiology of the endocrine, nervous, and reproductive systems.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70434  MAMMALIAN PHYSIOLOGY II  3 Credit Hours
Physiology of cardiovascular, renal, respiratory and digestive systems. Lecture three hours.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70440  CELLULAR AND MOLECULAR SIGNALING  3 Credit Hours
(Cross-listed with BSCI 60440 and BMS 60440 and BMS 70440) The relevant and current topics associated with cellular signaling is covered. Topics include receptor pharmacology, classes and regulation, transcription factors, cell cycle signaling and cell-cell communication.
Prerequisite: BSCI 4/5/70143 and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70450  BIOLOGICAL CLOCKS  2 Credit Hours
(Cross-listed with BSCI 40450 and BSCI 50450) Topics covered include the characteristics of biological clocks, their ecology, molecular biology, and neurobiology, the function and organization of sleep, and the medical implications of biological rhythmicity. Students enrolling at the graduate level should have some background in neurobiology and genetics.
Prerequisite: Doctoral standing.
Corequisite: BSCI 70451.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BSCI 70451  CURRENT TOPICS IN BIOLOGICAL CLOCKS RESEARCH  1 Credit Hour
(Cross-listed with BSCI 50451) Discussion of current research literature in the area of research on biological clocks.
Prerequisite: Doctoral standing.
Corequisite: BSCI 70450.
Schedule Type: Seminar
Contact Hours: 1 lecture
Grade Mode: Standard Letter-S/U

BSCI 70460  ADVANCED HUMAN PHYSIOLOGY  3 Credit Hours
(Slashed with BSCI 40460 and BSCI 50460) Major concepts and theoretical principles of human physiology, including nervous, endocrine, cardiovascular, respiratory, renal, gastrointestinal and reproductive systems.
Prerequisite: Doctoral standing.
Corequisite: BSCI 70462.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70462  ADVANCED HUMAN PHYSIOLOGY: READINGS AND CASE STUDIES  1 Credit Hour
(Slashed with BSCI 40462 and BSCI 50462) Designed to complement the lecture course in Advanced Human Physiology. Students will read primary literature in physiology and work independently and in groups to apply their knowledge to solving case studies.
Prerequisite: Doctoral standing.
Corequisite: BSCI 70460.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BSCI 70463  MEDICAL BIOTECHNOLOGY  3 Credit Hours
(Slashed with BSCI 40463 and BSCI 50463) (Cross-listed with BTEC 40463) Medical Biotechnology provides a basic understanding of how living cells and cellular materials can be used for medical applications, particularly in the diagnosis and therapy of human diseases.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70462  ADVANCED HUMAN PHYSIOLOGY: READINGS AND CASE STUDIES  1 Credit Hour
(Slashed with BSCI 40462 and BSCI 50462) Designed to complement the lecture course in Advanced Human Physiology. Students will read primary literature in physiology and work independently and in groups to apply their knowledge to solving case studies.
Prerequisite: Doctoral standing.
Corequisite: BSCI 70460.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BSCI 70491  SEMINAR IN PHYSIOLOGY  1 Credit Hour
(Repeatable for credit) (Cross-listed with BSCI 60491) Credits may be applied toward degree if department approves.
Prerequisite: Special approval of instructor and Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BSCI 70515  ANIMAL BEHAVIOR  3 Credit Hours
Explores the evolution of various animal behaviors, the functions they might serve, and the interplay among the social, ecological and physiological mechanisms that regulate their occurrence.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70517  MEDICAL HISTOLOGY  3 Credit Hours
(Cross-listed with BSCI 40517 and BSCI 50517) Study of the microscopic and submicroscopic structure of the mammalian body in relation to function. Lecture two hours laboratory three hours weekly.
Prerequisite: 4 hours of biology and Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 2 lecture, 3 lab
Grade Mode: Standard Letter
BSCI 70519 HORMONES AND BEHAVIOR 3 Credit Hours
(Cross-listed with BSCI 40519 and BSCI 70519) Current concepts of hormone and behavior interactions across species.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70530 BEHAVIORAL EVOLUTION 3 Credit Hours
(Cross-listed with BSCI 40530 and BSCI 50530) Examination of how behavior contributes to survival and reproduction in an ecological context. We consider how behavior may have evolved in a wide range of animals. Students enrolled at the graduate level will be expected to have had a course in evolution.
Prerequisite: Doctoral standing and special approval.
Corequisite: BSCI 70522.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 70520 WILDLIFE RESOURCES 3 Credit Hours
(Cross-listed with BSCI 40520 and BSCI 50520) Ecological parameters are discussed relative to the preservation and management of wild animal populations. Aesthetic economic and environmental values are discussed. Lecture three hours weekly.
Prerequisite: 4 hours of biology and Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U

BSCI 70556 VERTEBRATE ZOOLOGY 4 Credit Hours
(Cross-listed with BSCI 40556 and BSCI 50556) Field approach to identification and natural history of all Ohio vertebrates except birds. Lecture three hours laboratory and field three hours weekly.
Prerequisite: plus 4 hours of biology and Doctoral standing.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

BSCI 71120 BIOLOGICAL LIGHT MICROSCOPY 3 Credit Hours
(Slashed with BSCI 41120 and BSCI 51120) Theoretical and practical information on the operation of optical microscopes, the application of transmission and fluorescence microscopy to biological specimens, and analysis of microscopic images.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BSCI 80145 MEDICAL GENOMICS 3 Credit Hours
(Cross-listed with BSCI 60145) Explores the relationship and contribution of genetics and genomics to healthcare issues, including disease susceptibility and therapeutic efficacy. Up-to-date genomics concepts and their applications to health care and the challenges of personalized medicine including genetic analyses (e.g., linkage and estimating population risks), ethical issues in genetic testing and therapy, genetic basis of disease processes (e.g., neurological, cardiovascular and neoplastic diseases) and epigenetic processes (that may link the environment to the risk of chronic diseases) are covered. This course requires an understanding of genetics and physiology; students should contact the Department of Biological Sciences to determine if they have the requisite prior training.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Clinical Laboratory Sciences (CLS)

CLS 49010 CLINICAL MICROBIOLOGY: THEORY 4 Credit Hours
Theoretical consideration of laboratory isolation, cultivation, identification and characterization of pathogenic microorganisms.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 8 other
Grade Mode: Standard Letter-IP
CLS 49011  CLINICAL MICROBIOLOGY:APPLICATIONS  4 Credit Hours
Applied and practical considerations of theoretical aspects of laboratory isolation, cultivation, identification and characterization of pathogenic microorganisms. Letter grades and ip.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 8 other
Grade Mode: Standard Letter-IP

CLS 49012  CLINICAL IMMUNOLOGY:THEORY  1 Credit Hour
Theoretical considerations of laboratory practices involving quantitation and detection of antigens and antibodies and the significance of these findings in pathological states.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49013  CLINICAL IMMUNOLOGY:APPLICATIONS  1 Credit Hour
Applied and practical consideration of laboratory practices in immunology and serology relating to diagnosis of disease states.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49014  CLINICAL MYCOLOGY:THEORY AND APPLICATIONS  1 Credit Hour
Theoretical, applied and practical consideration of the isolation, identification and characterization of pathogenic fungi and their relation to human disease states.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49015  CLINICAL PARASITOLOGY:THEORY AND APPLICATIONS  1 Credit Hour
Theoretical, applied and practical considerations of the isolation, identification and characterization of human parasites and their relation to pathological conditions.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49020  CLINICAL CHEMISTRY:THEORY  4 Credit Hours
Theoretical considerations of the principles of clinical chemistry relating to the identification and quantitation of biologically important substances in blood and other body fluids.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 8 other
Grade Mode: Standard Letter-IP

CLS 49021  CLINICAL CHEMISTRY:APPLICATIONS  3 Credit Hours
Applied and practical considerations of clinical chemistry principles relating to significant changes in body fluids as the result of pathologic conditions.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 6 other
Grade Mode: Standard Letter-IP

CLS 49022  URINALYSIS:THEORY  1 Credit Hour
Theoretical considerations of the physiological activities of the renal system together with laboratory principles of analysis of urine and other body fluids.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49023  URINALYSIS:APPLICATIONS  1 Credit Hour
Applied and practical considerations of laboratory practices in urine and other body fluid analysis as aids in diagnosis of disease.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49030  IMMUNOHEMATOLOGY:THEORY  2 Credit Hours
Theoretical consideration of laboratory procedures involved in blood grouping and typing; identification of blood group antigens and antibodies collection and preparation of blood for transfusion.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

CLS 49031  IMMUNOHEMATOLOGY:APPLICATIONS  2 Credit Hours
Applied and practical consideration of laboratory methods for the administration of blood and its components.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

CLS 49032  COAGULATION:THEORY AND APPLICATIONS  1 Credit Hour
Theoretical consideration of the coagulation mechanism and its relation to pathological states; identification of abnormalities and deficiencies.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49033  CLINICAL HEMATOLOGY:THEORY  2 Credit Hours
Theoretical considerations of the development of formed elements; identification of marrow and blood cells; study of normal and abnormal cellular blood components.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 4 other
Grade Mode: Standard Letter-IP

CLS 49034  CLINICAL HEMATOLOGY:APPLICATIONS  2 Credit Hours
Applied and practical consideration of laboratory methods and procedures in identification and enumeration of normal and abnormal formed elements of blood.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 4 other
Grade Mode: Standard Letter-IP
CLS 49040  TOPICS IN LABORATORY MANAGEMENT  1 Credit Hour
Consideration of topics relating to safety, education, personnel, budgeting, scheduling and medical legal problems. Repeatable for a total of 4 hours.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2 other
Grade Mode: Standard Letter-IP

CLS 49095  SPECIAL TOPICS IN MEDICAL TECHNOLOGY  1-4 Credit Hours
(Repeatable for a maximum of 4 credit hours) Topical consideration of special techniques encountered in nuclear medicine, cytology, cytogenetics, virology, toxicology and special instrumentation.
Prerequisite: Medical technology (MEDT) major.
Schedule Type: Clinic
Contact Hours: 2-8 other
Grade Mode: Standard Letter-IP

Department of Chemistry and Biochemistry

Chemistry (CHEM)

CHEM 00020  INTRODUCTION TO CHEMISTRY  2 Credit Hours
Problem-based introduction to the fundamentals of chemistry including significant figures, unit conversions, measurement, structure of matter, energy, composition of matter, atomic structure, the periodic table, introduction to bonding, and the formulas and names of both ionic and covalent compounds. Course does not count toward graduation.
Prerequisite: Math ACT score of 18; or ALEKS math assessment score of 45; or minimum C grade in MATH 00023 or higher.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 10030  CHEMISTRY IN OUR WORLD (KBS)  3 Credit Hours
A course for non-science majors that utilizes environmental and consumer topics to introduce chemical principles and develop critical-thinking skills.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

CHEM 10031  CHEMISTRY IN OUR WORLD LABORATORY (KBS) (KLAB)  1 Credit Hour
Discovery-based experiments to introduce chemical principles and develop critical-thinking skills. A course for non-science majors; includes chemistry that is related to environmental and consumer issues.
Pre/corequisite: CHEM 10030.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, Transfer Module Natural Sciences

CHEM 10050  FUNDAMENTALS OF CHEMISTRY (KBS)  3 Credit Hours
Basic concepts of chemistry (including atomic structure, chemical bonding and reactions) necessary for courses in elementary organic chemistry and physiological chemistry. Students may only receive credit toward graduation for one of the following courses: CHEM 10050; or CHEM 10060 and 10061; or CHEM 10970 and 10971.
Prerequisite: Minimum 16 ACT math score or MATH 00023 or MATH 00024 or MATH 11009 or MATH 11010 or MATH 11012 or MATH 12002 or MATH 12011 or MATH 12021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

CHEM 10052  INTRODUCTION TO ORGANIC CHEMISTRY (KBS)  2 Credit Hours
Chemistry of organic and biological molecules necessary for the study of physiological chemistry. Students may only receive credit toward graduation for one of the following courses: CHEM 10052; or CHEM 20481 and 20482; or CHEM 30481 and 30482.
Prerequisite: CHEM 10050 or 10060.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

CHEM 10055  MOLECULES OF LIFE (KBS)  3 Credit Hours
An integrated introduction to molecular systems and their participation in the processes of life.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences

College of Arts and Sciences
CHEM 10060  GENERAL CHEMISTRY I (KBS)  4 Credit Hours
Chemistry for science majors, emphasizing stoichiometry, introduction to chemical reactions, thermochemistry, atomic structure, periodicity, molecular structure and chemical bonding. Students who register for this course must successfully complete the departmentally-approved placement assessment prior to the start of the term. Students who do not complete the placement assessment and associated modules will be deregistered. Students will be informed of the requirement by the Department of Chemistry and Biochemistry. Students may only receive credit toward graduation for one of the following courses: CHEM 10050 or CHEM 10055 or CHEM 10060 or CHEM 10970.  
Prerequisite: Minimum 55 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00024; or minimum C grade in MATH 10774 (taken as pre or corequisite); or minimum C grade in MATH 10775; or minimum C grade in any course MATH 11009 to MATH 49999.

Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Science

CHEM 10061  GENERAL CHEMISTRY II (KBS)  4 Credit Hours
Continuation of CHEM 10060, emphasizing intermolecular forces, properties of mixtures, main group chemistry, kinetics, equilibrium, acid-base chemistry, thermodynamics and electrochemistry. Students may only receive credit toward graduation for one of the following courses: CHEM 10050 or CHEM 10055 or CHEM 10061 or CHEM 10971.

Prerequisite: Minimum C grade in either CHEM 10060 or CHEM 10970.

Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Science

CHEM 10062  GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)  1 Credit Hour
Laboratory covering pertinent aspects of CHEM 10060. Three hours weekly. Students may only receive credit toward graduation for one of the following courses: CHEM 10053 or CHEM 10062.

Pre/corequisite: CHEM 10060 or CHEM 10970.

Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science

CHEM 10063  GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)  1 Credit Hour
Laboratory covering pertinent aspects of CHEM 10061, including qualitative analysis. Students may only receive credit toward graduation for one of the following courses: CHEM 10053 or CHEM 10063.

Prerequisite: CHEM 10062.

Pre/corequisite: CHEM 10061 or CHEM 10971.

Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science

CHEM 10970  HONORS GENERAL CHEMISTRY I (KBS)  4 Credit Hours
Rigorous general chemistry course for qualified students. Stoichiometry, equilibrium, thermochemistry, atomic structure and chemical bonding, descriptive inorganic and nuclear chemistry.

Prerequisite: Special approval.

Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences

CHEM 10971  HONORS GENERAL CHEMISTRY II (KBS)  4 Credit Hours
A continuation of CHEM 10970. Topics include properties of mixtures, properties of the elements, periodic patterns, organic compounds, kinetics, equilibrium, thermodynamics and electrochemistry.

Prerequisite: CHEM 10970 with minimum C grade.

Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences

CHEM 20050  CAREER PATHWAYS IN CHEMISTRY  1 Credit Hour
Designed to introduce students to the wide range of career pathways available in chemistry. Students will learn different strategies for identifying and pursuing career opportunities, and will develop their communication skills through writing assignments and oral presentations. Satisfactory/Unsatisfactory (S/U) graded.

Prerequisite: None.

Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

CHEM 20095  SPECIAL TOPICS  1-3 Credit Hours
(repeatable for credit) Selected topics in chemistry.

Prerequisite: special approval.

Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CHEM 20098  INTRODUCTION TO CHEMICAL RESEARCH (ELR)  1-3 Credit Hours
Research experience for freshmen and sophomores. Registration requires prior approval of the research director. Does not count toward the electives for the BS or BA chemistry degree. A written report is required.

Prerequisite: GPA of 2.500 in chemistry and special approval.

Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

CHEM 20284  PHYSIOLOGICAL CHEMISTRY  4 Credit Hours
Chemistry and metabolism of carbohydrates, lipids, nucleic acids and proteins; regulation of metabolism, nature of enzyme action, clinical aspects of biochemistry. Four hours of lecture weekly.

Prerequisite: CHEM 10052 or 20481.

Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
CHEM 20481 BASIC ORGANIC CHEMISTRY I 4 Credit Hours
Survey of the structure, preparation and reactions (including mechanisms) of organic compounds emphasizing the chemistry of biologically important functional groups. Students may only receive credit toward graduation for one of the following courses: CHEM 10052 or CHEM 10055 or CHEM 20482 or CHEM 30482.
Prerequisite: CHEM 10061 or 10971 with a minimum C grade.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: TAG Science

CHEM 20482 BASIC ORGANIC CHEMISTRY II 2 Credit Hours
Continuation of CHEM 20481, emphasizing the chemistry of functional groups prevalent in biological chemistry. Students may only receive credit toward graduation for one of the following courses: CHEM 10052 or CHEM 10055 or CHEM 20482 or CHEM 30482.
Prerequisite: CHEM 20481 with a minimum C grade.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
Attributes: TAG Science

CHEM 30050 INTRODUCTION TO MATERIALS CHEMISTRY 2 Credit Hours
This course provides an introduction to materials and their applications. It serves as the initiation for the materials chemistry concentration.
Prerequisite: CHEM 10061 or 10971; and CHEM 30481 and PHY 23101.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 30105 ANALYTICAL CHEMISTRY I 3 Credit Hours
Covers the fundamental theory, experimental methods, and applications of analytical chemistry principles in chemistry as well as other related disciplines such as life sciences and environmental science. It covers analytical measurements, experimental error, statistics, chemical equilibrium and titration, spectrometry as well as analytical separation techniques.
Prerequisite: CHEM 10061.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 30106 ANALYTICAL CHEMISTRY II 2 Credit Hours
Covers the theoretical basis and experimental methods of analytical chemistry not considered in Analytical Chemistry I (CHEM 30105), such as noise reduction, advanced chemical equilibria and titrations, electrochemistry, atomic spectroscopy, instrumental design, and sample preparation. Prerequisite: CHEM 30105
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 30107 ANALYTICAL CHEMISTRY LABORATORY I (WIC) 1 Credit Hour
Fundamental laboratory class for analytical chemistry. Provides hands-on experience to students on the subjects including data treatment, volumetric analysis, spectrophotometry, separation techniques and mass spectrometry. Pre-/corequisite: CHEM 30105.
Prerequisite: CHEM 10063.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

CHEM 30108 ANALYTICAL CHEMISTRY LABORATORY II (WIC) 2 Credit Hours
Advanced analytical chemistry laboratory class which covers a broad range of modern analytical techniques, including ion-selective electrodes, voltammetry, atomic spectroscopy, mass-spectrometry and capillary electrophoresis. Unlike Analytic Chemistry Laboratory I (CHEM 30107) this class focuses on forensic rather than bioanalytical applications.
Prerequisite: CHEM 30105.
Pre/corequisite: CHEM 30107.
Schedule Type: Laboratory
Contact Hours: 6 lab
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

CHEM 30284 INTRODUCTORY BIOLOGICAL CHEMISTRY 4 Credit Hours
Chemistry and metabolism of biochemically important compounds; nature of enzyme action; metabolic regulation and bioenergetics.
Prerequisite: CHEM 20481; or CHEM 30481 and 30482.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CHEM 30301 INORGANIC CHEMISTRY I 2 Credit Hours
Chemistry of hydrogen, ions in aqueous solution, redox reactions, coordination complexes: d-block chemistry, crystal field model, electronic spectra and magnetism, introduction to organometallic chemistry, periodic trends for p-block elements.
Prerequisite: CHEM 10061.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 30475 ORGANIC CHEMISTRY LABORATORY I (ELR) 1 Credit Hour
Practical experience in organic laboratory techniques on both micro- and macroscale: physical methods for purification and characterization of organic compounds, introduction to organic reactions.
Prerequisite: CHEM 10063; Pre/corequisite: CHEM 20481 or 30481.
Schedule Type: Laboratory
Contact Hours: 1 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, TAG Science

CHEM 30476 ORGANIC CHEMISTRY LABORATORY II 1 Credit Hour
Continuation of CHEM 30475, involving multi-step organic experiments that utilize techniques introduced in CHEM 30475.
Prerequisite: CHEM 30475.
Pre/corequisite: CHEM 20482 or 30482.
Schedule Type: Laboratory
Contact Hours: 1 lab
Grade Mode: Standard Letter
Attributes: TAG Science

CHEM 30481 ORGANIC CHEMISTRY I 3 Credit Hours
Introduction to organic chemistry from structural, mechanistic and synthetic viewpoints with an emphasis on the chemistry of biologically relevant functional groups. Students may only receive credit toward graduation for one of the following courses: CHEM 10052 or CHEM 10055 or CHEM 20481 or CHEM 30481.
Prerequisite: CHEM 10061 or CHEM 10971 with a minimum C grade.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CHEM 30482  ORGANIC CHEMISTRY II  3 Credit Hours
Continuation of CHEM 30481; organic chemistry from mechanistic and synthetic viewpoints; IR and NMR spectroscopy; mass spectrometry. Students may only receive credit toward graduation for one of the following courses: CHEM 10052 or CHEM 10055 or CHEM 20482 or CHEM 30482. 
Prerequisite: CHEM 30481 with a minimum C grade.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40053  MATERIALS CHEMISTRY LABORATORY  2 Credit Hours
Exploration of the synthesis, characterization and application of inorganic and organic materials.
Prerequisite: CHEM 30050.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

CHEM 40092  INTERNSHIP IN CHEMISTRY AND BIOCHEMISTRY (ELR)  1-9 Credit Hours
Workplace experience in chemistry or biochemistry relevant to a student’s career objectives. Includes career advising and job search strategies. Comprehensive written report and presentation of activities required after completion of internship.
Prerequisite: Junior standing; and special approval.
Schedule Type: Practicum or Internship
Contact Hours: 3-27 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

CHEM 40093  VARIABLE TITLE WORKSHOP IN CHEMISTRY  1-6 Credit Hours
(Repeatable for credit)Variable titled workshop in chemistry.
Prerequisite: Special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CHEM 40099  SENIOR HONORS THESIS (ELR)  1-10 Credit Hours
(Repeatable for credit)For departmental honors may be started summer prior to senior year. Register each semester during senior year. Minimum total credit 5-hours.
Prerequisite: Departmental and honors college approval.
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 1-10 other
Grade Mode: Standard Letter-IP

CHEM 40109  BIOANALYTICAL CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 50109 and CHEM 70109) Covers traditional as well as newly emerging topics in the field of bioanalytical chemistry. Provides an overview of the fundamental biological targets for bioanalytical assays, such as lipids, peptides, proteins, nucleic acids and cells. Briefly introduces traditional tools, such as chromatography, electrophoresis, mass spectrometry, fluorescence techniques, immunoassays, and biosensors. Discusses approaches most recently developed in the field, which include lab-on-a-chip and single molecule techniques. Co/Prerequisite: CHEM 30284 or 40245 or 40261.
Prerequisite: CHEM 30105.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40110  ANALYTICAL MASS SPECTROMETRY  3 Credit Hours
(Slashed with CHEM 50110 and CHEM 70110) Survey of modern techniques in and associated with mass spectrometry, including historical perspectives, strengths and weaknesses, detection and quantification of analytes, ionization source and mass analyzer design, as well as construction of associated technologies including vacuum systems, ion detection, and ion optics. Ion formation processes will also be discussed.
Prerequisite: CHEM 30105 with minimum C grade; and MATH 12002 or MATH 12021 with minimum C grade.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40113  CHEMICAL SEPARATIONS  3 Credit Hours
(Cross-listed with CHEM 50113 and CHEM 70113) Theory, instrumentation and applications of chemical separations for chemical analysis with an emphasis on gas and liquid chromatography.
Prerequisite: CHEM 30106.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40116  SPECTROCHEMICAL METHODS OF ANALYSIS  3 Credit Hours
(Slashed with CHEM 50116 and CHEM 70116) Presented material is designed to familiarize students with fundamental concepts in spectrochemical analyses, mainly in the form of optical spectroscopic methods. Design and construction of spectroscopic instruments, detection and quantification of analytes, interaction of electromagnetic radiation with molecules, as well as collection and processing of analytical signals will be presented.
Prerequisite: CHEM 30105 with minimum C grade; and MATH 12002 or MATH 12021 with minimum C grade.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40118  SPEKTROCHEMICAL METHODS OF ANALYSIS  3 Credit Hours
(Slashed with CHEM 50118 and CHEM 70118) Presented material is designed to familiarize students with fundamental concepts in spectrochemical analyses, mainly in the form of optical spectroscopic methods. Design and construction of spectroscopic instruments, detection and quantification of analytes, interaction of electromagnetic radiation with molecules, as well as collection and processing of analytical signals will be presented.
Prerequisite: CHEM 30105 with minimum C grade; and MATH 12002 or MATH 12021 with minimum C grade.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40195  SPECIAL TOPICS IN ANALYTICAL CHEMISTRY  1-3 Credit Hours
(Repeatable for credit)Selected topics in analytical chemistry.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CHEM 40245  BIOCHEMICAL FOUNDATIONS OF MEDICINE  4 Credit Hours
(Cross-listed with CHEM 50245) Chemistry and metabolism of biologically important compounds; enzyme catalysis; metabolic regulation, inborn and induced errors of metabolism. For students in integrated life science (ILS) program.
Prerequisite: CHEM 30481 and pre- or corequisite: CHEM 30482.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
CHEM 40248 ADVANCED BIOLOGICAL CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 50248 and CHEM 70248) Chemistry of biologically important molecules. Advanced topics in metabolic and enzyme regulation; enzyme kinetics and mechanism; DNA replication, recombination and repair; gene transcription and translation; recombinant DNA technology; selected areas in molecular physiology. Six hours weekly.
Prerequisite: CHEM 30284 or 40245 or 40247.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40251 ADVANCED BIOLOGICAL CHEMISTRY LABORATORY (WIC)  2 Credit Hours
Practical experience in the chemistry of biologically important molecules. Properties of proteins, lipids and nucleic acids. Recombinant DNA technology. Six hours weekly.
Prerequisite: CHEM 30284 or 40245 or 40247.
Schedule Type: Lecture
Contact Hours: 2 lab
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

CHEM 40261 PRINCIPLES OF BIOCHEMISTRY I  3 Credit Hours
(Cross-listed with CHEM 50261 and CHEM 70261) Introduction to biochemical principles regarding the structure and function of biomolecules including water, amino acids, proteins, carbohydrates and lipids; emphasis on enzymes, membranes and bioenergetics. 000) grade in MATH 12002
Prerequisite: CHEM 20481 or CHEM 30482; and CHEM 40555 or CHEM 40567 or a minimum C (2.000) grade in MATH 12021 or a minimum C (2.)
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40262 PRINCIPLES OF BIOCHEMISTRY II  3 Credit Hours
(Cross-listed with CHEM 50262 and CHEM 70262) Aspects of biochemistry focusing on information, chemical and energy flow, including: integration of metabolic pathways; DNA replication, repair, recombination and modification; transcription and translation; signal transduction, post-translational modification.
Prerequisite: CHEM 40261.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40263 PHYSICAL BIOCHEMISTRY  3 Credit Hours
(Slashed with CHEM 50263 and CHEM 70263) Principles and techniques of physical chemistry used in studying biomacromolecules and biological systems, spectroscopy, structure and properties of biological molecules.
Prerequisite: CHEM 40555 or 40567; and CHEM 30284 or CHEM 40245 or CHEM 40261.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40295 SPECIAL TOPICS IN BIOCHEMISTRY  1-3 Credit Hours
(Repeatable for credit) Selected topics in biochemistry.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CHEM 40302 INORGANIC CHEMISTRY II  2 Credit Hours
(Cross-listed with CHEM 50302) Physical techniques in inorganic chemistry, molecular structure and bonding, metallic and ionic solids, organometallic chemistry, homogeneous and heterogeneous catalysis; solid-state and materials chemistry, nanomaterials, nanoscience and nanotechnology. Prerequisite: CHEM 30301
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 40303 INORGANIC CHEMISTRY III  2 Credit Hours
(Cross-listed with CHEM 50303) Molecular symmetry, molecular orbital theory of polyatomic molecules and octahedra complexes, electronic spectra and reaction mechanisms of d-block complexes, periodic trends Groups 1 and 2 and d-block, bioinorganic chemistry.
Prerequisite: CHEM 40302.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 40352 INORGANIC MATERIALS CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 50352 and CHEM 70352) Broad survey of the synthesis, properties, characterization and applications of inorganic materials.
Prerequisite: CHEM 30050 and 40361.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40364 INTERMEDIATE INORGANIC CHEMISTRY LAB  1 Credit Hour
A laboratory course providing experience in the synthesis of significant inorganic compounds and the techniques of various experimental and spectroscopic methods and chromatographic separations.
Prerequisite: CHEM 40303.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter

CHEM 40365 BIOLOGICAL INORGANIC CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 50365 and CHEM 70365) Physical methods, s-block metals, metal ion-induced forlding, electron transfer proteins, oxidoreductases, substrate binding and activation by non-redox mechanisms, biominalization, group-atom transfer and metals in medicine.
Prerequisite: CHEM 30301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40395 SPECIAL TOPICS IN INORGANIC CHEMISTRY  1-3 Credit Hours
(Repeatable for credit) Selected topics in inorganic chemistry.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisite(s)</th>
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<tbody>
<tr>
<td>CHEM 40451</td>
<td>ORGANIC MATERIALS CHEMISTRY</td>
<td>3</td>
<td>Broad survey of the synthesis, properties, characterization and applications of organic and polymeric materials.</td>
<td>CHEM 30482.</td>
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<td>CHEM 40476</td>
<td>SPECTROSCOPIC IDENTIFICATION OF ORGANIC</td>
<td>2</td>
<td>Strategies for structural elucidation of organic compounds from analysis of infrared, proton and carbon NMR, and mass spectrometric data through lectures and problem solving.</td>
<td>CHEM 30482.</td>
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<td>CHEM 40477</td>
<td>INTERMEDIATE ORGANIC CHEMISTRY LABORATORY</td>
<td>1</td>
<td>Continuation of CHEM 30476, including hands-on use of a high-field NMR spectrometer; single and multistep organic syntheses.</td>
<td>CHEM 30476.</td>
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<td>CHEM 40478</td>
<td>SYNTHESIS OF ORGANIC LIQUID CRYSTALS</td>
<td>3</td>
<td>Synthesis of organic thermotropic liquid crystals including nematic, smectic and discotic variants. Evaluation of the phase types using polarizing microscopy and DSC. Brief introduction into their use in display devices.</td>
<td>CHEM 30478.</td>
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<td>CHEM 40483</td>
<td>INTERMEDIATE ORGANIC CHEMISTRY</td>
<td>1</td>
<td>Continuation of CHEM 30482; organic chemistry from mechanistic and synthetic viewpoints, including synthetic design, organotransition metal chemistry and free radical chemistry.</td>
<td>A minimum C grade in CHEM 30482.</td>
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<td>CHEM 40495</td>
<td>SPECIAL TOPICS IN ORGANIC CHEMISTRY</td>
<td>1-3</td>
<td>Selected topics in organic chemistry.</td>
<td>Special approval.</td>
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<td>CHEM 40555</td>
<td>PHYSICAL CHEMISTRY I</td>
<td>3</td>
<td>Fundamental concepts of physical chemistry, with example problems chosen emphasizing applications in chemistry and the biological sciences.</td>
<td>CHEM 10061 or CHEM 10971 with a minimum C grade; MATH 12003 with a minimum C grade; and PHY 23102.</td>
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<td>CHEM 40556</td>
<td>PHYSICAL CHEMISTRY II</td>
<td>3</td>
<td>A continuation of CHEM 40555. Areas covered include quantum mechanics, atomic and molecular structure, spectroscopy, statistical mechanics, theories of reaction rates and the solid state.</td>
<td>CHEM 40555 or PHY 45301.</td>
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<td>CHEM 40557</td>
<td>PHYSICAL CHEMISTRY LABORATORY</td>
<td>2</td>
<td>Experiments in numerous areas of physical chemistry, including the interpretation and reporting of obtained experimental data, correlation of results with theory and an introduction to the computer treatment of data.</td>
<td>CHEM 40556.</td>
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<td>CHEM 40559</td>
<td>NANOMATERIALS</td>
<td>3</td>
<td>Fundamental aspects of nanomaterials ranging from nanoparticles to three-dimensional (3D) nanostructures emphasizing their synthesis, chemistry and applications.</td>
<td>CHEM 10061.</td>
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<td>Pre/corequisite: CHEM 40555 or CHEM 40567.</td>
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<td>Contact Hours: 3 lecture</td>
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<td>CHEM 40567</td>
<td>PHYSICAL CHEMISTRY FOR LIFE SCIENCES</td>
<td>4</td>
<td>Traditional aspects of physical chemistry with minimal calculus treatment. Applications to the health sciences emphasized. Pre or co-require: PHY 13002 or PHY 23102.</td>
<td>CHEM 10061 or CHEM 10971 with minimum C grade; and MATH 12002 or MATH 12021.</td>
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<tr>
<td>CHEM 40568</td>
<td>ELEMENTARY PHYSICAL CHEMISTRY LABORATORY</td>
<td>1</td>
<td>Provides hands-on experience with calorimetry, viscosimetry and spectroscopic techniques.</td>
<td>CHEM 40555 or 40567.</td>
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<td>Schedule Type: Laboratory</td>
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<td>Contact Hours: 1 lab</td>
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<td>Grade Mode: Standard Letter</td>
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CHEM 40571  SURFACE CHEMISTRY  2 Credit Hours
(Cross-listed with CHEM 50571 and CHEM 70571) Treatment of basic principles and concepts in surface and colloid chemistry. Relationship to practical systems emphasized. Two hours lecture weekly.
Prerequisite: CHEM 40555 or 40567.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 40575  MOLECULAR SPECTROSCOPY  3 Credit Hours
(Cross-listed with CHEM 50575 and CHEM 70575) Survey of the fundamental principles of the interaction of radiation with matter, with an emphasis on the interpretation of microwave, infrared and ultraviolet-visible spectra. Introduction to group theory and its application to spectroscopic interpretation. Description of modern experimental techniques.
Prerequisite: CHEM 40556.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 40595  SPECIAL TOPICS IN PHYSICAL CHEMISTRY  1-3 Credit Hours
(Repeatable for credit) Selected topics in physical chemistry.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Satisfactory/Unsatisfactory

CHEM 40795  CURRENT TOPICS IN CHEMICAL EDUCATION  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with CHEM 50795) Recent advances in chemical research, instrumentation and theory important to chemical educators.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Satisfactory/Unsatisfactory

CHEM 40796  INDIVIDUAL INVESTIGATION  1-8 Credit Hours
(Repeatable for credit) Registration requires prior approval of the research director. Written report required. Maximum of two hours may be applied to the four hour CHEM 40000 elective requirement for the chemistry concentration within the B.S. in Chemistry.
Prerequisite: 2.500 GPA in chemistry and special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CHEM 41010  BIOPHOTONICS  3 Credit Hours
(Slashed with CHEM 51010; Cross-listed with BSCI 41110 and BSCI 51110 and PHY 41110 and PHY 51110) Interdisciplinary overview of the basics of biophotonics; application of biophotonics techniques to probe biological samples. Introduction to the foundations of optics and photonics and how the molecular structure of organic molecules translates into unique photonic properties and targeting in biological cells or tissue. Preparation of fluorescent materials, advanced spectroscopy and cell visualization using regular and confocal fluorescence microscopy.
Prerequisite: special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 6 lab
Grade Mode: Standard Letter

CHEM 40093  VARIABLE TITLE WORKSHOP IN CHEMISTRY  1-6 Credit Hours
(Repeatable for credit) Variable titled workshop in chemistry.
Prerequisite: Graduate standing and special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

CHEM 50109  BIOANALYTICAL CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40109 and CHEM 70109) Covers traditional as well as newly emerging topics in the field of bioanalytical chemistry. The course will provide an overview of the fundamental biological targets for the bioanalytical assays, such as lipids, peptides, proteins, nucleic acids, and cells. The course will then briefly introduce traditional tools, such as chromatography, electrophoresis, mass spectrometry, fluorescence techniques, immunoassays, and biosensors. Finally, the course will discuss approaches most recently developed in the field, which include lab-on-a-chip and single molecule techniques.
Prerequisite: CHEM 30105; and graduate standing; and special approval.
Corequisite: CHEM 30284 or 40245 or 40261.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50110  ANALYTICAL MASS SPECTROMETRY  3 Credit Hours
(Slashed with CHEM 40110 and CHEM 70110) Survey of modern techniques in and associated with mass spectrometry, including historical perspectives, strengths and weaknesses, detection and quantification of analytes, ionization source and mass analyzer design, as well as construction of associated technologies including vacuum systems, ion detection, and ion optics. Ion formation processes will also be discussed.
Prerequisite: Graduate standing in chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50113  CHEMICAL SEPARATIONS  3 Credit Hours
(Cross-listed with CHEM 40113 and CHEM 70113) Theory, instrumentation and applications of chemical separations for chemical analysis. Emphasis on gas and liquid chromatography.
Prerequisite: CHEM 30106 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50116  SPECTROCHEMICAL METHODS OF ANALYSIS  3 Credit Hours
(Slashed with CHEM 40116 and CHEM 70116) Presented material is designed to familiarize students with fundamental concepts in spectrochemical analyses, mainly in the form of optical spectroscopic methods. Design and construction of spectroscopic instruments, detection and quantification of analytes, interaction of electromagnetic radiation with molecules, as well as collection and processing of analytical signals will be presented.
Prerequisite: Graduate standing in chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CHEM 50245 BIOCHEMICAL FOUNDATIONS OF MEDICINE  4 Credit Hours
(Cross-listed with CHEM 40245) Introduction to chemistry and metabolism of important compounds in biological systems; enzymes and characteristics of enzyme catalysis; regulation of metabolism at molecular, cellular and organism levels; inborn and induced errors of metabolism. Designed and scheduled for and priority given to students in integrated life sciences program. Graduate standing.
Prerequisite: CHEM 30481.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CHEM 50248 ADVANCED BIOLOGICAL CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40248 and CHEM 70248) Chemistry of biologically important molecules. Advanced topics in: metabolic and enzyme regulation; enzyme kinetics and mechanism; DNA replication, recombination and repair; gene transcription and translation; recombinant DNA technology; selected areas in molecular physiology. Three hours weekly.
Prerequisite: CHEM 30284 or CHEM 40245 or CHEM 40247; graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50261 PRINCIPLES OF BIOCHEMISTRY I  3 Credit Hours
(Cross-listed with CHEM 40261 and CHEM 70261) Introduction to biochemical principles regarding the structure and function of biomolecules including water, amino acids, proteins, carbohydrates and lipids; emphasis on enzymes, membranes and bioenergetics.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50262 PRINCIPLES OF BIOCHEMISTRY II  3 Credit Hours
(Cross-listed with CHEM 40262 and CHEM 70262) Aspects of biochemistry focusing on information, chemical and energy flow, including: integration of metabolic pathways; DNA replication, repair, recombination and modification; transcription and translation; signal transduction, and post-translational modification. Prerequisites: CHEM 50261 or CHEM 70261; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50263 PHYSICAL BIOCHEMISTRY  3 Credit Hours
( cross-listed with CHEM 40263 and CHEM 70263) Principles and techniques of physical chemistry used in studying biomacromolecules and biological systems. Topics covered are thermodynamics, spectroscopy, structure and properties of biological molecules.
Prerequisite: Graduate standing in chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50302 INORGANIC CHEMISTRY II  2 Credit Hours
(Cross-listed with CHEM 40302) Physical techniques in inorganic chemistry, molecular structure and bonding, metallic and ionic solids, organometallic chemistry, homogeneous and heterogeneous catalysis; solid-state and materials chemistry, nanomaterials, nanoscience and nanotechnology.
Prerequisite: CHEM 30301 and graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 50303 INORGANIC CHEMISTRY III  2 Credit Hours
(Cross-listed with CHEM 40303) Molecular symmetry, molecular orbital theory of polyatomic molecules and octahedral complexes, electronic spectra and reaction mechanisms of d-block complexes, periodic trends Groups 1 and 2 and d-block, bioinorganic chemistry.
Prerequisite: CHEM 50302 and graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 50352 INORGANIC MATERIALS CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40352 and CHEM 70352) Broad survey of the synthesis, properties, characterization and applications of inorganic materials.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50365 BIOLOGICAL INORGANIC CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40365 and CHEM 70365) Physical methods, s-block metals, metal-induced stabilization, electron transfer proteins, oxidoreductases, hydrolases and lyases, metal transport and storage, nitrogenases, group-atom transfer and metals in medicine.
Prerequisite: CHEM 30360 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50451 ORGANIC MATERIALS CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40451 and CHEM 70451) Broad survey of the synthesis, properties, characterization and applications of organic and polymeric materials.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50476 SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS  2 Credit Hours
(Cross-listed with CHEM 40476 and CHEM 70476) Strategies for structural elucidation of organic compounds from analysis of infrared, proton and carbon NMR and mass spectrometric data through lectures and problem solving.
Prerequisite: CHEM 30482 and graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
CHEM 50478 SYNTHESIS OF ORGANIC LIQUID CRYSTALS 3 Credit Hours
(Cross-listed with CHEM 40478 and CHEM 70478) Synthesis of organic thermotropic liquid crystals including nematic, smectic and discotic variants. Evaluation of the phase types using polarizing microscopy and DSC. Brief introduction into their use in display devices.
Prerequisite: CHEM 30482; graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50555 PHYSICAL CHEMISTRY I 3 Credit Hours
(Cross-listed with CHEM 40555 and CHEM 70555) Fundamental concepts of physical chemistry, with example problems chosen emphasizing application in chemistry and the biological sciences.
Prerequisite: Graduate standing in chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50556 PHYSICAL CHEMISTRY II 3 Credit Hours
(Cross-listed with CHEM 40556 and CHEM 70556) A continuation of CHEM 50555. Areas covered are chemical kinetics, quantum chemistry and the solid state.
Prerequisite: CHEM 50555 or PHY 45301; graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50557 PHYSICAL CHEMISTRY LABORATORY 2 Credit Hours
(Slashed with CHEM 40557 and CHEM 70557) Experiments in numerous areas of physical chemistry, including the interpretation and reporting of obtained experimental data, correlation of results with theory and an introduction to the computer treatment of data. Co/prerequisites: CHEM 50555 and CHEM 50556.
Prerequisite: Graduate standing.
Schedule Type: Laboratory
Contact Hours: 4 lab
Grade Mode: Standard Letter

CHEM 50559 NANOMATERIALS 3 Credit Hours
(Slashed with CHEM 40559 and CHEM 70559) Fundamental aspects of nanomaterials ranging from nanoparticles to three-dimensional (3D) nanostructures emphasizing their synthesis, chemistry and applications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50571 SURFACE CHEMISTRY 2 Credit Hours
(Cross-listed with CHEM 40571 and CHEM 70571) Treatment of basic principles and concepts in surface and colloid chemistry. Relationship to practical systems emphasized. Graduate standing.
Prerequisite: CHEM 40555 or 40567.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 50575 MOLECULAR SPECTROSCOPY 3 Credit Hours
(Cross-listed with CHEM 40575 and CHEM 70575) Survey of the fundamental principles of the interaction of radiation with matter, with an emphasis on the interpretation of microwave, infrared and ultraviolet-visible spectra. Introduction to group theory and its application to spectroscopic interpretation. Description of modern experimental techniques.
Prerequisite: CHEM 40556 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 50795 CURRENT TOPICS IN CHEMICAL EDUCATION 1-3 Credit Hours
(Repeatable for credit) (Cross-listed with CHEM 40795) Designed to present recent advances in chemical research, instrumentation and theory to chemistry educators.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Satisfactory/Unsatisfactory

CHEM 51010 BIOPHOTONICS 3 Credit Hours
(Slashed with CHEM 41010; Cross-listed with BSCI 41110 and BSCI 51110 and PHY 41010 and PHY 51010) Interdisciplinary overview of the basics of biophotonics; application of biophotonic techniques to probe biological samples. Introduction to the foundations of optics and photonics and how the molecular structure of organic molecules translates into unique photonic properties and targeting in biological cells or tissue. Preparation of fluorescent materials, advanced spectroscopy and cell visualization using regular and confocal fluorescence microscopy.
Prerequisite: graduate standing and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 6 lab
Grade Mode: Standard Letter

CHEM 60199 THESIS I 2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in single semester distributed over several semesters if desired.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CHEM 60254 BIOMEMBRANES 2 Credit Hours
(Cross-listed with CHEM 70254) Biological membranes; composition, structure, dynamics and biogenesis; structure/function of protein mediated membrane transport.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

CHEM 60291 SEMINAR: RECENT DEVELOPMENTS IN BIOCHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 70291) Presentation and discussion of research papers from current biochemistry literature. Participation by students and faculty.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP
CHEM 60299 THESIS II 2 Credit Hours
Thesis students must continue registration until all degree requirements are met.
Prerequisite: CHEM 60199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CHEM 60327 MODERN INORGANIC CHEMISTRY 3 Credit Hours
(Cross-listed with CHEM 70327) Synthesis, structure and reactivity of inorganic compounds including transition metal and organometallic complexes. Graduate standing.
Prerequisite: CHEM 40362.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 60347 CHEMICAL CRYSTALLOGRAPHY 3 Credit Hours
(Cross-listed with CHEM 70347) Structure solution and refinement methods of X-ray diffraction data. Emphasis will be placed on single crystal techniques.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 60391 SEMINAR: RECENT DEVELOPMENTS IN INORGANIC CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 70391) Presentation and discussion of research papers from current inorganic chemistry literature. Participation by students and faculty.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

CHEM 60472 ADVANCED ORGANIC CHEMISTRY-SYNTHETIC ASPECTS 3 Credit Hours
Prerequisite: CHEM 30482.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 60473 STEREoselective ORGANIC SYNTHESIS 3 Credit Hours
(Cross-listed with CHEM 70473) Modern methods of asymmetric synthesis; introduction to selected methods for stereoselective N-heterocycle synthesis; application of these methods in natural product synthesis.
Prerequisite: CHEM 30482; graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 60541 ADVANCED PHYSICAL CHEMISTRY 3 Credit Hours
(Cross-listed with CHEM 70541) Covers basic materials of modern physical chemistry in two broad areas: thermodynamics and introductory quantum mechanics. Graduate standing.
Prerequisite: CHEM 50556.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 60591 SEMINAR: RECENT DEVELOPMENTS IN PHYSICAL CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 70591) Presentation and discussion of research papers from current physical chemistry literature. Participation by students and faculty.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

CHEM 60894 COLLEGE TEACHING OF CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 70894) Experience in teaching of chemistry at college level.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

CHEM 61191 SEMINAR: PROBLEM SOLVING IN ANALYTICAL CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 71191) Problem solving in analytical chemistry, including chemical analysis methods, instrumentation, sample preparation, and data handling.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 61491 SEMINAR: PROBLEM SOLVING IN ORGANIC CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 71491) Practical experience in the solving of current problems of synthesis, spectroscopy, and mechanism in organic chemistry.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 62191 SEMINAR: ANALYTICAL CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 72191) Student and faculty presentations on topics in analytical chemistry.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP
CHEM 62291  SEMINAR: BIOCHEMISTRY  1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 72291) Student and faculty presentations on topics in biochemistry
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 62391  SEMINAR: INORGANIC CHEMISTRY  1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 72391) Student and faculty presentations on topics in inorganic chemistry.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 62491  SEMINAR: ORGANIC CHEMISTRY  1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 72491) Presentation of topics from the recent literature on aspects of organic chemistry including synthesis, spectroscopy, mechanism, and materials properties.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 62591  SEMINAR: PHYSICAL CHEMISTRY  1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 72591) Student and faculty presentations on topics in physical chemistry.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 70093  VARIABLE TITLE WORKSHOP IN CHEMISTRY  1-6 Credit Hours
(Repeatable for credit) Variable title workshop in Chemistry.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

CHEM 70109  BIOANALYTICAL CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40109 and CHEM 50109) Covers traditional as well as newly emerging topics in the field of bioanalytical chemistry. The course will provide an overview of the fundamental biological targets for the bioanalytical assays, such as lipids, peptides, proteins, nucleic acids, and cells. The course will then briefly introduce traditional tools, such as chromatography, electrophoresis, mass spectrometry, fluorescence techniques, immunoassays, and biosensors. Finally, the course will discuss approaches most recently developed in the field, which include lab-on-a-chip and single molecule techniques.
Prerequisite: CHEM 30105; and doctoral standing; and special approval.
Corequisite: CHEM 30284 or 40245 or 40261.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 70110  ANALYTICAL MASS SPECTROMETRY  3 Credit Hours
(Repeatable for credit) (Cross-listed with CHEM 40110 and CHEM 50110) Survey of modern techniques in and associated with mass spectrometry, including historical perspectives, strengths and weaknesses, detection and quantification of analytes, ionization source and mass analyzer design, as well as construction of associated technologies including vacuum systems, ion detection, and ion optics. Ion formation processes will also be discussed.
Prerequisite: Doctoral standing in chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 70113  CHEMICAL SEPARATIONS  3 Credit Hours
(Cross-listed with CHEM 40113 and CHEM 50113) Theory, instrumentation and applications of chemical separations for chemical analysis. Emphasis on gas and liquid chromatography.
Prerequisite: CHEM 30106 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 70116  SPECTROCHEMICAL METHODS OF ANALYSIS  3 Credit Hours
(Repeatable for credit) Advanced topics in analytical chemistry. Emphasis on gas and liquid chromatography.
Prerequisite: Doctoral standing in chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 70195  ADVANCED TOPICS, ANALYTICAL  1-3 Credit Hours
(Repeatable for credit) Advanced topics in analytical chemistry.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CHEM 70248  ADVANCED BIOLOGICAL CHEMISTRY  3 Credit Hours
(Cross-listed with CHEM 40248 and CHEM 50248) Chemistry of biologically important molecules. Advanced topics in: metabolic and enzyme regulation; enzyme kinetics and mechanism; DNA replication; recombination and repair; gene transcription and translation; recombinant DNA technology; selected areas in molecular physiology. Three hours weekly.
Prerequisite: CHEM 30284 or 40245 or 40247 doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHEM 70254  BIOMEMBRANES  2 Credit Hours
(Cross-listed with CHEM 60254) Biological membranes; composition, structure, dynamics and biogenesis; structure/function of protein mediated membrane transport.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
CHEM 70261  PRINCIPLES OF BIOCHEMISTRY I  3 Credit Hours  
(Cross-listed with CHEM 40261 and CHEM 50261) Introduction to biochemical principles regarding the structure and function of biomolecules including water, amino acids, proteins, carbohydrates and lipids; emphases on enzymes, membranes and bioenergetics.  
Prerequisite: doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70262  PRINCIPLES OF BIOCHEMISTRY II  3 Credit Hours  
(Cross-listed with CHEM 40262 and CHEM 50262) Aspects of biochemistry focusing on information, chemical and energy flow, including: integration of metabolic pathways; DNA replication, repair, recombination and modification; transcription and translation; signal transduction, and post-translational modification.  
Prerequisite: CHEM 50261 or CHEM 70261; and doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70263  PHYSICAL BIOCHEMISTRY  3 Credit Hours  
(Slashed with CHEM 40263 and CHEM 50263) Principles and techniques of physical chemistry used in studying biomacro-molecules and biological systems. Topics covered are thermodynamics, spectroscopy, structure and properties of biological molecules.  
Prerequisite: Doctoral standing in chemistry.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70291  SEMINAR:RECENT DEVELOPMENTS IN BIOCHEMISTRY  
1 Credit Hour  
(Repeatable for credit) Presentation and discussion of research papers from current biochemistry literature. Participation by students and faculty.  
Prerequisite: doctoral standing.  
Schedule Type: Seminar  
Contact Hours: 1 other  
Grade Mode: Standard Letter-IP  

CHEM 70295  ADVANCED TOPICS IN BIOCHEMISTRY 1-3 Credit Hours  
(Repeatable for credit) Advanced topics in biochemistry.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 1-3 lecture  
Grade Mode: Standard Letter  

CHEM 70327  MODERN INORGANIC CHEMISTRY  3 Credit Hours  
(Cross-listed with CHEM 60327) Synthesis, structure and reactivity of inorganic compounds including transition metal and organometallic complexes. Doctoral standing.  
Prerequisite: CHEM 40362.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70347  CHEMICAL CRYSTALLOGRAPHY  3 Credit Hours  
(Cross-listed with CHEM 60347) Structure solution and refinement methods of X-ray diffraction data. Emphasis will be placed on single-crystal techniques.  
Prerequisite: Doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70352  INORGANIC MATERIALS CHEMISTRY  3 Credit Hours  
(Cross-listed with CHEM 40352 and CHEM 50352) Broad survey of the synthesis, properties, characterization and applications of inorganic materials.  
Prerequisite: Doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70365  BIOLOGICAL INORGANIC CHEMISTRY  3 Credit Hours  
(Cross-listed with CHEM 40365 and CHEM 50365) Physical methods, s-block metals, metal-induced stabilization, electron transfer proteins, oxidoreductases, hydrolases and lyases, metal transport and storage, nitrogenases, group-atom transfer and metals in medicine.  
Prerequisite: CHEM 30360 and doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70391  SEMINAR:RECENT DEVELOPMENTS IN INORGANIC CHEMISTRY  1 Credit Hour  
(Repeatable for credit) (Cross-listed with CHEM 60391) Presentation and discussion of research papers from current inorganic chemistry literature. Participation by students and faculty.  
Prerequisite: Doctoral standing.  
Schedule Type: Seminar  
Contact Hours: 1 other  
Grade Mode: Standard Letter-IP  

CHEM 70395  ADVANCED TOPICS, INORGANIC  1-3 Credit Hours  
(Repeatable for credit) Advanced topics in inorganic chemistry.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 1-3 lecture  
Grade Mode: Standard Letter-IP  

CHEM 70451  ORGANIC MATERIALS CHEMISTRY  3 Credit Hours  
(Cross-listed with CHEM 40451 and CHEM 50451) Broad survey of the synthesis, properties characterization and applications of organic and polymeric materials.  
Prerequisite: Doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CHEM 70472  ADVANCED ORGANIC CHEMISTRY-SYNTHETIC ASPECTS  3 Credit Hours  
Prerequisite: CHEM 30482.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
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<tr>
<td>CHEM 70473</td>
<td>STEREOSELECTIVE ORGANIC SYNTHESIS</td>
<td>3</td>
<td>(Cross-listed with CHEM 60473) Modern methods of asymmetric synthesis; introduction to selected methods for stereoselective N-heterocycle synthesis; application of these methods in natural product synthesis.</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
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<tr>
<td>CHEM 70476</td>
<td>SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS</td>
<td>2</td>
<td>(Cross-listed with CHEM 40476 and CHEM 50476) Strategies for structural elucidation of organic compounds from analysis of infrared, proton and carbon NMR, and mass spectrometric data through lectures and problem solving.</td>
<td>CHEM 30482</td>
<td>Lecture</td>
<td>2 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70478</td>
<td>SYNTHESIS OF ORGANIC LIQUID CRYSTALS</td>
<td>3</td>
<td>(Cross-listed with CHEM 40478 and CHEM 70478) Synthesis of organic thermotropic liquid crystals including nematic, smectic and discotic variants. Evaluation of the phase types using polarizing microscopy and DSC. Brief introduction into their use in display devices.</td>
<td>CHEM 30482</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70495</td>
<td>ADVANCED TOPICS, ORGANIC</td>
<td>1-3</td>
<td>(Repeatable for credit) Advanced topics in organic chemistry.</td>
<td>Permission</td>
<td>Lecture</td>
<td>1-3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70541</td>
<td>ADVANCED PHYSICAL CHEMISTRY</td>
<td>3</td>
<td>(Cross-listed with CHEM 60541) Covers basic materials of modern physical chemistry in two broad areas: thermodynamics and introductory quantum mechanics. Doctoral standing.</td>
<td>CHEM 50556</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70555</td>
<td>PHYSICAL CHEMISTRY I</td>
<td>3</td>
<td>(Cross-listed with CHEM 40555 and CHEM 50555) Fundamental concepts of physical chemistry, with example problems chosen emphasizing applications in chemistry and the biological sciences.</td>
<td>CHEM 30482</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70556</td>
<td>PHYSICAL CHEMISTRY II</td>
<td>3</td>
<td>(Cross-listed with CHEM 40556 and CHEM 50556) Fundamental concepts of physical chemistry of current interest. Included are biological and medical aspects of physical chemistry. Graduate credit given to nonchemistry and nonphysics majors and with permission to certain chemistry majors.</td>
<td>CHEM 5/70556</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70571</td>
<td>SURFACE CHEMISTRY</td>
<td>2</td>
<td>(Cross-listed with CHEM 40571 and CHEM 50571) Treatment of basic principles and concepts in surface and colloid chemistry. Relationship to practical systems emphasized. Doctoral standing.</td>
<td>CHEM 40555 or 40567</td>
<td>Lecture</td>
<td>2 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70575</td>
<td>MOLECULAR SPECTROSCOPY</td>
<td>3</td>
<td>(Cross-listed with CHEM 40575 and CHEM 50575) Survey of the fundamental principles of the interaction of radiation with matter, with an emphasis on the interpretation of microwave, infrared and ultraviolet-visible spectra. Introduction to group theory and its application to spectroscopic interpretation. Description of modern experimental techniques.</td>
<td>CHEM 40556 and doctoral standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>CHEM 70591</td>
<td>SEMINAR:RECENT DEVELOPMENTS IN PHYSICAL CHEMISTRY</td>
<td>1</td>
<td>(Repeatable for credit) (Cross-listed with CHEM 60591) Presentation and discussion of research papers from current physical chemistry literature. Participation by students and faculty.</td>
<td>Doctoral standing.</td>
<td>Seminar</td>
<td>1 other</td>
<td>Standard Letter-IP</td>
</tr>
</tbody>
</table>
CHEM 70595 ADVANCED TOPICS, PHYSICAL 1-3 Credit Hours
(Repeatable for credit) Advanced topics in physical chemistry.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CHEM 70894 COLLEGE TEACHING OF CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 60894) Experience in
teaching of chemistry at college level.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

CHEM 71191 SEMINAR: PROBLEM SOLVING IN ANALYTICAL CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 61191) Problem solving in analytical chemistry, including chemical analysis methods,
instrumentation, sample preparation, and data handling.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 71491 SEMINAR: PROBLEM SOLVING IN ORGANIC CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 61491) Practical experience in the solving of current problems of synthesis, spectroscopy,
and mechanism in organic chemistry.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 72191 SEMINAR: ANALYTICAL CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 62191) Student and faculty presentations on topics in analytical chemistry.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 72291 SEMINAR: BIOCHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 62291) Student and faculty presentations on topics in biochemistry.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 72391 SEMINAR: INORGANIC CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 62391) Student and faculty presentations on topics in inorganic chemistry.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 72491 SEMINAR: ORGANIC CHEMISTRY 1 Credit Hour
(Repeatable for credit) (Cross-listed with CHEM 62491) Presentation of topics from the recent literature on aspects of organic chemistry
including synthesis, spectroscopy, mechanism, and materials properties.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter-IP

CHEM 80199 DISSERTATION I 15 Credit Hours
(Repeatable for credit) Doctoral dissertation, for which registration in two semesters is required, first of which will be semester in which
dissertation work is begun and continuing until the completion of 30 hours.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CHEM 80299 DISSERTATION II 15 Credit Hours
(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and
continuing until all degree requirements are met.
Prerequisite: CHEM 80199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CHEM 80898 RESEARCH 1-15 Credit Hours
(Repeatable for credit) Research for doctoral students. Credits earned may be applied toward degree if department approves.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

Department of Computer Science

Computer Science (CS)

CS 10001 COMPUTER LITERACY 3 Credit Hours
Introduction to history, language, procedures, applications, abuses and impact of computers. Hands-on experience with microcomputers. Not open to students with previous experience.
Prerequisite: None.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter
CS 10051  INTRODUCTION TO COMPUTER SCIENCE (KMCR)  4 Credit Hours
An introductory, broad and hands-on coverage of aspects of computer science, including algorithms, problem solving, operating systems concepts, computer architecture, programming languages and modern applications. Three-credit lecture with one-credit lab.
Prerequisite: none.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 1 lab
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

CS 10062  PROGRAMMING FOR PROBLEM SOLVING IN SCIENCES  4 Credit Hours
Solving problems in a science frequently requires a knowledge of programming. This course provides an introduction to using programs to solve problems. It is designed for majors and non-majors who have had little or no prior programming experience. The course emphasizes a hands-on, team-based approach to learning programming and problem solving.
Prerequisite: minimum ALEKS score of 67 or MATH 10774 or MATH 10775 or MATH 11010 or a higher level MATH.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

CS 13001  COMPUTER SCIENCE I: PROGRAMMING AND PROBLEM SOLVING  4 Credit Hours
Computer science concepts, including algorithm development and problem-solving strategies focused on procedural abstraction. High-level programming concepts, including data types, expressions, program structures, functions, parameter passing, scope, extent, arrays, introduction to recursion and an introduction to object-oriented concepts.
Prerequisite: minimum C grade in MATH 11010 or MATH 12001.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

CS 13011  COMPUTER SCIENCE IA: PROCEDURAL PROGRAMMING  2 Credit Hours
Computer science concepts, including algorithm development and problem-solving strategies focused on programming abstractions. High-level programming concepts, including variables, branching, iteration and functions.
Prerequisite: minimum C grade in MATH 11010 or MATH 12001.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1.5 lecture, 1.5 lab
Grade Mode: Standard Letter

CS 13012  COMPUTER SCIENCE IB: OBJECT ORIENTED PROGRAMMING  2 Credit Hours
Computer science concepts, including algorithm development and problem-solving strategies focused on programming abstractions. High-level programming concepts, including introduction to recursion and an introduction to object-oriented concepts.
Prerequisite: Minimum C grade in CS 13011.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1.5 lecture, 1.5 lab
Grade Mode: Standard Letter

CS 13012  INTRODUCTION TO OBJECT ORIENTED PROGRAMMING  2 Credit Hours
Introduces to object-oriented concepts. Level programming concepts, including introduction to recursion and an introduction to object-oriented concepts.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 13013  COMPUTER SCIENCE IA: LAWS OF THOUGHT  3 Credit Hours
Focuses on computer science foundations and discrete mathematics. Specific topics include logic, sets, functions, relations, algorithms, proof techniques, counting, graphs, trees, Boolean algebra, grammars and languages.
Prerequisite: Minimum C grade in MATH 11009 or MATH 11010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 13015  COMPUTER SCIENCE IB: DATA STRUCTURES AND ABSTRACTION  4 Credit Hours
Introduces to object-oriented programming. Level programming concepts, including data types, expressions, program structures, functions, parameter passing, scope, extent, arrays, introduction to recursion and an introduction to object-oriented concepts.
Prerequisite: Minimum C grade in MATH 11009 or MATH 11010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 13018  PROGRAMMING FOR PROBLEM SOLVING IN SCIENCES  4 Credit Hours
Solving problems in a science frequently requires a knowledge of programming. This course provides an introduction to using programs to solve problems. It is designed for majors and non-majors who have had little or no prior programming experience. The course emphasizes a hands-on, team-based approach to learning programming and problem solving.
Prerequisite: minimum ALEKS score of 67 or MATH 10774 or MATH 10775 or MATH 11010 or a higher level MATH.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

CS 13021  COMPUTER SCIENCE IIA: DATA STRUCTURES AND ABSTRACTION  4 Credit Hours
Computer science concepts and problem solving focusing on data structure and abstraction. Object-oriented concepts and programming including encapsulation, information hiding, object design, generics, polymorphism and an introduction to inheritance. Dynamic memory structures including dynamic arrays, pointers, linked-lists and the use of recursion for problem solving. Abstract data types including stacks, queues, lists, trees and graphs.
Prerequisite: CS 13001 or CS 13012 with a minimum grade of C (2.000).
Corequisite: CS 23022.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

CS 13030  PROGRAMMING Robotic AND Embedded Systems LAB I  1 Credit Hour
This course provides a team based, hands-on introduction to linking and programming robotic and embedded systems. Students in this course work with junior and senior level students on projects building devices that require linking and programming robotic and embedded systems.
Prerequisite: C or better in either CS 13001 or CS 13012.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

CS 13031  RoboticS AND Embedded Systems LAB II  1 Credit Hour
CS 23302  ROBOTICS AND EMBEDDED SYSTEMS LAB II  2 Credit Hours
This course is the second computer science course on linking and programming robotic and embedded systems in a team based, hands-on environment. Students in this course work with junior and senior level students on projects building devices that require linking and programming robotic and embedded systems.
Prerequisite: C or better in CS 23001 and CS 23301.
Schedule Type: Laboratory
Contact Hours: 4 lab
Grade Mode: Standard Letter

CS 27101  INTRODUCTION TO WEB INTERFACE DESIGN  3 Credit Hours
Introduction to principles for the design and implementation of user-centered website interfaces, website interface evaluation, human computer interaction, effective data organization and manipulation and tools for website creation.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 29995  SPECIAL TOPICS IN COMPUTER SCIENCE  1-3 Credit Hours
(Repeatable for credit)Special topics from all areas of computer science.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

CS 33006  SOCIAL AND ETHICAL ISSUES IN COMPUTING (WIC)  3 Credit Hours
Social issues, including historical and social context, professional responsibilities, risks and liabilities and intellectual property.
Prerequisite: C (2.000) or better in CS 13001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

CS 33007  INTRODUCTION TO DATABASE SYSTEM DESIGN  3 Credit Hours
An introduction to the basic theoretical aspects of database systems, file organization, search methodologies, language design and performance evaluation techniques, initial modeling concepts and their use in hierarchical, network, relational and object-oriented database designs.
Prerequisite: minimum grade of C (2.000) in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 33011  SPEED PROGRAMMING TECHNIQUES  3 Credit Hours
Discussion and practice of pertinent aspects related to programming under time constraints.
Prerequisite: CS 23001.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

CS 33092  SPEED PROGRAMMING PRACTICUM (ELR)  2 Credit Hours
(Repeatable for credit)Practice of pertinent aspects from CS 3301.
Prerequisite: CS 33011.
Schedule Type: Practicum or Internship
Contact Hours: 2 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

CS 33101  STRUCTURE OF PROGRAMMING LANGUAGES  3 Credit Hours
Introduction to syntax, semantics, behavior and implementation issues in imperative, functional, logic and object-oriented languages; type theory, concurrency, data dependency, nondeterminism and internet languages.
Prerequisite: C (2.000) or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 33192  INTERNSHIP IN COMPUTER SCIENCE (ELR)  1-3 Credit Hours
(Repeatable for credit for a maximum of 12 credit hours) Supervised work experience in computer science. Since this work will be outside the department a report and final presentation will be required; a site visit might also be necessary. Satisfactory/unsatisfactory (S/U) graded.
Prerequisite: special approval.
Schedule Type: Practicum or Internship
Contact Hours: 3-9 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

CS 33211  OPERATING SYSTEMS  3 Credit Hours
Introduction to operating systems, processes and threads, CPU scheduling, mutual exclusion and synchronization, deadlock, memory management, file systems, networking and distributed systems. Pre or Prerequisite: CS 23001 with a minimum grade of C (2.000).
Corequisite: CS 35101.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 33223  UNIX TOOLS  3 Credit Hours
Course will cover UNIX operating system environment topics that will make the user more productive. Topics will include the user environment, shells, files, the file system, editors, scripting languages, document processing, processes, remote access and documentation.
Prerequisite: CS 13001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 33301 EMBEDDED SYSTEM PROGRAMMING  3 Credit Hours
Catalog Description (edited): An embedded system is a combination of computer hardware and software specifically designed for a particular function. Embedded systems have been playing important roles in various application areas such as industrial machines, automobiles, medical equipment, cameras, household appliances, air planes, vending machines, toys and other uses. Students will learn fundamental concepts of designing and programming embedded computer systems, including requirements specifications, architectural and detailed design, and implementation, focusing on real-time aspects of programming languages, operating system kernels, and hardware architectures.
Prerequisite: C or better in CS 23001.
Corequisite: CS 35101.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 33901 SOFTWARE ENGINEERING  3 Credit Hours
An introduction to software engineering concepts: life cycle models; modeling languages; requirements analysis; specification; design; testing; validation; project management and maintenance.
Prerequisite: C (2.000) or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 35101 COMPUTER ARCHITECTURE  3 Credit Hours
Functional overview of computer systems, interconnection of basic components, system performance measures, instruction set design, arithmetic logic unit, control unit, memory system, pipelining, interrupts and input-output. Prerequisite: C or better in CS 13001 or C or better in CS 13011 and CS 13012
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 35201 COMPUTER COMMUNICATION NETWORKS  3 Credit Hours
An introduction to net-centric systems, data communication protocols, network architectures, routing protocols, network management, congestion control, network security, compression techniques, mobile and wireless networks, and WWW as an example of a client-server system.
Prerequisite: minimum grade of C (2.000) in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 38101 INTRODUCTION TO GAME PROGRAMMING  3 Credit Hours
Game engine scripting, event driven and data driven programming, game engine data structures, basic game related graphics and AI concepts, a short game development project.
Prerequisite: minimum grade of C (2.000) or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 39995 SPECIAL TOPICS IN COMPUTER SCIENCE  1-3 Credit Hours
(Repeatable for credit)Special topics from all areas of computer science.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 41038 INTERMEDIATE LOGIC  3 Credit Hours
(Cross-listed with MATH 41038 and MATH 51038 and PHIL 41038 and PHIL 51038) A detailed, systematic study of symbolic logic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. The aim of the course is twofold: first, to develop a facility in understanding and using symbolic logic for various purposes, and second, to understand and appreciate symbolic logic as an area of study in itself. Topics include the distinction between syntactic, object-level proofs and semantic, meta-level proofs, the distinction between axiomatic systems and natural deduction systems of object-level proofs, various systems of modal logic, and some non-classical logics.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 41045 METALOGIC  3 Credit Hours
(Slashed with CS 51045; Cross-listed with MATH 41045 and MATH 51045 and PHIL 41045 and PHIL 51045) A detailed, systematic study of metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. Topics include the soundness and completeness of the propositional and predicate calculi, the decidability of propositional calculus, the undecidability of predicate calculus, Gödel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionality of the set of general recursive functions, abacus computable functions, and Turing computable functions, and the philosophical motivations for the Church-Turing Thesis that all computable functions are Turing computable.
Prerequisite: PHIL 41038.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 42201 INTRODUCTION TO NUMERICAL COMPUTING I  3 Credit Hours
An introduction to numerical methods and software for solving many common scientific computing problems. Linear systems, least-squares data fitting, nonlinear equations and systems and optimization problems.
Prerequisite: Minimum C grade in: MATH 12003; and MATH 21001 or MATH 20501; and PHIL 10061 or PHIL 13001, or CS 13011 and CS 13012.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 42202 NUMERICAL COMPUTING II  3 Credit Hours
(Cross-listed with CS 52202 and MATH 42202 and MATH 52202) A continuation of CS 42201. Topics include interpolation, numerical differentiation and integration, and numerical solution of ordinary differential equations.
Prerequisite: MATH 32044 or MATH 32052; and MATH 42201 or CS 42201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 43006    THEORY OF OBJECT-ORIENTED PROGRAMMING  3 Credit Hours
(Cross-listed with CS 53006) In depth course on the theory and principles of object-based and object-oriented programming using a language such as C++. The course covers advanced topics in inheritance and interface planning, generic (type independent) programming, factors of polymorphism, structure and organization of class libraries and object oriented design principles.
Prerequisite: CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43016    BIG DATA ANALYTICS  3 Credit Hours
This course will introduce the state-of-art computing platforms with the focus on how to utilize them in processing (managing and analyzing) massive datasets. The course will utilize several key data processing tasks, including simple statistics, data aggregation, join processing, frequent pattern mining, data clustering, information retrieval, pagerank, and massive graph analytics as the case study for large scale data processing. Prerequisites: C or better in CS 23001
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43105    DATA MINING TECHNIQUES  3 Credit Hours
Concepts and techniques of data mining. Data mining is a process of discovering information from a set of large databases. This course takes a database perspective on data mining, covering a set of interesting topics, including association rule mining, clustering, classification, web mining, etc. It covers the basics of some important theoretical foundations for data mining, including linear regression, Bayesian inferences, information theory, and markov chain random walk. Prerequisites: CS 33007
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43111    STRUCTURE OF COMPILERS  3 Credit Hours
(Cross-listed with CS 53111) Techniques used to write compilers including lexical analysis, syntax analysis, syntax-directed translation, type checking, run-time environments, and intermediate code generation. Prerequisite: CS 35101 and 33101.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43118    GRAPH AND SOCIAL NETWORK ANALYSIS  3 Credit Hours
(Slashed with CS 53118 and CS 73118) Catalog Description: This course covers a number of important and useful ideas in graph databases, especially in social networks (e.g. the data model for certain-uncertain graphs), indexing over graphs, and query processing algorithms for graph databases (e.g., single-source path queries, path queries, reachability queries, keyword search queries, subgraph matching, etc.). The influence maximization problems over social networks in real applications are also discussed as well as various queries over the distributed graph database. Prerequisites: CS 33007
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43202    SYSTEMS ADMINISTRATION  3 Credit Hours
(Cross-listed with CS 53202) The setting up and day-to-day administration of multiuser multitasking systems, such as the various versions of UNIX, together with the analysis of problems which can arise in these activities. Prerequisite: CS 33211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43203    SYSTEMS PROGRAMMING  3 Credit Hours
(Slashed with CS 53203) The setting up and day-to-day administration of multiuser multitasking systems, such as the various versions of UNIX, together with the analysis of problems which can arise in these activities. Implementation and maintenance of system programs, system utilities, command interpreters, editors, file maintenance programs, text processors, interrupt handling, and device drivers. Prerequisite: CS 23001 with a minimum grade of C.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43301    SOFTWARE DEVELOPMENT FOR ROBOTICS  3 Credit Hours
(Slashed with CS 53301) Robots are being used in multiple places that are not easily accessible for humans to support the lack of available labor, to gain extra precision, and for cost effective manufacturing processes, monitoring, space exploration, precision surgery and artificial limb support for elderly and physically challenged persons. Computer science is an integral part of robotics as it includes areas such as computer algorithms, artificial intelligence, and image processing that are essential aspects of robotics. This first course on robotics will teach the students various motions of rigid robots, mathematics and algorithms related to these motions, motion planning, obstacle avoidance, intelligent path planning including use of various sensors. Prerequisites: Minimum grade of C or better in CS 23001 and CS 33301
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43302    ALGORITHMIC ROBOTICS  3 Credit Hours
(Slashed with CS 53302 and CS 73302) This course provides students theoretical, mathematical, and practical foundations for the design, analysis, and evaluation of algorithms for robots for diverse robotic applications. We will focus on a principled and mathematically sound approach to the design of algorithms for robots rather than ad hoc and hacking development approaches. Prerequisites: CS 33301 and CS 43301
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43303    INTERNET OF THINGS  3 Credit Hours
(Slashed with CS 53303 and CS 73303) This course will provide a comprehensive an understanding of the Internet of Things by looking into a variety of real-world application scenarios, existing and new technologies and architectures, communication protocols and standardization efforts, societal and behavioral changes, and how to apply these technologies to tackle real-world problems. Prerequisites: CS 33301 or CS 45231
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 43305 ADVANCED DIGITAL DESIGN 3 Credit Hours
(Slashed with CS 53305) This course describes techniques in the design of digital systems. Topics covered include combinational and sequential logic, gate-level minimization, registers and counters, memory and programmable logic, hardware description languages, digital communication including serial and parallel and synchronous and asynchronous methods. Prerequisites: Minimum C or better in CS 23001
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43334 HUMAN-ROBOT INTERACTION 3 Credit Hours
(Slashed with CS 53334 and CS 73334) Human-Robot Interaction (HRI) is the study of interactions between humans and robots dedicated to understanding, designing, and evaluating robotic systems for use by and with humans. HRI is a multidisciplinary field that incorporates human-computer interaction, artificial intelligence, robotics, natural language understanding, design, and social sciences. Interaction between humans and robots may take several forms, but are generally categorized by how close in proximity the humans and robots are to each other such as remote, proximate, and hybrid interaction. In the class, students will learn the fundamental technologies and theories in each category, and blend this knowledge with various case studies and lab activities.
Prerequisite: CS 33301 and CS 43301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 43401 SECURE PROGRAMMING 3 Credit Hours
Code vulnerabilities, static code analysis, error handling, secure I/O, race conditions and mediation, handling buffer and integer overflow, handling vulnerabilities in web and database programming, privacy and cryptography, random number generators.
Prerequisite: C (2.000) or better in CS 23001 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 44001 COMPUTER SCIENCE III-PROGRAMMING PATTERNS 4 Credit Hours
(Slashed with CS 54001) CS III Programming Patterns extends students’ knowledge of object oriented programming, and improves their C++ programming skills. Specifically, it covers procedural and object-based programming, inheritance, polymorphism, popular design patterns, and generic programming.
Prerequisite: CS 23001 with a minimum grade of C (2.000).
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter

CS 44003 MOBILE APPS IN IOS PROGRAMMING 3 Credit Hours
(Slashed with CS 54003) Students are introduced to mobile applications programming in the iOS environment using model, view, controller paradigms. Other topics include swift, programming using on board devices like GPS, cameras, motion detectors, and screen touches.
Prerequisite: CS 23001 with a minimum C grade.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 44105 WEB PROGRAMMING I 3 Credit Hours
(Slashed with CS 54105) This course is the first of a two-course sequence on Web Programming covering from basic to advanced topics on Web Programming based on open standards and best practices. Topics covered include the HyperText Markup Language (HTML), specifying look and feel using Cascading Style Sheets (CSS), client side programming in Javascript, server side programming in PHP, and the Hypertext Transfer Protocol (HTTP).
Prerequisite: CS 23001 with a minimum grade of C (2.000).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 44106 WEB PROGRAMMING II 3 Credit Hours
(Slashed with CS 54106) This course is the second of a two-course sequence on Web Programming covering advanced topics on Web Programming based on open standards and best practices. This is a project course exploring advanced aspects of Web programming. Topics covered include advanced server side programming in PHP; database driven websites; structured query language (SQL) and MySQL; E-commerce; web hosting using Apache, PHP and MySQL; basic and digest authentication; web security, encryption and digital certificates; Extensible Markup Language (XML) for the web, AJAX and web services; scalable vector graphics (SVG); mobile websites.
Prerequisite: CS 44105.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 44201 ARTIFICIAL INTELLIGENCE 3 Credit Hours
(Cross-listed with CS 54201) Examines goals, problems, concepts and methods of artificial intelligence, heuristic versus algorithmic methods, natural language comprehension, theorem proving.
Prerequisite: CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 44901 SOFTWARE DEVELOPMENT PROJECT (ELR) (WIC) 4 Credit Hours
With the supervision of the instructor, students will work in teams to design and implement a realistic software project similar to projects they would encounter in the workplace.
Prerequisite: CS 23001 with a minimum grade of C (2.000); and junior standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

CS 45203 COMPUTER NETWORK SECURITY 3 Credit Hours
(Cross-listed with CS 55203) Overview of network security including attacks and vulnerabilities and defense measures, secure network design, network and transport layers security, intrusion detection techniques, defense against denial of service attacks, network hardware, software, and applications attacks and their defense, security policies, legal and ethical issues in cyber and computer crimes.
Prerequisite: CS 35201 and MATH 30011.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 45231  INTERNET ENGINEERING     3 Credit Hours
Design fundamentals and working principles of internet systems at
the IP layer and above. DNS, inter-domain routing, internet client server
programming, application level protocols (HTTP, XML, etc.) web server
architecture, browser internet security and multimedia serving.
Prerequisite: CS 23001, 33211 and 35201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 46101  DESIGN AND ANALYSIS OF ALGORITHMS     3 Credit Hours
(Cross-listed with CS 56101) Introduction to algorithmic concepts,
design and complexity analysis of algorithms, searching, sorting, graphs,
and geometric algorithms and parallel algorithms.
Prerequisite: MATH 12003 and C (2.000) or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 47101  COMPUTER GRAPHICS     3 Credit Hours
Display file generation, interactive graphics techniques, display devices,
three-dimensional graphics, graphic system design, graphic languages
and applications in man-machine communications.
Prerequisite: CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 47201  HUMAN COMPUTER INTERACTION     3 Credit Hours
Approaches the human-computer interaction as an activity of the human
whose productivity is increased by the use of the computer as a tool.
Examines physiology and psychology considers the structure and
operation of the computer and models the interaction between the two.
Prerequisite: CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 47205  INFORMATION SECURITY     3 Credit Hours
(Slashed with CS 57205) An introduction to concepts and methodology
useful for information security, as specified by the NSTISSI NO. 4011
standard from the NSA.
Prerequisite: CS 23001 with a minimum grade of C (2.000).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 47206  DATA SECURITY AND PRIVACY     3 Credit Hours
(Slashed with CS 57206) The goal of the course is to familiarize the
students with basic concepts of security and privacy, their definitions,
applications and current advances in research community and industry.
This course addresses the security and privacy issues in legacy systems
and also studies security and privacy policies and legislations. This
course also reviews current research projects in the area of security and
privacy.
Prerequisite: Minimum C grade or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 47207  DIGITAL FORENSICS     3 Credit Hours
(Slashed with CS 57207) This course addresses the need for digital
forensics, best practices for general incidence response, legal aspects
of forensics, tools and techniques to perform a full computer forensic
investigation.
Prerequisite: Minimum C grade or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 47221  INTRODUCTION TO CRYPTOLOGY     3 Credit Hours
This is a course on the modern science of Cryptology; that is, the process
of hiding information by converting it, through a reversible process, into
something unrecognizable. Of course, only the recipient should be able
to reverse the "hiding" or encrypting process. As far as usage in life is
concerned, this course will help you to set up cryptosystems in many
different environments. This skill is highly employable, from the NSA, to
banks, to anybody who needs to encrypt information is looking for people
with knowledge in Cryptology.
Prerequisite: Minimum C grade or better in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 48101  GAME ENGINE CONCEPTS     3 Credit Hours
Introduction to 3D game engine design, game memory management,
multithreading in games, sprites and bitmap animation level design,
path finding, audio-visual effects, AI and physical modeling in games,
networked gaming.
Prerequisite: minimum grade of C (2.000) in CS 23001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 48102  GAME DEVELOPMENT PRACTICUM (ELR) (WIC)     4 Credit
Hours
With the supervision of the instructor, students will work in teams to
design and implement a computer game or 3D interactive learning
environment using a game engine in a professional setup. Prerequisites:
CS 33007 and CS 33901 and CS 35201; and CS 48101 or CS 38101; and
Junior standing
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

CS 49901  CAPSTONE PROJECT (ELR) (WIC)     4 Credit Hours
The course is an integrative experience that brings together all
components of the undergraduate computer science curriculum in an
applied, hands-on real-world setting. The course is three-credits lecture
and one-credit lab.
Prerequisite: CS 33007 and 33901 and 35201.
Schedule Type: Combined Lecture and Lab
Contact Hours: 4 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

CS 49995  SPECIAL TOPICS IN COMPUTER SCIENCE     1-4 Credit
Hours
(Repeatable for credit) (Cross-listed with CS 59995) Special topics from
all areas of computer science.
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
CS 49996  INDIVIDUAL STUDY  1-4 Credit Hours
(Repeatable for credit).
Prerequisite: special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-4 other
Grade Mode: Standard Letter

CS 49998  RESEARCH (ELR)  1-15 Credit Hours
(Repeatable for credit).
Prerequisite: special approval.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

CS 51045  METALOGIC  3 Credit Hours
(Slashed with CS 41045; Cross-listed with MATH 41045 and MATH 51045 and PHIL 41045 and PHIL 51045) A detailed, systematic study of
metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic.
Topics include the soundness and completeness of the propositional and predicate calculi, decidability of propositional calculus, the
undecidability of predicate calculus, Gödel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionalit
y of the set of general recursive functions, abacus computable functions,
and Turing computable functions, and the philosophical motivations
for the Church-Turing Thesis that all computable functions are Turing computable.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 52001  NUMERICAL COMPUTING I  3 Credit Hours
(Cross-listed with CS 42001 and MATH 42001 and MATH 52001) An introduction to numerical methods and software for solving many
common scientific computing problems. Linear systems, least-squares
data fitting, nonlinear equations and systems, and optimization problems.
Prerequisite: Graduate standing in Computer Science.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 52002  NUMERICAL COMPUTING II  3 Credit Hours
(Cross-listed with CS 42002 and MATH 42002 and MATH 52002) A continuation of CS 52001. Topics include interpolation numerical
differentiation and integration and numerical solution of ordinary
differential equations.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 53006  THEORY OF OBJECT-ORIENTED PROGRAMMING  3 Credit Hours
(Cross-listed with CS 43006) In-depth course on the theory and principles
of object-based and object-oriented programming using a language
such as C++. The course covers advanced topics in inheritance
and interface planning, generic (type independent) programming, factors of
polymorphism, structure and organization of class libraries, and object-
oriented design principles.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 53111  STRUCTURE OF COMPILERS  3 Credit Hours
(Cross-listed with CS 43111) Techniques used to write compilers
including lexical analysis, syntax analysis, syntax directed translation,
type checking, run-time environments and intermediate code generation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 53118  GRAPH AND SOCIAL NETWORK ANALYSIS  3 Credit Hours
(Slashed with CS 43118 and CS 73118) This course covers a number
of important and useful ideas in graph databases, especially in social
networks (e.g. the data model for certain-uncertain graphs), indexing
over graphs, and query processing algorithms for graph databases (e.g.,
single-source path queries, path queries, reachability queries, keyword
search queries, subgraph matching, etc.). The influence maximization
problems over social networks in real applications are also discussed
as well as various queries over the distributed graph databases.
Prerequisites: Graduate Standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 53202  SYSTEMS ADMINISTRATION  3 Credit Hours
(Cross-listed with CS 43202) The setting up and day-to-day administration
of multiuser multitasking systems, such as the various versions of UNIX
together with the analysis of problems which can arise in these activities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 53203  SYSTEMS PROGRAMMING  3 Credit Hours
(Cross-listed with CS 43203) The setting up and day-to-day administration
of multiuser multitasking systems, such as the various versions of UNIX
(together with the analysis of problems which can arise in these activities. Implementation and maintenance of system programs, system
utilities, command interpreters, editors, file maintenance programs, text
processors, interrupt handling, and device drivers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 53301  SOFTWARE DEVELOPMENT FOR ROBOTICS  3 Credit Hours
(Slashed with CS 43301) Robots are being used in multiple places that
are not easily accessible for humans, to support the lack of available
labor, to gain extra precision, and for cost effective manufacturing
processes, monitoring, space exploration, precision surgery and artificial
limb support for elderly and physically challenged persons. Computer
science is an integral part of robotics as it includes areas such as
computer algorithms, artificial intelligence, and image processing that are
essential aspects of robotics. This first course on robotics will teach the
students various motions of rigid robots, mathematics and algorithms
related to these motions, motion planning, obstacle avoidance, intelligent
path planning including use of various sensors.
Prerequisite: Graduate Standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 5302  ALGORITHMIC ROBOTICS  3 Credit Hours  
(Slashed with CS 43302 and 73302) This course provides students theoretical, mathematical, and practical foundations for the design, analysis, and evaluation of algorithms for robots for diverse robotic applications. We will focus on a principled and mathematically sound approach to the design of algorithms for robots rather than ad hoc and hacking development approaches. Prerequisites: Graduate Standing 
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 5303  INTERNET OF THINGS  3 Credit Hours  
(Slashed with CS 43303 and 73303) This course will provide a comprehensive understanding of the Internet of Things by looking into a variety of real-world application scenarios, existing and new technologies and architectures, communication protocols and standardization efforts, societal and behavioral changes, and how to apply these technologies to tackle real-world problems. Prerequisite: Graduate Standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 5305  ADVANCED DIGITAL DESIGN  3 Credit Hours  
(Slashed with CS 43305) This course describes techniques in the design of digital systems. Topics covered include combinational and sequential logic, gate-level minimization, registers and counters, memory and programmable logic, hardware description languages, digital communication including serial and parallel and synchronous and asynchronous methods. Prerequisites: Graduate Standing  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 5334  HUMAN-ROBOT INTERACTION  3 Credit Hours  
(Slashed with CS 43334 and 73334) Human-Robot Interaction (HRI) is the study of interactions between humans and robots dedicated to understanding, designing, and evaluating robotic systems for use by and with humans. HRI is a multidisciplinary field that incorporates human-computer interaction, artificial intelligence, robotics, natural language understanding, design, and social sciences. Interaction between humans and robots may take several forms, but are generally categorized by how close in proximity the humans and robots are to each other such as remote, proximate, and hybrid interaction. In the class, students will learn the fundamental technologies and theories in each category, and blend this knowledge with various case studies and lab activities. Prerequisites: Graduate Standing  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 53401  SECURE PROGRAMMING  3 Credit Hours  
Code vulnerabilities, static code analysis, error handling, secure I/O, race conditions and mediation, handling buffer and integer overflow, handling vulnerabilities in web and database programming, privacy and cryptography, random number generators. Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 54001  COMPUTER SCIENCE III - PROGRAMMING PATTERNS  4 Credit Hours  
(Slashed with CS 44001) Extends students’ knowledge of object oriented programming, and improves their C++ programming skills. Specifically, it covers procedural and object-based programming, inheritance, polymorphism, popular design patterns, and generic programming. Prerequisite: Graduate standing.  
Schedule Type: Combined Lecture and Lab  
Contact Hours: 3 lecture, 3 lab  
Grade Mode: Standard Letter  

CS 54003  MOBILE APPS IN IOS PROGRAMMING  3 Credit Hours  
Students are introduced to mobile applications programming in the iOS environment using model, view, controller paradigms. Other topics include swift, programming using on board devices like GPS, cameras, motion detectors, and screen touches. Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 54105  WEB PROGRAMMING I  3 Credit Hours  
(Slashed with CS 44105) This course is the first of a two-course sequence on Web Programming covering from basic to advanced topics on Web Programming based on open standards and best practices. Topics covered include the HyperText Markup Language (HTML), specifying look and feel using Cascading Style Sheets (CSS), client side programming in Javascript, server side programming in PHP, and the Hypertext Transfer Protocol (HTTP). Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 54106  WEB PROGRAMMING II  3 Credit Hours  
(Slashed with CS 44106) This course is the second of a two-course sequence on Web Programming covering advanced topics on Web Programming based on open standards and practices. This is a project course exploring advanced aspects of Web programming. Topics covered include advanced server side programming in PHP; database driven websites; structured query language (SQL) and MySQL; E-commerce; web hosting using Apache, PHP MySQL; basic and digest authentication; web security, encryption and digital certificates; Markup Language (XML) for the web, AJAX and web services; scalable vector graphics (SVG); websites. Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CS 54201  ARTIFICIAL INTELLIGENCE  3 Credit Hours  
(Cross-listed with CS 44201) Examines goals, problems, concepts and methods of artificial intelligence heuristic versus algorithmic methods, natural language comprehension, theorem proving. Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
CS 55201  COMPUTER COMMUNICATION NETWORKS  3 Credit Hours
An introduction to net-centric systems, data communication protocols, network architectures, routing protocols, network management, congestion control, network security, compression techniques, mobile and wireless networks, and WWW as an example of a client server system.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 55203  COMPUTER NETWORK SECURITY  3 Credit Hours
(Cross-listed with CS 45203) Overview of network security including attacks and vulnerabilities and defense measures, secure network design, network and transport layers security, intrusion detection techniques, defense against denial of service attacks, network hardware, software, and applications attacks and their defense, security policies, legal and ethical issues in cyber and computer crimes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 55231  INTERNET ENGINEERING  3 Credit Hours
(Cross-listed with CS 45231) Design fundamentals and working principles of internet systems at the IP layer and above. DNS, inter-domain routing, internet client server programming, application level protocols (HTTP, XML, etc.) Web server architecture, browser, internet security, and multimedia serving.
Prerequisite: CS 33001 and 55201; graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 56101  DESIGN AND ANALYSIS OF ALGORITHMS  3 Credit Hours
(Cross-listed with CS 46101) Introduction to algorithmic concepts, practical techniques for the design and analysis of algorithms; searching, sorting, integer and floating point arithmetic; vector and matrix manipulation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57101  COMPUTER GRAPHICS  3 Credit Hours
(Cross-listed with CS 47101) Display file generation, interactive graphics techniques, display devices, three-dimensional graphics, graphic system design, graphic languages and applications in man-machine communications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57201  HUMAN COMPUTER INTERACTION  3 Credit Hours
(Cross-listed with CS 47201) Approaches the human-computer interaction as an activity of the human whose productivity is increased by the use of the computer as a tool. Examines physiology and psychology considers the structure and operation of the computer and models the interaction between the two.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57205  INFORMATION SECURITY  3 Credit Hours
(Cross-listed with CS 47205) An introduction to concepts and methodology useful for information security, as specified by the NSTISSI NO. 4011 standard from the NSA.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57206  DATA SECURITY AND PRIVACY  3 Credit Hours
(Slashed with CS 47206) The goal of the course is to familiarize the students with basic concepts of security and privacy, their definitions, applications and current advances in research community and industry. This course addresses the security and privacy issues in legacy systems and also studies security and privacy policies and legislations. This course also reviews current research projects in the area of security and privacy.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57207  DIGITAL FORENSICS  3 Credit Hours
(Slashed with CS 47207) This course addresses the need for digital forensics, best practices for general incidence response, legal aspects of forensics, tools and techniques to perform a full computer forensic investigation.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57221  INTRODUCTION TO CRYPTOLOGY  3 Credit Hours
(Slashed with CS 47221) This is a course on the modern science of Cryptology; that is, the process of hiding information by converting it, through a reversible process, into something unrecognizable. Of course, only the recipient should be able to reverse the “hiding” or encrypting process. As far as usage in life is concerned, this course will help you to set up cryptosystems in many different environments. This skill is highly employable; from the NSA, to banks, to anybody who needs to encrypt information is looking for people with knowledge in Cryptology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57225  INFORMATION SECURITY  3 Credit Hours
(Cross-listed with CS 47225) An introduction to concepts and methodology useful for information security, as specified by the NSTISSI NO. 4011 standard from the NSA.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 57229  COMPUTER COMMUNICATIONS  3 Credit Hours
(Cross-listed with CS 47229) Study of communication systems from the network layer through the transport layer with an emphasis on the Internet and various protocols and architectures. This course also includes an introduction to the study of computer networks such as LANs, MANs, and internet and the application of protocols to this area.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 59995  SPECIAL TOPICS IN COMPUTER SCIENCE  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with CS 49995) Various special courses will be announced in the schedule of classes under this title.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
CS 60093 VARIABLE TITLE WORKSHOP IN COMPUTER SCIENCE  1-3 Credit Hours
(Repeatable for credit) Studies of special topics in computer science. Not acceptable for credit toward a graduate degree in computer science without approval of the student’s adviser.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

CS 60094 COLLEGE TEACHING OF COMPUTER SCIENCE  1 Credit Hour
(Repeatable for credit) (Cross-listed with CS 70094) Techniques and problems of college teaching of computer science. Student presentation of computer science papers will be included.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter-S/U

CS 601002 ALGORITHMS AND PROGRAMMING I  4 Credit Hours
An introduction to the algorithms and tools used in computer science; includes programming in a high level language. This course may not be counted toward degree requirement in the CS Masters of Science degree or the CS Ph.D. degree.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CS 601003 ALGORITHMS AND PROGRAMMING II  4 Credit Hours
Further exploration into the tools used in computer science. This course may not be counted toward degree requirements in the CS Masters of Science degree or the CS Ph.D. degree.
Prerequisite: CS 601002; graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CS 601004 OPERATING SYSTEMS AND ARCHITECTURE  4 Credit Hours
The fundamentals of computer operating systems and architecture design required for a Masters of Arts degree in computer science are presented. This course may not be counted towards the Masters of Science or the Doctoral programs in Computer Science.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CS 61092 PRACTICUM IN CS FOR INFORMATION ARCHITECTURE AND KNOWLEDGE MANAGEMENT  1-5 Credit Hours
(Repeatable for credit) This course is an alternative to IAKM 60199 for students interested in pursuing a CS thesis. Credit for IAKM 60199 or any other project course is not allowed.
Prerequisite: Graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 1-5 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CS 61199 THESIS I FOR INFORMATION ARCHITECTURE AND KNOWLEDGE MANAGEMENT  2-6 Credit Hours
Thesis students must register for a minimum of 6 hours. No credit for CS students.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CS 61299 THESIS II FOR INFORMATION ARCHITECTURE AND KNOWLEDGE MANAGEMENT STUDENTS  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: CS 61199.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

CS 62263 NUMERICAL SOLUTION OF LARGE SPARSE LINEAR SYSTEMS  3 Credit Hours
Prerequisite: MATH 4/51021 and CS 4/52202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 62264 NUMERICAL SOLUTION OF NONLINEAR SYSTEMS  3 Credit Hours
(Cross-listed with CS 72264 and MATH 62264 and MATH 72264) Construction and analysis of numerical methods for systems of nonlinear algebraic equations and optimization problems. Numerical implementation and software. Graduate standing.
Prerequisite: MATH 4/52041 and CS 4/52202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63005 ADVANCED DATABASE SYSTEMS DESIGN  3 Credit Hours
(Cross-listed with CS 73005) Introduction to a variety of advanced database topics and on-going trends in modern database systems. The course includes advanced issues of object-oriented database, XML, advanced client server architecture and distributed database techniques.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63015 DATA MINING TECHNIQUES  3 Credit Hours
(Cross-listed with CS 73015) Concepts and techniques of data mining. Data mining is a process of discovering information from a set of large databases. This course takes a database perspective on data mining.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 63016  BIG DATA ANALYTICS  3 Credit Hours
(Slashed with CS 73016) Introduces computing platforms with focus on how to use them in processing, managing and analyzing massive datasets. Utilizes several key data processing tasks, including simple statistics, data aggregation, join processing, frequent pattern mining, data clustering, information retrieval, pagerank and massive graph analytics as the case study for large scale data processing.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63017  BIG DATA MANAGEMENT  3 Credit Hours
This course will cover a series of important Big-Data-related problems and their solutions. Specifically, we will introduce the characteristics and challenges of the Big Data, state-of-the-art computing paradigm such as MapReduce, big data programming tools (e.g., Hadoop and MongoDB), big data extraction and integration, big data storage, scalable indexing for big data, big graph processing, big data stream techniques and algorithms, big probabilistic data management, big data privacy, big data visualizations, and big data applications (e.g., spatial, finance, multimedia, medical, health, and social data).
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63018  PROBABILISTIC DATA MANAGEMENT  3 Credit Hours
(Slashed with CS 73018) This course addresses the fundamental concepts and techniques for probabilistic data management in the area of databases. Probabilistic data are pervasive in many real-world applications, such as sensor networks, GPS system, location-based services, mobile computing, multimedia databases, data extraction and integration, trajectory data analysis, semantic web, privacy preserving, and so on. This class also covers major research topics such as probabilistic or uncertain data models, probabilistic queries, probabilistic query answering techniques, and data quality issues in databases.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63100  COMPUTATIONAL HEALTH INFORMATICS  3 Credit Hours
(Slashed with CS 73100) The course describes computational techniques and software tools for managing and transmitting health related information and automated analysis of medical and biosignal data.
Prerequisites: Graduate Standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63201  ADVANCED OPERATING SYSTEMS  3 Credit Hours
(Cross-listed with CS 73201) Introduction to distributed systems, interprocess communication, distributed mutual exclusion, synchronization and deadlock, distributed process management and distributed file systems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63301  PARALLEL AND DISTRIBUTED COMPUTING  3 Credit Hours
(Cross-listed with CS 73301) Overview of parallel and distributed computing; structuring parallel and distributed programs; parallel programming using SIMD, SPMD, MIMD and associative computing; parallel and distributed architecture using existing machines as case studies.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63304  CLUSTER COMPUTING  3 Credit Hours
(Cross-listed with CS 73304) This course will investigate clusters of computers as a computing platform, hardware and software tradeoffs for clusters and application performance and programming of clusters.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63305  MULTICORE COMPUTING  3 Credit Hours
(Slashed with CS 73305) Starting about 2005, hardware architects began putting more than one processing core on a single chip, leading to the recent rapid advancements in multicore processor architectures. This shift has changed almost everything ranging from memory hierarchy and consistency to programming those architectures. The goal of this course is to study multicore processor architectures from the perspective of hardware, software and algorithm design, the challenges, and the technologies that are relevant to those architectures.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63306  EMBEDDED COMPUTING  3 Credit Hours
(Slashed with CS 73306) Computational issues structuring programs for processors embedded in other devices, such as those found in automobiles and biological and chemical sample processing devices.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63901  SOFTWARE ENGINEERING METHODOLOGIES  3 Credit Hours
(Cross-listed with CS 73901) Software process models; modeling languages; software process improvement; requirement analysis and elicitation; advanced systems and architectural design; estimation; verification and validation; reuse; and metrics.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 63902  SOFTWARE EVOLUTION  3 Credit Hours
(Cross-listed with CS 73902) Methods and techniques supporting later lifecycle activities, including software testing and maintenance, reuse and reverse engineering.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
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Traffic management and internet routing, traffic, congestion control, quality of service (QoS), performance analysis, traffic management and internet routing.

MPEG standards, multimedia formats, 3-D object and movement representation, multimedia storage, QoS maintenance, transmission and buffering, multimedia clocks and synchronization, content based indexing, matching and retrieval of 2-D and 3-D objects, XML based distributed multimedia languages, synchronous and reactive languages.

Advanced algorithms, fast fourier transforms, algorithms on trees and graphs, rational and polynomial arithmetic, gcd, factoring, numerical and symbolic computational algorithms, Risch integration algorithm, pattern matching.

Introduces and evaluates important models of parallel (synchronous and asynchronous) and distributed computation, using basic searching, sorting, graph, matrix, numerical computing and computational geometry algorithms.
CS 66120  EVOLUTIONARY COMPUTATION  3 Credit Hours  
(Cross-listed with CS 76120) Introduction to evolutionary computation techniques for optimization, learning and design. Topics include natural and artificial evolution, chromosome representations, search operators, co-evolution, constraint handling techniques, niching and speciation, classifier systems and theoretical foundations.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter 

CS 67101 ADVANCED COMPUTER GRAPHICS  3 Credit Hours  
(Cross-listed with CS 77101) In-depth study of active research topics in computer graphics. Topics include volume rendering, image-based rendering and modeling, graphics architectures, virtual reality, modeling in computer graphics, non-photorealistic rendering, computer animation and computer games.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter 

CS 67301  SCIENTIFIC VISUALIZATION  3 Credit Hours  
(Cross-listed with CS 77301) Discusses the visualization of scientific, engineering and medical data sets. Introduces mechanisms to acquire sampled or computed data and points out methods to transform these data into the visual system.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter 

CS 67302  INFORMATION VISUALIZATION  3 Credit Hours  
(Slashed with CS 77302) Information visualization is the science that unveils the underlying structure of data sets using visual representations that utilize the powerful processing capabilities of the human visual perceptual system. In this class, we will study algorithms and systems for visually exploring, understanding, and analyzing large, complex data sets. Information visualization focuses on abstract data such as symbolic, tabular, networked, hierarchical, or textual information sources. The objectives of the course are to learn the principles involved in information visualization and a variety of existing techniques and systems. The students will also gain backgrounds and skills that will aid the design of new, innovative visualizations in realistic applications. Prerequisites: Graduate Standing  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter 

CS 69098  RESEARCH  1-5 Credit Hours  
(Repeatable for credit) Satisfactory/Unsatisfactory (S/U) graded. In Progress (IP) mark permissible. Research or individual investigation. Credits are applied toward degree requirements with approval if grade of "S" is given.  
Prerequisite: Graduate standing.  
Schedule Type: Research  
Contact Hours: 1-5 other  
Grade Mode: Satisfactory/Unsatisfactory-IP 

CS 69191  MASTER'S SEMINAR  1-2 Credit Hours  
(Repeatable for credit) Course is Satisfactory/Unsatisfactory (S/U) graded. Seminar for masters students to present and discuss computer science related research and academics. Masters students are required to take at least 2 credit hours for completion of degree and make at least one presentation of project work or research. Only two credits count towards the masters degree.  
Prerequisite: Computer Science (CS) major within the Master of Arts (MA) or Master of Science (MS) degree.  
Schedule Type: Seminar  
Contact Hours: 1-2 other  
Grade Mode: Satisfactory/Unsatisfactory-IP 

CS 69199  THESIS I  2-6 Credit Hours  
Thesis student must register for total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.  
Prerequisite: Graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2-6 other  
Grade Mode: Satisfactory/Unsatisfactory-IP 

CS 69299  THESIS II  2 Credit Hours  
Thesis students must continue registration each semester until all degree requirements are met.  
Prerequisite: CS 69199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2 other  
Grade Mode: Satisfactory/Unsatisfactory-IP 

CS 69995  SPECIAL TOPICS IN COMPUTER SCIENCE  1-3 Credit Hours  
(Repeatable for credit) (Cross-listed with CS 79995) Special topics in computer science.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 1-3 lecture  
Grade Mode: Standard Letter-S/U 

CS 70094  COLLEGE TEACHING OF COMPUTER SCIENCE  1 Credit Hour  
(Repeatable for credit) (Cross-listed with CS 60094) Techniques and problems of college teaching of computer science. Student presentation of computer science papers will be included.  
Prerequisite: Doctoral standing.  
Schedule Type: Lecture  
Contact Hours: 1 lecture  
Grade Mode: Standard Letter-S/U 

CS 72263  NUMERICAL SOLUTION OF LARGE SPARSE LINEAR SYSTEMS  3 Credit Hours  
Prerequisite: MATH 4/51021 and CS 4/52202.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
CS 72264  NUMERICAL SOLUTION OF NONLINEAR SYSTEMS  3 Credit Hours
(Cross-listed with CS 62264 and MATH 62264 and MATH 72264) Construction and analysis of numerical methods for systems of non-linear algebraic equations and optimization problems. Numerical implementation and software. Doctoral standing. 
Prerequisite: MATH 4/52041 and CS 4/52202. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73005  ADVANCED DATABASE SYSTEMS DESIGN  3 Credit Hours
(Cross-listed with CS 63005) Introduction to a variety of advanced database topics and on-going trends in modern database systems. The course includes advanced issues of object-oriented database, XML, advanced client server architecture and distributed database techniques. 
Prerequisite: Doctoral standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73015  DATA MINING TECHNIQUES  3 Credit Hours
(Cross-listed with CS 63015) Concepts and techniques of data mining. Data mining is a process of discovering information from a set of large databases. This course takes a database perspective on data mining. 
Prerequisite: Doctoral standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73016  BIG DATA ANALYTICS  3 Credit Hours
Introduces computing platforms with the focus on how to utilize them in processing, managing and analyzing massive datasets. The course will utilize several key data processing tasks, including simple statistics, data aggregation, join processing, frequent pattern mining, data clustering, information retrieval, pagerank, and massive graph analytics as the case study for large scale data processing. 
Prerequisite: Doctoral standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73017  BIG DATA MANAGEMENT  3 Credit Hours
This course will cover a series of important Big-Data-related problems and their solutions. Specifically, we will introduce the characteristics and challenges of the Big Data, state-of-the-art computing paradigm and platforms (e.g., MapReduce), big data programming tools (e.g., Hadoop and MongoDB), big data extraction and integration, big data storage, scalable indexing for big data, big graph processing, big data stream techniques and algorithms, big probabilistic data management, big data privacy, big data visualizations, and big data applications (e.g., spatial, finance, multimedia, medical, health, and social data). 
Prerequisite: Doctoral Standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73018  PROBABILISTIC DATA MANAGEMENT  3 Credit Hours
(Slashed with CS 63018) This course addresses the fundamental concepts and techniques for probabilistic data management in the area of databases. Probabilistic data are pervasive in many real-world applications, such as sensor networks, GPS system, location-based services, mobile computing, multimedia databases, data extraction and integration, trajectory data analysis, semantic web, and privacy preserving. This class also covers major research topics such as probabilistic or uncertain data models, probabilistic queries, probabilistic query answering techniques, and data quality issues in databases. 
Prerequisite: Doctoral Standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73100  COMPUTATIONAL HEALTH INFORMATICS  3 Credit Hours
(Slashed with CS 63100) The course describes computational techniques and software tools for managing and transmitting health related information and automated analysis of medical and biosignal data. 
Prerequisites: Doctoral Standing 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73118  GRAPH SOCIAL NETWK ANALYSIS  3 Credit Hours
(Slashed with CS 43118 and CS 53118) This course covers a number of important and useful ideas in graph databases, especially in social networks (e.g. the data model for certain-uncertain graphs), indexing over graphs, and query processing algorithms for graph databases (e.g., single-source path queries, path queries, reachability queries, keyword search queries, subgraph matching, etc.). The influence maximization problems over social networks in real applications are also discussed as well as various queries over the distributed graph database. 
Prerequisites: Doctoral standing 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73201  ADVANCED OPERATING SYSTEMS  3 Credit Hours
(Cross-listed with CS 63201) Introduction to distributed systems, interprocess communication, distributed mutual exclusion, synchronization and deadlock, distributed process management and distributed file systems. 
Prerequisite: Doctoral standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

CS 73301  PARALLEL AND DISTRIBUTED COMPUTING  3 Credit Hours
(Cross-listed with CS 63301) Overview of parallel and distributed computing, structuring parallel and distributed programs, parallel programming using simd spmd mind and, associative computing parallel and distributed architecture using existing machines as case studies. 
Prerequisite: Doctoral standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter
CS 73302 ALGORITHMIC ROBOTICS  3 Credit Hours
(Slashed with CS 43302 and CS 53302) This course provides students theoretical, mathematical, and practical foundations for the design, analysis, and evaluation of algorithms for robots for diverse robotic applications. We will focus on a principled and mathematically sound approach to the design of algorithms for robots rather than ad hoc and hacking development approaches. Prerequisites: Doctoral Standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73303 INTERNET OF THINGS  3 Credit Hours
(Slashed with CS 43303 and CS 53303) This course will provide a comprehensive understanding of the Internet of Things by looking into a variety of real-world application scenarios, existing and new technologies and architectures, communication protocols and standardization efforts, societal and behavioral changes, and how to apply these technologies to tackle real-world problems. Prerequisites: Doctoral Standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73304 CLUSTER COMPUTING  3 Credit Hours
(Cross-listed with CS 63304) This course will investigate clusters of computers as a computing platform, hardware and software tradeoffs for clusters and application performance and programming of clusters. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73305 MULTICORE COMPUTING  3 Credit Hours
(Slashed with CS 63305) Starting about 2005, hardware architects began putting more than one processing core on a single chip, leading to the recent rapid advancements in multicore processor architectures. This shift has changed almost everything ranging from memory hierarchy and consistency to programming those architectures. The goal of this course is to study multicore processor architectures from the perspective of hardware, software, and algorithm design, the challenges, and the technologies that are relevant to those architectures. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73306 EMBEDDED COMPUTING  3 Credit Hours
(Slashed with CS 63306) Computational issues structuring programs for processors embedded in other devices such as those found in automobiles and biological chemical sample processing devices. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73334 HUMAN-ROBOT INTERACTION  3 Credit Hours
(Slashed with CS 43334 and CS 53334) Human-Robot Interaction (HRI) is the study of interactions between humans and robots dedicated to understanding, designing, and evaluating robotic systems for use by and with humans. HRI is a multidisciplinary field that incorporates human-computer interaction, artificial intelligence, robotics, natural language understanding, design, and social sciences. Interaction between humans and robots may take several forms, but are generally categorized by how close in proximity the humans and robots are to each other such as remote, proximate, and hybrid interaction. In the class, students will learn the fundamental technologies and theories in each category, and blend this knowledge with various case studies and lab activities. Prerequisite: Doctoral Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73901 SOFTWARE ENGINEERING METHODOLOGIES  3 Credit Hours
(Cross-listed with CS 63901) Software process models; modeling languages; software process improvement, requirement analysis and elicitation, advanced systems and architectural design, estimation, verification and validation reuse, and metrics. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 73902 SOFTWARE EVOLUTION  3 Credit Hours
(Cross-listed with CS 63902) Methods and techniques supporting later lifecycle activities, including software testing and maintenance reuse and reverse engineering. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 74201 ADVANCED ARTIFICIAL INTELLIGENCE  3 Credit Hours
(Slashed with CS 64201) Additional topics in AI such as logic programming, advanced problem-solving systems, understanding natural languages, vision, learning, plan generating systems. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 74301 PATTERN RECOGNITION PRINCIPLES  3 Credit Hours
(Cross-listed with CS 64301) Introduction to mathematical pattern recognition, feature selection, distribution-free classification, statistical classification, nonsupervised learning, sequential learning and application. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 74401 IMAGE PROCESSING  3 Credit Hours
(Cross-listed with CS 64401) This course covers digital processing of digital imagery. Digitization of TV imagery, noise removal, image enhancement, edge and texture detection, object recognition and scene analysis. Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CS 74402 MULTIMEDIA SYSTEMS AND BIOMETRICS 3 Credit Hours
(Slashed with CS 64402) This course discusses computational techniques for fusion of multimedia data collected by sensors for human-identification using automated analysis of biometric signals.
Prerequisite: Doctoral Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 75101 ADVANCED COMPUTER ARCHITECTURE 3 Credit Hours
(Cross-listed with CS 65101) System performance measures, processor implementation, pipelining, system interconnection, memory hierarchy interrupts, stack architecture, vector and multiprocessors.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 77101 SYSTEM MODELING AND PERFORMANCE EVALUATION 3 Credit Hours
(Cross-listed with CS 67101) In-depth study of active research topics in computer graphics. Topics include volume rendering, image-based rendering and modeling, graphics architectures, virtual reality, modeling in computer graphics, non-photorealistic rendering, computer animation and computer games.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Additional course descriptions and details can be found in the Kent State University Catalog 2018-2019.
CS 77302 INFORMATION VISUALIZATION 3 Credit Hours
(Slashed with CS 67302) Information visualization is the science that
unveils the underlying structure of data sets using visual representations
that utilize the powerful processing capabilities of the human visual
perceptual system. In this class, we will study algorithms and systems for
visually exploring, understanding, and analyzing large, complex data sets.
Information visualization focuses on abstract data such as symbolic,
tabular, networked, hierarchical, or textual information sources. The
objectives of the course are to learn the principles involved in information
visualization and a variety of existing techniques and systems. The
students will also gain backgrounds and skills that will aid the design of
new, innovative visualizations in realistic applications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CS 79995 SPECIAL TOPICS IN COMPUTER SCIENCE 1-3 Credit Hours
(Repeatable for credit) (Cross-listed with CS 69995) Special topics in
computer science.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter-S/U

CS 89098 RESEARCH 1-15 Credit Hours
(Repeatable for credit) Research seminar on current research in computer
science. Doctoral students who have not yet passed their candidacy exams.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-IP

CS 89199 DISSERTATION I 15 Credit Hours
(Repeatable for credit) Dissertation work is begun and continuing until the completion of 30
hours.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Standard Letter-IP

CS 89299 DISSERTATION II 15 Credit Hours
(Repeatable for credit) Continuing registration required for doctoral
students who have completed the initial 30 hours of dissertation and
continuing until all degree requirements are met.
Prerequisite: CS 89199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Standard Letter

CS 89991 RESEARCH SEMINAR IN COMPUTER SCIENCE 1-3 Credit Hours
(Repeatable for credit) Research seminar on current research in computer
science. Special approval; doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

Department of English

English (ENG)

ENG 01001 INTRODUCTION TO COLLEGE WRITING-STRETCH 3 Credit Hours
Introduces the instruction and experiences necessary for students to acquire college-level literacy, with an emphasis on reading and writing college level texts. Course does not count toward graduation.
Prerequisite: ACT English score of 0-17; or SAT Evidence Based Reading and Writing score of 200-240; or WritePlacer score of 0-3; or Accuplacer Reading Comprehension score of 0-79 and WritePlacer score of 4.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 02001 ESL WRITING LEVEL I 2 Credit Hours
Introduction to the writing process. Review of basic syntactic and morphological patterns and sentence and paragraph organization. Support of vocabulary development. Students are placed in appropriate course based on test score. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02002 ESL WRITING LEVEL II 2 Credit Hours
Introduction to basic knowledge of sentence structure and development of ability to write with more sentence variety. Practice of standard paragraph format. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02003 ESL WRITING LEVEL III 2 Credit Hours
Review and practice of writing narrative and descriptive paragraphs. Analysis and self-correction; support of vocabulary expansion and practice of syntax of statements in paragraphs through relevant topics. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter
ENG 02004  ESL WRITING LEVEL IV  2 Credit Hours
Development of narrative, descriptive and explanatory paragraphs into essays; practice of prewriting activities. Support of vocabulary expansion and focus on transitioning from simple to complex sentences in paragraphs. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02005  ESL WRITING LEVEL V  2 Credit Hours
Introduction to the purpose, format and structure of an essay. Practice of narrative and expository essays. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02006  ESL WRITING LEVEL VI  2 Credit Hours
Review and practice of the purpose, format and structure of an essay. Focus on response essays; practice of parallel constructions, quotations, and the use of outside sources. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02007  ESL WRITING LEVEL VII  2 Credit Hours
Review of formatting and structuring essays. Practice of expository essays; focus on outlining, summarizing and citations; review of selected text-type specific grammatical features. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02101  ESL READING LEVEL I  2 Credit Hours
Introduction to basic reading strategies such as recognizing and differentiating between main and supporting ideas; skimming and scanning and making inferences. Support of vocabulary development. Students will be placed in the appropriate course based on test score. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02102  ESL READING LEVEL II  2 Credit Hours
Practice in basic reading strategies and development. Support of vocabulary development. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02103  ESL READING LEVEL III  2 Credit Hours
Practice in reading strategies such as recognizing and differentiating between main and supporting ideas of paragraphs and entire texts; skimming and scanning and making inferences. Support of vocabulary development. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02104  ESL READING LEVEL IV  2 Credit Hours
Practice of reading and summarizing strategies; skimming and scanning texts; support of vocabulary development. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02105  ESL READING LEVEL V  2 Credit Hours
Practice of reading strategies; skimming and scanning; focus on inferences from background information and culturally specific references. Support of vocabulary development. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02106  ESL READING LEVEL VI  2 Credit Hours
Practice of reading strategies; skimming and scanning; inferences in non-explicit contexts using background information. Culturally specific references and cultural schemata. Support of vocabulary development; strengthening awareness of word-formation. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02107  ESL READING LEVEL VII  2 Credit Hours
Practice identifying communicative functions of texts; reading strategies such as recognizing and differentiating between main and supporting ideas; skimming and scanning. Support of vocabulary development. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02201  ESL LISTENING LEVEL I  2 Credit Hours
Practice in basic listening strategies, including listening for detail and gist, key words, names, formal and informal forms of address, greetings and conversation endings, acceptance and refusals, etc. Students are place in the appropriate course based on test scores. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter
ENG 02202  ESL LISTENING LEVEL II  2 Credit Hours
Practice in basic listening strategies, including listening for detail and gist, key words, locations, numbers, acceptances and refusals, opinions, etc. as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02203  ESL LISTENING LEVEL III  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information in order to listen for detail and gist, key words, connecting themes; comparing and summarizing as well as note-taking as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02204  ESL LISTENING LEVEL IV  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information in order to listen for detail and gist, key words, emphasis, stance and speaker’s feelings; comparing and summarizing as well as note-taking as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02205  ESL LISTENING LEVEL V  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information in order to listen for detail and gist, key words; comparing and summarizing as well as note-taking as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02206  ESL LISTENING LEVEL VI  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information; focus on detail and gist, key words, and meanings from stress, rhythm and intonation. Includes colloquial English. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02207  ESL LISTENING LEVEL VII  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information; focus on detail and gist, key words, stance and speaker’s feelings; comparing and summarizing as well as note-taking as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02201  ESL SPEAKING LEVEL I  1 Credit Hour
Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02301  ESL SPEAKING LEVEL II  1 Credit Hour
Practices of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using simple sentences. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02302  ESL SPEAKING LEVEL III  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using complex sentences. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02303  ESL SPEAKING LEVEL IV  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using more complex sentences. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02304  ESL SPEAKING LEVEL V  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using more complex sentences. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02305  ESL SPEAKING LEVEL VI  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using more complex sentences and improvement in accuracy. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter
ENG 02306  ESL SPEAKING LEVEL VI  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using more complex sentences and improvement in accuracy. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02307  ESL SPEAKING LEVEL VII  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on fluency building using more complex sentences and improvement in accuracy. Support of vocabulary building when receiving and producing oral messages as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 02401  ESL GRAMMAR LEVEL I  2 Credit Hours
Introduction to word classes, especially verbs (including regular and irregular forms, tense and aspect, imperative), statement and question syntax, positive and negative clauses. Students are placed in appropriate course based on test score. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02402  ESL GRAMMAR LEVEL II  2 Credit Hours
Application of word classes, especially verbs (including tense and aspect), modal verbs, gerunds and infinitives, nouns (count and noncount), adjectives and adverbs (comparison), statement and question syntax, positive and negative clauses. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02403  ESL GRAMMAR LEVEL III  2 Credit Hours
Application of word classes, especially verbs and phrasal verbs (tense and aspect), present and future modal verbs, nouns and pronouns, as well as statement and question syntax, positive and negative clauses at appropriate level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02404  ESL GRAMMAR LEVEL IV  2 Credit Hours
Application of word classes, especially verbs and phrasal verbs (tense and aspect), gerunds and infinitives, nouns, articles, adjectives, adverbs, statement and question syntax, positive and negative clauses at appropriate level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02405  ESL GRAMMAR LEVEL V  2 Credit Hours
Application of word classes, especially verbs (tense and aspect), causal and phrasal verb syntax, verbal nouns, conjoiners, as well as statement and question syntax, positive and negative clauses and question tags as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02406  ESL GRAMMAR LEVEL VI  2 Credit Hours
Application of verb tenses and aspects, modality and passive voice, as well as clause structures and functions (noun clauses, adjective clauses) as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02407  ESL GRAMMAR LEVEL VII  2 Credit Hours
Application of verb tenses and aspects, passive voice, modal verbs, noun phrases, subject-verb agreement, clause structures and functions (interrogative clauses, noun clauses, adjective clauses) as appropriate to level. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 02500  ESL PRONUNCIATION  1 Credit Hour
(Repeatable for a maximum of 2 credit hours) Study of English pronunciation with practice in segmental and suprasegmental features (sounds, sound combinations, syllables, stress, rhythm, and intonation). Students are placed in the appropriate course based on test score. Course does not count toward graduation.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 11002  COLLEGE WRITING I-STRETCH (KCMP)  3 Credit Hours
Continues the instruction and practice necessary to write for college, with emphasis on the reading, thinking, writing and technological skills necessary for writing college level texts.
Prerequisite: Minimum C grade in ENG 01001; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Composition, Transfer Module Composition

ENG 11011  COLLEGE WRITING I (KCMP)  3 Credit Hours
The study and practice of academic writing, including an introduction to rhetorical principles, the writing process, critical reading, research, and technology. Students with a GED Reasoning Through Language Arts score of 165 or higher need to contact the department for approval.
Prerequisite: ACT English score of 18-25; or SAT Evidence Based Reading and Writing score of 480-590; or Accuplacer Reading Comprehension score of 80 or higher and WritePlacer score of 4; or WritePlacer score 5 or higher.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Composition, Transfer Module Composition
ENG 12008  ESL WRITING LEVEL VIII  2 Credit Hours
Review and practice of formatting and structuring essays depending on varying content and audience. Focus on persuasive and response essays; practice of outlining, summarizing and citation; review of selected text-type specific grammatical features.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12009  ESL WRITING LEVEL IX  2 Credit Hours
Review and practice of formatting and structuring essays for academic vs. non-academic purposes. Practice of paraphrasing, summarizing and citation; review of selected text-type specific grammatical features.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12101  ESL WRITING LEVEL X  2 Credit Hours
Review and practice of formatting and structuring essays for academic vs. non-academic purposes. Practice with cause and effect, compare and contrast and argumentation. Practice of paraphrasing, summarizing and citation and review of selected text-type specific grammatical features.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12095  SPECIAL TOPICS IN ENGLISH AS SECOND LANGUAGE 1-2 Credit Hours
(Repeatable for credit) Overview of skills related to a special topic in second language learning.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4-2.33 lecture
Grade Mode: Standard Letter

ENG 12108  ESL READING LEVEL VIII  2 Credit Hours
Practice identifying communicative functions of texts; practice reading strategies. Support of vocabulary development and extensive reading.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12109  ESL READING LEVEL IX  2 Credit Hours
Identifying communicative functions of texts; reading strategies; skimming and scanning. Support of vocabulary development and extensive reading.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12110  ESL READING LEVEL X  2 Credit Hours
Practice with communicative functions of texts; strategies for academic reading. Support of vocabulary development and extensive reading.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12208  ESL LISTENING LEVEL VIII  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information; focus on detail and gist, key words, stance and speaker’s feelings; comparing and summarizing as well as note-taking and meanings from stress, rhythm and intonation as appropriate to level.
Prerequisite: None, placement and registration done by the department.
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12209  ESL LISTENING LEVEL IX  2 Credit Hours
Practice in listening strategies through predicting, using background knowledge and contextual information; focus on detail and gist, key words, stance and schemata. Emphasis on listening for academic purposes; practice in note-taking.
Prerequisite: None, placement and registration done by the department.
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12308  ESL SPEAKING LEVEL VIII  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on natural fluency and accuracy as well as pragmatic appropriateness. Support of vocabulary building when receiving and producing oral messages as appropriate to level.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 12309  ESL SPEAKING LEVEL IX  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on natural fluency and accuracy as well as pragmatic appropriateness. Support of vocabulary building when receiving and producing oral messages as appropriate to level.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 12310  ESL SPEAKING LEVEL X  1 Credit Hour
Practice of speaking skills while processing verbal and nonverbal information in both formal and informal contexts. Focus on natural fluency and accuracy as well as pragmatic appropriateness. Support of vocabulary building when receiving and producing oral messages as appropriate to level.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter
ENG 12408 ESL GRAMMAR LEVEL VIII  2 Credit Hours
Application of verb tenses and aspects, passive voice, modal verbs, gerunds and infinitives, coordinating conjunctions as well as clause structures and functions (noun clauses, adjective clauses, adverbial clauses) as appropriate to level.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12409 ESL GRAMMAR LEVEL IX  2 Credit Hours
Application of verb tenses and aspects, passive voice, nominals, interrogative syntax as well as clause structures and functions (dependent vs. independent clauses; reducing dependent clauses; conditional clauses) as appropriate to level.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12410 ESL GRAMMAR LEVEL X  2 Credit Hours
Application of verb tenses and aspects, passive voice, nominals, adverbials, interrogative syntax as well as clause structures and functions (dependent vs. independent clauses; clause reductions; conditional clauses) as appropriate to level.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12507 ESL DEBATE  1 Credit Hour
(Repeatable for a maximum of 2 credit hours) Practice of skills for persuasive speaking, making effective arguments and active listening. Engagement in formal and informal debates and presentations. Must score minimum level 7 on proficiency test.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 12508 ESL PUBLIC SPEAKING  1 Credit Hour
(Repeatable for a maximum of 2 credit hours) Preparation for continued academic study and professional advancement, including effective techniques for speaking in public. Design and analysis of speeches and presentations. Must score minimum level 8 on proficiency test.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 1.4 lecture
Grade Mode: Standard Letter

ENG 12605 ESL AMERICAN CULTURE I  2 Credit Hours
Overview of basic American values and beliefs related to history, immigration, diversity, and geography. Must score minimum level 5 on proficiency test.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12606 ESL AMERICAN CULTURE II  2 Credit Hours
Overview of basic American values and beliefs related to education, holidays, government and politics, the criminal justice system, America in the 21st century, etc. Must score minimum level 6 on proficiency test.
Prerequisite: None (placement and registration done by the department).
Schedule Type: Lecture
Contact Hours: 2.33 lecture
Grade Mode: Standard Letter

ENG 12707 ESL BUSINESS ENGLISH I  2 Credit Hours
Overview of business communication, business writing strategies, and computer skills in the workplace. Must score minimum level 7 on proficiency test.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

ENG 12708 ESL BUSINESS ENGLISH II  2 Credit Hours
Development of oral and written business communication skills.
Prerequisite: Minimum C- grade in ENG 12707; and special approval.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

ENG 12801 ESL ACADEMIC SUCCESS  1 Credit Hour
This class will provide transitional support for students preparing to enter an undergraduate or graduate course of study from the ESL Center. Students will focus on the social, cultural, and academic skills needed to be competent and successful in an American university setting including understanding university policies, academic expectations, and cultural norms.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

ENG 20002 INTRODUCTION TO TECHNICAL WRITING  3 Credit Hours
Introduction to communication practices within technical communities. Planning, drafting, revising and editing. Process descriptions, object descriptions, instructional texts, technical correspondence, problem reports, critical reflection.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or minimum C- grade in ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 20021 INTRODUCTION TO CREATIVE WRITING  3 Credit Hours
Practice in various forms of creative writing with some emphasis on student interests and on sources of creativity.
Prerequisite: Minimum 26 ACT combined English/writing score; or minimum 600 SAT writing score; or ENG 11002; or ENG 11011; or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 21001 INTRODUCTION TO ETHNIC LITERATURE OF THE UNITED STATES (DIVD)  3 Credit Hours
Study of selected ethnic American writers; may include works by African, Asian, Hispanic, Jewish, Native Americans and other groups.
Prerequisite: Minimum 26 ACT combined English/writing score; or minimum 600 SAT writing score; or ENG 11002; or ENG 11011; or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

ENG 21002 INTRODUCTION TO WOMEN'S LITERATURE (DIVD)  3 Credit Hours
Introduction to works by women writing in English, and to literary and gender issues they raise.
Prerequisite: Minimum 26 ACT combined English/writing score; or minimum 600 SAT writing score; or ENG 11002; or ENG 11011; or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

ENG 21003 INTRODUCTION TO LGBT LITERATURE (DIVD)  3 Credit Hours
Introduction to lesbian, gay, bisexual and transgender literature in English and to issues of gender, sexuality and culture raised by this literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

ENG 21011 COLLEGE WRITING II (KCMP)  3 Credit Hours
Continuation of college-level writing instruction with emphasis on research and inquiry, culminating in a lengthy written and/or multi-modal project.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or minimum C- grade in ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Composition, Transfer Module Composition

ENG 21054 INTRODUCTION TO SHAKESPEARE (KHUM)  3 Credit Hours
Study of representative plays and poems in the context of Shakespeare's age, his language and his cultural influence.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Humanities, Transfer Module Humanities

ENG 22071 GREAT BOOKS TO 1700 (KHUM)  3 Credit Hours
Great works of world literature read in English, from ancient world to 1700, covering a wide range of ethnic and national voices, genres and traditions.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Humanities, Transfer Module Humanities

ENG 22072 GREAT BOOKS SINCE 1700 (KHUM)  3 Credit Hours
Great works of world literature read in English, from 1700 to today, covering a wide range of ethnic and national voices, genres and traditions.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Humanities, Transfer Module Humanities

ENG 22073 MAJOR MODERN WRITERS: BRITISH AND UNITED STATES (KHUM)  3 Credit Hours
Introduction to British and U.S. writers of the 20th and 21st centuries; study of their works in their literary and cultural contexts.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Humanities, Transfer Module Humanities

ENG 24001 INTRODUCTION TO LITERARY STUDY  3 Credit Hours
Introduction to techniques for reading and writing about literature, with emphasis on reading strategies for prose, poetry and drama. Literary terms, composition of interpretive essays, and literary research is also studied.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Humanities, Transfer Module Humanities

ENG 24002 INTRODUCTION TO COMPOSITION THEORY  3 Credit Hours
Provides an introduction to composition theory, research in writing studies and pedagogical practices for academic writing. Students learn different methods of teaching writing by producing essays and projects within different genres and by applying different approaches to composition to their own work. Students examine writing, as well as research and teaching about writing, as socially, politically and historically situated activities.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 25001 LITERATURE IN ENGLISH I 3 Credit Hours
British literature written before 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 25002 LITERATURE IN ENGLISH II 3 Credit Hours
British literature written since 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 25004 LITERATURE IN THE UNITED STATES I 3 Credit Hours
U.S. literature from the colonial period until 1865 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 25005 LITERATURE IN THE UNITED STATES II 3 Credit Hours
U.S. literature from 1865 to the present studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 26001 POPULAR FORMS OF LITERATURE 3 Credit Hours
Introduction to popular forms of literature such as the western, the detective story, science fiction, fantasy, the war story and others.
Prerequisite: Minimum 26 ACT combined English/writing score; or minimum 600 SAT writing score; or ENG 11002, or ENG 11011; or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 25001 LITERATURE IN ENGLISH I 3 Credit Hours
British literature written before 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 25002 LITERATURE IN ENGLISH II 3 Credit Hours
British literature written since 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 25004 LITERATURE IN THE UNITED STATES I 3 Credit Hours
U.S. literature from the colonial period until 1865 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 25005 LITERATURE IN THE UNITED STATES II 3 Credit Hours
U.S. literature from 1865 to the present studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Arts and Humanities

ENG 26001 POPULAR FORMS OF LITERATURE 3 Credit Hours
Introduction to popular forms of literature such as the western, the detective story, science fiction, fantasy, the war story and others.
Prerequisite: Minimum 26 ACT combined English/writing score; or minimum 600 SAT writing score; or ENG 11002, or ENG 11011; or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 26095 SOPHOMORE SPECIAL TOPICS 3 Credit Hours
(Repeatable for credit) In-depth study of a particular writer, theme or literary movement, such as literature and film, gothic novels.
Prerequisite: ACT English score of 26 or higher; or SAT Evidence Based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

ENG 30001 ENGLISH STUDIES (WIC) 3 Credit Hours
Writing about and reading in a variety of texts and critical modes as an introduction to critical thinking and writing. Emphasis on the application of principles and methods of literary study to selected texts.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

ENG 30050 WRITING AND RHETORIC IN A DIGITAL AGE 3 Credit Hours
Writing course with a focus on learning and using a variety of tools available within contemporary digital composing environments.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30051 WRITING, RHETORIC AND NEW MEDIA 3 Credit Hours
Rhetorical principles for multimodal writing to produce rhetorically effective professional, scholarly, personal, and civic texts that integrate some blend of written word, visuals, images, audio and video.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30052 MEDICAL AND SCIENTIFIC WRITING 3 Credit Hours
Explores the communication principles and practices which occur in medical, health scientific, and scientific contexts. Students gain extensive individual and collaborative practice in writing about medicine and science for diverse audiences.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30061 WRITING IN BUSINESS 2 Credit Hours
Introduces students to writing practices in business settings, helping students to understand several of the ways that business writing differs from academic writing. Students learn practical skills related to addressing audience expectations relative to the purpose of the message, applying appropriate formats to business documents, integrating graphics commonly used in business documents, and using principles of rhetoric to convey a message effectively and concisely.
Prerequisite: ENG 21011 and COMM 15000 and BUS 10123; and special approval.
Corequisite: BUS 30061.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
ENG 30062 PRINCIPLES OF TECHNICAL WRITING 3 Credit Hours
Introduces theoretical principles of technical communication. Extensive
practice in the use, evaluation and production of complex technical
documents including research reports/research proposals. Emphasis on
oral, written and electronic communication. Prerequisite: Minimum C-
grade in ENG 21011 or HONR 10297
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30063 PROFESSIONAL WRITING 3 Credit Hours
Practice norms and strategies of effective workplace communication.
Prerequisite: Minimum C- grade in ENG 21011 or HONR 10297; and junior
standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Business

ENG 30064 ARGUMENTATIVE PROSE WRITING 3 Credit Hours
Practice in writing argumentative essays, with emphasis on discussion of
student work.
Prerequisite: Minimum C- grade in ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30065 EXPOSITORY PROSE WRITING 3 Credit Hours
Practice in prose composition with emphasis on exposition and
discussion of student work.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30066 WRITING IN THE PUBLIC SPHERE (ELR) 3 Credit Hours
Writing course focusing on a multimodal service-learning project
collaborating with peer and community partners in an online, hybrid or
face-to-face delivery system.
Prerequisite: Minimum C- grade in ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 30067 FICTION WRITING I 3 Credit Hours
Instruction and practice in writing fiction with specific models and
discussions of student work on a weekly basis.
Prerequisite: ENG 20021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30068 FICTION WRITING II 3 Credit Hours
Continued instruction and practice in writing fiction with specific
models and discussion of student work on a weekly basis.
Prerequisite: ENG 30067.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30069 POETRY WRITING I 3 Credit Hours
Instruction in and practice of writing poetry with specific models and
discussion of student work on a weekly basis.
Prerequisite: ENG 20021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30070 POETRY WRITING II 3 Credit Hours
Continued practice in writing of poetry with specific models and
discussion of student work on a weekly basis.
Prerequisite: ENG 30069.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30071 CREATIVE NONFICTION 3 Credit Hours
Instruction and practice in writing creative nonfiction with specific
models and discussions of student work on a weekly basis.
Prerequisite: Minimum C grade in ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30072 EDITING AND PUBLISHING I 3 Credit Hours
Provides students with an overview of the editing and publishing industry.
Provides practice, instruction, and feedback on document editing and
book production and publishing.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30073 EDITING AND PUBLISHING II 3 Credit Hours
Builds on the skills acquired in ENG 30072 through proofreading
and copyediting exercises based on The Chicago Manual of Style.
Emphasis on topics such as document design and production, fact-
checking, working within social media, and editing work written by others.
Prerequisites: ENG 30072
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30074 GRAMMAR FOR EDITING 3 Credit Hours
Course focuses on editing practices that require knowledge of the rules
of grammar, usage, and stylistic conventions in a variety of professional
fields.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 30075 JUNIOR SPECIAL TOPICS 3 Credit Hours
(Repeatable for credit)An opportunity to focus on important issues in
literature, writing, criticism or cultural studies.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Grade Mode</th>
<th>Schedule Type</th>
<th>Contact Hours</th>
<th>Prerequisite</th>
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<tr>
<td>ENG 31001</td>
<td>Fundamentals of English Grammar</td>
<td>3</td>
<td>Lecture</td>
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<td>3 lecture</td>
<td>None.</td>
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<td>ENG 31002</td>
<td>History of the English Language</td>
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<td>Lecture</td>
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<td>ENG 31003</td>
<td>Linguistics</td>
<td>3</td>
<td>Lecture</td>
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<td>ENG 31004</td>
<td>Lexicology/Lexicography</td>
<td>3</td>
<td>Lecture</td>
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<td>ENG 31005</td>
<td>Child Second Language Acquisition</td>
<td>3</td>
<td>Lecture</td>
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<td>ENG 31006</td>
<td>World Englishes (DIVG) (WIC)</td>
<td>3</td>
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<td>ENG 31007</td>
<td>Pedagogy for Teaching English as a Second Language</td>
<td>3</td>
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<td>ENG 31008</td>
<td>Grammar for Teaching English as a Second/Foreign Language</td>
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<td>ENG 31009</td>
<td>Adult Second Language Acquisition</td>
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<td>ENG 31011</td>
<td>World Englishes</td>
<td>3</td>
<td>Lecture</td>
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<td>3 lecture</td>
<td>ACT English score of 26 or higher; or SAT Evidence based Reading and Writing score of 600 or higher; or ENG 11002, ENG 11011, or HONR 10197.</td>
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<td>ENG 31012</td>
<td>Gender and Language</td>
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<td>Lecture</td>
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<td>ENG 31095</td>
<td>Special Topics in Linguistics</td>
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<td>ENG 32001</td>
<td>Children's Literature</td>
<td>3</td>
<td>Lecture</td>
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<td>ENG 32002</td>
<td>Literature for Young Adults</td>
<td>3</td>
<td>Lecture</td>
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<td>ENG 33001</td>
<td>U.S. Literature to 1865</td>
<td>3</td>
<td>Lecture</td>
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<td>Course Code</td>
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<td>Schedule Type</td>
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<td>ENG 33002</td>
<td>U.S. LITERATURE FROM 1865 TO 1945</td>
<td>3</td>
<td>Lecture</td>
<td>ENG 21011 or HONR 10297</td>
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<td>ENG 33003</td>
<td>U.S. LITERATURE FROM 1945 TO PRESENT</td>
<td>3</td>
<td>Lecture</td>
<td>ENG 21011 or HONR 10297</td>
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<tr>
<td>ENG 33010</td>
<td>AFRICAN-AMERICAN LITERATURE TO 1900</td>
<td>3</td>
<td>Lecture</td>
<td>ENG 21011 or HONR 10297</td>
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<td></td>
<td>(Cross-listed with PAS 32001) Study of African-American literature from its beginning to 1900, including such writers as Wheatley, J. Hammon, Terry, B. Hammon, Jones, Marrant, Allen, Hall, Walker, Truth, Garnet, Douglass, Delany, Harper, Stewart, Turner, Jacobs, Keckley, Brown, Wilson, Griggs, Chesnutt and Dunbar.</td>
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<td>ENG 33012</td>
<td>MODERN AFRICAN-AMERICAN LITERATURE</td>
<td>3</td>
<td>Lecture</td>
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<td>(Cross-listed with PAS 32002) Study of African-American literature from the early twentieth century to the present. The authors include Toomer, Hughes, Larsen, Wright, Baldwin, Hansberry, Jones, Lorde, Walker, Morrison, Mosley, Youngblood and Carter.</td>
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<td>ENG 33013</td>
<td>PAN-AFRICAN WOMEN'S LITERATURE (DIVG)</td>
<td>3</td>
<td>Lecture</td>
<td>ENG 21011 or HONR 10297</td>
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<td></td>
<td>(Cross-listed with PAS 37100) Introduces students to literary works by African and Caribbean women.</td>
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<td>ENG 33014</td>
<td>AFRICAN-AMERICAN WOMEN'S LITERATURE</td>
<td>3</td>
<td>Lecture</td>
<td>ENG 21011 or HONR 10297</td>
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<td></td>
<td>(Cross-listed with PAS 37200) Introduces students to literary works by African-American women.</td>
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<td>ENG 33015</td>
<td>AFRICAN LITERATURES (DIVG)</td>
<td>3</td>
<td>Lecture</td>
<td>ENG 21011 or HONR 10297</td>
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<td>(Cross-listed with PAS 32050) Examines works of major 20th-century African, African American and Caribbean writers and intellectuals. Authors include Niane, Achebe, Emecheta, Prince, Hurston, Hughes, Cesaire, Senghor, Soyinka and many others.</td>
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<td>ENG 33016</td>
<td>AFRICAN-AMERICAN LITERATURE</td>
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<td>(Cross-listed with PAS 32010) Study of African-American literature from the close of the Civil War through World War II.</td>
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<td>ENG 33017</td>
<td>MODERN AFRICAN-AMERICAN LITERATURE</td>
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<td>(Cross-listed with PAS 37101) Study of African-American literature from the late 1800s to the present. The authors include Toomer, Hughes, Larsen, Wright, Baldwin, Hansberry, Jones, Lorde, Walker, Morrison, Mosley, Youngblood and Carter.</td>
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<td>ENG 33018</td>
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<td>(Cross-listed with PAS 37102) Introduces students to literary works by African and Caribbean women.</td>
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<td>ENG 33019</td>
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<td>(Cross-listed with PAS 37201) Introduces students to literary works by African-American women.</td>
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<td>ENG 33020</td>
<td>AFRICAN LITERATURES (DIVG)</td>
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<td>(Cross-listed with PAS 32051) Examines works of major 20th-century African, African American and Caribbean writers and intellectuals. Authors include Niane, Achebe, Emecheta, Prince, Hurston, Hughes, Cesaire, Senghor, Soyinka and many others.</td>
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<td>ENG 33021</td>
<td>AFRICAN-AMERICAN LITERATURE</td>
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<td>(Cross-listed with PAS 32011) Study of African-American literature from the close of the Civil War through World War II.</td>
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<td>ENG 33022</td>
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<td>(Cross-listed with PAS 37102) Study of African-American literature from the late 1800s to the present. The authors include Toomer, Hughes, Larsen, Wright, Baldwin, Hansberry, Jones, Lorde, Walker, Morrison, Mosley, Youngblood and Carter.</td>
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<td>ENG 33023</td>
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<td>(Cross-listed with PAS 37103) Introduces students to literary works by African and Caribbean women.</td>
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<td>ENG 33024</td>
<td>AFRICAN-AMERICAN WOMEN'S LITERATURE</td>
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<td>(Cross-listed with PAS 37202) Introduces students to literary works by African-American women.</td>
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ENG 34021 WOMEN'S LITERATURE (DIVD) 3 Credit Hours
Critical and theoretical consideration of gender issues concerning British and U.S. women writers studied in their historical and cultural contexts.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

ENG 34031 SHORT STORY 3 Credit Hours
Critical analysis of short stories written by important world authors. Selections include stories originally written in English and stories translated into English.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 34055 SHAKESPEARE 3 Credit Hours
Study of plays representing Shakespeare’s entire career, including Henry IV parts I and II, The Merchant of Venice, Measure for Measure, Hamlet, Othello and The Tempest.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 34065 CHAUCER 3 Credit Hours
Close study of Chaucer’s Canterbury Tales, with some attention to courtly poems and/or selected lyrics.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 34090 SHAKESPEARE IN PERFORMANCE 3 Credit Hours
This course is designed around a field-trip to the American Shakespeare Center in Staunton, VA, during which students attend performances of plays and participate in workshops. Students will also attend at least one performance of an early modern play staged in Northeastern Ohio. Students will formally study all the plays before attending performances of them.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 34095 SPECIAL TOPICS: MAJOR AUTHOR STUDIES 3 Credit Hours
(Repeatable for credit when topics varies) Intensive study of one or more authors from the English-speaking world.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 35101 LITERATURE AND OTHER DISCIPLINES 3 Credit Hours
Study of literature in relation to, or from the standpoint of, another discipline such as psychoanalysis, psychology, religion, theology, music and painting.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 35201 THE BIBLE AS LITERATURE 3 Credit Hours
Study of Bible as a great book subject to literary criticism and as a main document of Western culture. Old and New Testaments read.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

ENG 35301 LESBIAN, GAY, BISEXUAL AND TRANSGENDER: CRITICAL PERSPECTIVES (DIVD) 3 Credit Hours
Study of theory, language and other aspects of lesbian, gay, bisexual and transgendered literature and culture.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

ENG 35401 SCIENCE FICTION 3 Credit Hours
Study of the origins, history, themes, and major works of science fiction drawn from a variety of national literatures, as well as the adaptation of literary works into film, television, graphic novels, video games, and other forms. Prerequisites: ENG 21011 or HONR 10297
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 35501 APPLIED LITERARY CRITICISM 3 Credit Hours
Advanced, reading-intensive course in the reading and interpretation of literary scholarship, with emphasis on published scholarly analysis. Primary and secondary texts vary, depending on the specialization of the instructor.
Prerequisite: ENG 21011 or HONR 10297; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 36001 CLASSICAL RHETORIC 3 Credit Hours
Ancient approaches to rhetoric studied in their historical and cultural contexts. Selections from Greek and Roman thinkers such as the Sophists, Plato, Aristotle, Cicero and Quintilian.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 37101 CRITICAL RHETORICAL STUDIES OF TEXTS IN CONTEXT 3 Credit Hours
Students learn critical analytic methods and apply them to written texts, examining the rhetorical function of their linguistic elements and their relationship to rhetorical contexts.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 38001 CRITICAL THEORY AND READING  3 Credit Hours
Introduction to major interpretive paradigms in literary studies, from
American New Criticism to the present, with emphasis on strategies for
analyzing poetry, drama and narrative fiction.  
Prerequisite: ENG 21011 or HONR 10297; and ENG 24001.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 38002 RHETORIC AND WRITING STUDIES  3 Credit Hours
Introduction to theories and scholarship that have shaped the disciplinary
study of rhetoric and writing, including key figures and concepts from
classical and modern rhetoric that continue to influence contemporary
writing scholarship and pedagogy.  
Prerequisite: ENG 21011 or HONR 10297; and ENG 24001.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 38895 SPECIAL TOPICS IN WRITING  3 Credit Hours
(Repeatable for credit) Special topics course with an emphasis on
writing. Topics include: Editing and Publishing; Grammar and Editing, and
others. Course may be repeated with different content.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39095 SPECIAL TOPICS IN LITERARY HISTORY  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected literary
histories such as the travel narrative, the fairy tale, the detective story,
and postcolonial literature.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39195 SPECIAL TOPICS IN DRAMA  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics, themes,
or periods in drama such as Gender Construction, Obsession, or Medieval
Drama.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39295 SPECIAL TOPICS IN POETRY  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
poetry such as poetic form, historical and cultural contexts, and artistic
movements.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39395 SPECIAL TOPICS IN FICTION  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
fiction such as the autobiographical novel, the novella and the short story.
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39495 SPECIAL TOPICS IN COMPARATIVE LITERATURE  3 Credit Hours
(Repeatable for credit) Study of selected topics in comparative
literature such as movements and genres in world literature and the
interrelationships of the arts.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39595 SPECIAL TOPICS IN LITERARY CRITICISM  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
literary criticism such as reader response criticism, psychoanalytic
methodologies or Marxist approaches.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39695 SPECIAL TOPICS IN ETHNIC LITERATURE OF THE UNITED
STATES  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
ethnic literature such as the literature of one ethnic group, race and
ethnicity in U.S. culture.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39795 SPECIAL TOPICS IN WOMEN'S LITERATURE  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
women's literature organized around literary, historical and theoretical
issues.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39895 SPECIAL TOPICS IN RHETORIC, COMPOSITION AND
WRITING  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
rhetoric, composition, and writing such as historical and contemporary
studies of political and professional discourse. Course may be repeated
with different content.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

ENG 39995 SPECIAL TOPICS CULTURAL STUDIES  3 Credit Hours
(Repeatable for credit when topic varies) Study of selected topics in
cultural studies organized around a particular mode or methodology of
cultural analysis.  
Prerequisite: ENG 21011 or HONR 10297.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
ENG 40099 WRITING PORTFOLIO 2 Credit Hours
Directed practice in constructing a portfolio of original writing, which may be creative, expository, technical, or preprofessional in nature.
Prerequisite: Junior standing and declared in either the Creative Writing minor or Professional and Technical Writing minor.
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 2 lecture
Grade Mode: Standard Letter/IP

ENG 41001 SOCIOLINGUISTICS IN SCHOOLING (DIVD) (WIC) 3 Credit Hours
Examines the interactions between society and language. Explores pedagogical implications of language variation.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Writing Intensive Course

ENG 41002 COMPUTERS IN SECOND LANGUAGE TEACHING 3 Credit Hours
(Cross-listed with MCLS 40654) (Slashed with ENG 51002 and MCLS 50654) Designed for teachers of language and culture, this course explores the availability of technology, its implementation in the classroom and its integration with second language skills.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 41003 LANGUAGE CURRICULUM, MATERIALS AND ASSESSMENT 3 Credit Hours
Advanced inquiry into English as a Second Language teaching methods, curriculum design, and materials selection, use and design. Assessment of learners in a student-centered ESL or language curriculum.
Prerequisite: ENG 31007.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 41009 STUDENT TEACHING (ELR) 9 Credit Hours
(Slashed with ENG 51009) Full-time student teaching over 13 weeks in English as a Second Language in grades P-12. Background check by the Bureau of Criminal Investigation and Identification (BCII) and Federal Bureau of Investigation (FBI) required to be presented to authorized personnel at the assigned school-agency before the first day of student teaching. To be enrolled in the course, students must have official valid certification of child safety training, approved basic life support and ALICE training presented to the campus office of clinical experience.
Prerequisite: CULT 29535 and EPSY 29525 and ITEC 39525 and eligibility for student teaching and special approval.
Corequisite: ENG 41525.
Schedule Type: Practicum or Internship
Contact Hours: 27.733 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

ENG 41092 ESL PRACTICUM IN INTENSIVE ENGLISH PROGRAMS (ELR) 3 Credit Hours
(Repeatable for credit) Provides opportunities for students to observe, assist, and or teach English as a second language in the ESL Center, including 70 fieldwork hours. Participating ESL Center classes are held Monday through Friday.
Pre/corequisite: ENG 31007.
Schedule Type: Lecture, Practicum or Internship
Contact Hours: 2 lecture, 5 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 41093 VARIABLE TITLE WORKSHOP IN ENGLISH 1-6 Credit Hours
(Repeatable for credit) An opportunity to focus on concerns of the discipline and on new developments in writing, criticism, literature and career opportunities.
Prerequisite: Junior standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

ENG 41094 COLLEGE TEACHING ASSISTANT (ELR) 1-3 Credit Hours
(Repeatable for maximum 6 credit hours) An opportunity to assist in the development and delivery of a college course in English. Expectations may include group and class leadership, selection of materials, development of classroom inquiry techniques, and multimedia support.
Prerequisite: senior standing and special approval.
Schedule Type: Field Experience, Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 41096 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for credit) Open to advanced undergraduate students in English or TESL. Only 3 hours of individual investigation count toward the English major.
Prerequisite: Special approval of instructor and department and junior standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter/IP

ENG 41098 GUIDED RESEARCH IN ENGLISH (ELR) 1-3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Independent student research with faculty guidance.
Prerequisite: junior standing and special approval.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement
ENG 41192 ESL PRACTICUM IN A P-12 SETTING (ELR) 3 Credit Hours
(Repeatable for credit) Provides students seeking educational licensure opportunities to observe, assist, and or teach English as a second language in P-12 schools, including 70 field-clinical hours. Students must complete the Bureau of Criminal Investigation and Identification (BCI) and Federal Bureau of Investigation (FBI) background checks and submit results to authorized personnel at the assigned school-agency before the first day of Practicum. Prerequisite: ENG 31005; Pre/corequisite: ENG 31007
Schedule Type: Lecture, Practicum or Internship
Contact Hours: 2 lecture, 5 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 41194 TUTORING OF WRITING 3 Credit Hours
This course provides training and professional development for writing center tutors. It covers writing center theory and practice, the history of writing centers, composition pedagogy, writing across the curriculum, tutoring ESL students, assessing writing center services, and the development of outreach programming. Prerequisites: ENG 21011 or HONR 10297 with a minimum grade of C
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 41198 RESEARCH ASSISTANT IN ENGLISH (ELR) 1-3 Credit Hours
(Repeatable for a maximum of 6 credit hours) An opportunity to assist a faculty member on faculty initiated research in criticism and literary analysis, rhetoric and composition, or applied language acquisition and teaching.
Prerequisite: junior standing and special approval.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 41292 TEACHING ENGLISH AS A FOREIGN LANGUAGE PRACTICUM (ELR) 3,6 Credit Hours
(Repeatable for a maximum of 12 credits) Students observe, participate and teach in a number of school contexts in Florence, Italy, from primary to secondary, community and higher education. Gives students authentic practice teaching English in the foreign language context. Pre/co-requisite: ENG 31007
Schedule Type: Practicum or Internship
Contact Hours: 5-10 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 41525 INQUIRY INTO PROFESSIONAL PRACTICE 3 Credit Hours
Preparation for student teaching of English as a second language, grades K-12.
Prerequisite: CULT 29535 and EPSY 29525 and ITEC 39525.
Corequisite: ENG 41009.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 42092 WRITING INTERNSHIP (ELR) 1-3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Guided internship in professional writing, editing, or publishing. Possible placements include the KSU Press, Institute for Bibliography and Editing, and WICK Poetry Center.
Prerequisite: junior standing and special approval.
Schedule Type: Field Experience, Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

ENG 42192 SERVICE LEARNING IN ENGLISH STUDIES (ELR) 3 Credit Hours
(Repeatable for maximum 6 credit hours) Provides guided opportunities for completing service learning related to English Studies. Service placements meet a community need and provide practice in such areas as writing, editing, publishing, teaching, and tutoring.
Prerequisite: junior standing and special approval.
Schedule Type: Field Experience, Practicum or Internship
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 43092 TEACHING POETRY IN THE SCHOOLS (ELR) 3 Credit Hours
(Repeatable for maximum 6 credit hours) Exploration of various approaches to teaching poetry writing, poetry appreciation, and poetry performance in school contexts. Study of creative writing as a means of developing literacy and promoting human growth.
Prerequisite: junior standing and special approval.
Schedule Type: Field Experience, Practicum or Internship
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

ENG 49091 SENIOR SEMINAR (ELR) (WIC) 3 Credit Hours
(Repeatable for credit) Intensive study of a special topic in English studies. Students complete a long writing project during the semester. Prerequisites: ENG 38001 or ENG 38002 and English (ENG) major
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

ENG 49095 SENIOR SPECIAL TOPICS 3 Credit Hours
(Repeatable for credit) Intensive study of topics that will vary each semester.
Prerequisite: senior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 51002 COMPUTERS IN SECOND LANGUAGE TEACHING 3 Credit Hours
(Cross-listed with MCLS 50654) (Slashed with ENG 41002 and MCSL 40654) Designed for teachers of language and culture, this course explores the availability of technology, its implementation in the classroom and its integration with second language skills.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENGL 5109 | STUDENT TEACHING | 9 Credit Hours
(Repealable for credit) Using the Kent program as an example, the focus will be on teaching composition, literature and language along with the needed planning and evaluation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 62291 | SEMINAR: BRITISH LITERATURE 1800 TO PRESENT | 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENGL 72291) In-depth treatment of various topics from the Romantic and Victorian periods and the 20th century.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENGL 63001 | METHODOLOGY OF TESL | 3 Credit Hours
(Cross-listed with ENGL 73001) The theory and methodology of teaching English as a second language.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63033 | THEORIES IN SECOND LANGUAGE ACQUISITION | 3 Credit Hours
(Cross-listed with MCLS 60661) (Slashed with ENGL 73033) This course surveys the major theoretical approaches to language acquisition, concentrating on second language acquisition and the relationship between acquisition/learning research and second language teaching approaches.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63034 | LITERATE PRACTICES AND SOCIOLINGUISTICS | 3 Credit Hours
(Cross-listed with ENGL 73034) Discussion of sociolinguistic approaches to understanding literacy and language in workplaces and classrooms and societal multilingualism. Survey of trends in sociolinguistic thought and method.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63037 | THE PRAGMATICS OF CONVERSATION | 3 Credit Hours
(Cross-listed with MCLS 60621) Theories of pragmatics, conversational structure and strategies with practical applications for teaching conversation strategies to foreign second language learners.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63038 | TEACHING LITERATURE AND CULTURE | 3 Credit Hours
(Cross-listed with MCLS 60622) Students will explore theories of literature and culture teaching as well as strategies for teaching literature and culture.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63039 | SECOND LANGUAGE CURRICULUM AND TESTING | 3 Credit Hours
(Cross-listed with MCLS 60663) Students will study second language curriculum and testing design and current issues, including oral proficiency testing.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63040 | LINGUISTICS FOR THE LANGUAGE PROFESSIONS | 3 Credit Hours
(Cross-listed with MCLS 60601) Students will be introduced to basic linguistic issues and how these relate to the language professions. Course focuses on functional principles, especially on options to express textual, interpersonal and ideational/experiential meaning.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 63041 | DESCRIPTIVE GRAMMAR OF ENGLISH | 3 Credit Hours
This course provides a description of English syntax and morphology. Presentation of material will be through rules and exposure to grammatical forms in meaningful contexts.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 63043  SECOND LANGUAGE WRITING  3 Credit Hours
(Cross-listed with MCLS 60665) Theory and practice in teaching second language writing. Topics will include current and historic approaches to second language writing, approaches to tutoring international students in writing centers, teacher and peer response, error correction, and technology in second language writing instruction.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 63044  SECOND LANGUAGE READING  3 Credit Hours
(Cross-listed with MCLS 60664) Addresses a wide variety of topics related to second language reading, including theoretical perspectives, the process of learning to read, models of how reading happens, comprehension, fluency, discourse structures, strategy use, and vocabulary acquisition. Teaching issues related to second language reading will also be addressed directly, namely assessment and curriculum building.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 63045  ENGLISH FOR SPECIFIC PURPOSES  3 Credit Hours
Examination of academic, workplace, and vocational language in the design of second language instructional materials and curriculum. Discourse domains from medical to agricultural to business are analyzed through applied linguistic tools. Curriculum and instructional materials are studied and designed.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 63046  SECOND LANGUAGE LISTENING AND SPEAKING  3 Credit Hours
Theory and practice in second language listening and speaking. Topics will include current approaches to second language speech perception and production, issues in teaching and assessing second language listening and speaking, and phonetic, phonological, and acoustic analyses for language teachers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 63047  HERITAGE LANGUAGES AND SECOND LANGUAGE LEARNING  3 Credit Hours
(Cross-listed with MCLS 60624) Theory and practice in language education of heritage language speakers. Ethnic, minority, ancestral, and community languages and language practices will be explored with implications for second and additional language learning in English, foreign language, bilingual education.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 63098  SECOND LANGUAGE RESEARCH METHODS  3 Credit Hours
(Cross-listed with MCLS 60698) Students learn how second language research influences their teaching practices by studying research texts and recent journal articles and conducting a research project.
Prerequisite: graduate standing.
Schedule Type: Research
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 63391  SEMINAR:LINGUISTICS  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 73391) In-depth treatment of various topics from modern linguistics, including phonology, morphology and various generative grammars.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 64070  WRITING POETRY  3 Credit Hours
(Cross-listed with ENG 74070) Advanced workshop in creative writing.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 64071  WRITING FICTION  3 Credit Hours
(Cross-listed with ENG 74071) Advanced workshop in the writing of fiction.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 65012  READING AND INTERPRETING RESEARCH ON WRITING  3 Credit Hours
(Cross-listed with ENG 75012) Course focuses on how to read critically and interpret published research by examining the principle means through which “knowledge” is constructed in writing research.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 65022  RHETORICAL THEORY:GREEK AND ROMAN  3 Credit Hours
(Cross-listed with ENG 75022) Course examines classical Greek and Roman rhetorical traditions and, to a lesser extent, their reappearance in contemporary rhetorical theories and composition pedagogies.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 65023  RHETORICAL THEORY:18TH, 19TH AND 20TH CENTURIES  3 Credit Hours
(Cross-listed with ENG 75023) Course surveys 18th-, 19th- and 20th-century developments in rhetorical theory and their influences on contemporary pedagogical and theoretical practices.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 65027  ROLE OF COMPOSITION  3 Credit Hours
(Cross-listed with ENG 75027) (Repeatable for maximum 6 credit hours)
Study of composition's contributions to writing studies such as writing
pedagogy/theory, writing technologies, assessment, process research,
WAC, program administration, rhetoric and cultural studies.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 65035  LINGUISTICS FOR RHETORICIANS  3 Credit Hours
(Cross-listed with ENG 75035) (Repeatable for maximum 6 credit hours)
Provides an introduction to linguistic theories, concepts and tools
relevant to the teaching and researching of various dimensions of written
texts.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 65044  RESEARCH DESIGN  3 Credit Hours
(Cross-listed with ENG 75044) (Repeatable for maximum 6 credit hours)
Introduces students to a range of research methodologies through
theoretical scholarship and guided practice, culminating in a pilot
research project.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 65051  LITERACY:FUNCTIONS, PRACTICES AND HISTORY  3 Credit Hours
(Cross-listed with ENG 75051) Introduces students to a range of research
methodologies through theoretical scholarship and guided practice, culminating in a pilot
research project. Course surveys and critically evaluates historical and contemporary studies of literacy in terms of
three dominant metaphors (“adaptation,” “power,” “grace”) those studies employ. Prerequisite: Graduate standing.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 65052  WRITING ACTIVITY AS SOCIAL PRACTICE  3 Credit Hours
(Cross-listed with ENG 75052) Through Vygotskian-based activity theory
and contemporary theories of practice, course explores the rhetorical
bases and implications of studying literacy and writing as embedded
activity.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 65053  WRITING TECHNOLOGIES  3 Credit Hours
(Cross-listed with ENG 75053) Course critically examines theoretical
and pedagogical claims concerning writing technologies and begins
identifying the conceptual components of a grounded theory for
technology-enhanced literacy learning.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66002  BRITISH AND IRISH LITERATURE FROM THE EARLY
ROMANTICS ONWARD  3 Credit Hours
(Cross-listed with ENG 76002) Broad, synchronic study of the literature
identified with a single period in literary history embracing various genres
and relating the literature to other cultural phenomena of the time.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66051  SHAKESPEARE  3 Credit Hours
(Cross-listed with ENG 76051) Close reading of selected plays and
poems by Shakespeare with some emphasis on critical and interpretative
problems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66052  LITERATURE OF THE UNITED STATES THROUGH THE CIVIL
WAR  3 Credit Hours
(Cross-listed with ENG 76052) Broad, synchronic study of U.S. literature
identified with a single period in literary history embracing various genres
and relating the literature to other cultural phenomena of the time.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66053  ETHNIC LITERATURE OF THE UNITED STATES  3 Credit Hours
(Cross-listed with ENG 76053) An examination of selected fiction and
theory by ethnic American authors, or of literary representations of special
topics relating to ethnic and racial identity.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66101  AFRICAN-AMERICAN LITERATURE  3 Credit Hours
(Cross-listed with ENG 76101) Broad, synchronic study of African American literature
identified with a single period in literary history embracing various genres
and relating the literature to other cultural phenomena of the time.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66102  ETHNIC LITERATURE OF THE UNITED STATES  3 Credit Hours
(Cross-listed with ENG 76102) Broad, synchronic study of the literature
identified with a single period in literary history embracing various genres
and relating the literature to other cultural phenomena of the time.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66103  AMERICAN LITERATURE  3 Credit Hours
(Cross-listed with ENG 76103) An examination of selected fiction and
theory by American authors, or of literary representations of special
topics relating to ethnic and racial identity.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66104  AFRICAN-AMERICAN LITERATURE  3 Credit Hours
(Cross-listed with ENG 76104) An examination of selected African-American fiction and theory, or of a special topic relating to literary
representations of African American culture identity or history.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66302  POST-COLONIAL LITERATURE IN ENGLISH  3 Credit Hours
(Cross-listed with ENG 76302) An examination of selected fiction and
theory in English by post-colonial authors from India, Africa, South Africa,
the Caribbean and elsewhere.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 66401 LITERARY MOVEMENTS 3 Credit Hours
(Cross-listed with ENG 76401) An examination of one particular movement in literary history via its writers, artists, benefactors, thinkers, political demagogues and critics.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66501 NARRATIVE LITERATURE 3 Credit Hours
(Cross-listed with ENG 76501) Close readings of selected novels, short stories, biographies, autobiographies, life writing, journals and other forms of narrative and verse by British American and other writers in English from one or more periods in literary history.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66791 SEMINAR: BRITISH AND IRISH LITERATURE 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 76791) In-depth treatment of various topics from Old English literature, Beowulf, Middle English literature and Chaucer.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 66991 SEMINAR: GENRE 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 76991) In-depth examination of one or more kinds of texts focusing on how forms are defined historically and analytically, with special attention to current approaches.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 66706 METHODS IN THE STUDY OF LITERATURE 3 Credit Hours
(Cross-listed with ENG 76706) Analytical reading and interpretation of published research and criticism, its assumptions, trends, controversies; course will identify and contextualize present opportunities for research in field. Required for Ph.D.s specializing in Division II.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 66791 SEMINAR: BRITISH AND IRISH LITERATURE 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 76791) In-depth treatment of various topics from Old English literature, Beowulf, Middle English literature and Chaucer.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
ENGL 67104 SOCIAL AND CULTURAL THEORY AND CRITICISM 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENGL 77104) Study of important issues and concepts in Marxist, new historicist, ethnic, post-colonialist and other modes of social/cultural theory and criticism.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 67591 SEMINAR: THEORY AND CRITICISM 3 Credit Hours
(Repeatable for credit when topic varies) (Cross-listed with ENGL 77591) In-depth study of important topics in contemporary theory and criticism.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENGL 68392 PRACTICUM IN TEACHING COLLEGE ENGLISH 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENGL 78392) Practical training and experience in teaching beginning composition courses.
Prerequisite: Graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 3 other
Grade Mode: Standard Letter

ENGL 68492 PRACTICUM IN TEACHING INTERNATIONAL STUDENTS 3 Credit Hours
(Repeatable for credit) Practical training and experience in teaching English to international students. Field placement in the ESL Center or in P-12 schools including 70 field-clinical hours. Participating classes are Monday through Friday. Pre or co-requisite: ENGL 63001.
Prerequisite: Graduate standing.
Schedule Type: Lecture, Practicum or Internship
Contact Hours: 3 lecture, 6 other
Grade Mode: Standard Letter

ENGL 69199 THESIS I 2-6 Credit Hours
Thesis students must register for a total of 6 semester hours, 2 to 6 in a single semester distributed over several semesters if desired.
Prerequisite: Special approval and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

ENGL 72291 SEMINAR: BRITISH LITERATURE 1800 TO PRESENT 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENGL 62291) In-depth treatment of various topics from the Romantic and Victorian periods and the 20th century.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENGL 73001 METHODOLOGY OF TEACHING ENGLISH AS A SECOND LANGUAGE 3 Credit Hours
(Cross-listed with ENGL 63001) The theory and methodology of teaching English as a second language.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENGL 73033 THEORIES IN SECOND LANGUAGE ACQUISITION 3 Credit Hours
(Slashed with ENGL 63033 and MCLS 60661) This course surveys the major theoretical approaches to language acquisition concentrating on second language acquisition and the relationship between acquisition learning research and second language teaching approaches.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 73034  LITERATE PRACTICES AND SOCIOLINGUISTICS  3 Credit Hours
(Cross-listed with ENG 63034) Discussion of sociolinguistic approaches to understanding literacy, language in workplaces and classrooms and societal multilingualism. Survey of trends in sociolinguistic thought and method.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 73391  SEMINAR:LINGUISTICS  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 63391) In-depth treatment of various topics from modern linguistics, including phonology, morphology and various generative grammars.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 74070  WRITING POETRY  3 Credit Hours
(Cross-listed with ENG 64070) Advanced workshop in creative writing.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 74071  WRITING FICTION  3 Credit Hours
(Cross-listed with ENG 64071) Advanced workshop in the writing of fiction.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 75012  READING AND INTERPRETING RESEARCH ON WRITING 3 Credit Hours
(Cross-listed with ENG 65012) Course focuses on how to read critically and interpret published research by examining the principle means through which "knowledge" is constructed in writing research.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 75022  RHETORICAL THEORY:GREEK AND ROMAN  3 Credit Hours
(Cross-listed with ENG 65022) Course examines classical Greek and Roman rhetorical traditions and, to a lesser extent, their reappearance in contemporary rhetorical theories and composition pedagogy.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 75023  RHETORICAL THEORY:18TH, 19TH AND 20TH CENTURIES  3 Credit Hours
(Cross-listed with ENG 65023) Course surveys 18th-, 19th- and 20th-century developments in rhetorical theory and their influences on contemporary pedagogical and theoretical practices.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 75027  ROLE OF COMPOSITION  3 Credit Hours
(Cross-listed with ENG 65027) (Repeatable for maximum 6 credit hours) Study of composition's contributions to writing studies such as writing pedagogy/theory, writing technologies, assessment, process research, WAC, program administration, rhetoric and cultural studies.
Prerequisite: doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 75035  LINGUISTICS FOR RHETORICIANS  3 Credit Hours
(Cross-listed with ENG 65035) (Repeatable for maximum 6 credit hours) Provides an introduction to linguistic theories, concepts and tools relevant to the teaching and researching of various dimensions of written texts.
Prerequisite: doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 75044  RESEARCH DESIGN  3 Credit Hours
(Cross-listed with ENG 65044) (Repeatable for maximum 6 credit hours) Introduces students to a range of research methodologies through theoretical scholarship and guided practice, culminating in a pilot research project.
Prerequisite: doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 75051  LITERACY:FUNCTIONS, PRACTICES AND HISTORY  3 Credit Hours
(Cross-listed with ENG 65051) Introduces students to a range of research methodologies through theoretical scholarship and guided practice, culminating in a pilot research project. Course surveys and critically evaluates historical and contemporary studies of literacy in terms of three dominant metaphors ("adaptation," "power," "grace") those studies employ. Prerequisite: Doctoral standing.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 75052  WRITING ACTIVITY AS SOCIAL PRACTICE  3 Credit Hours
(Cross-listed with ENG 65052) Through Vygotskian-based activity theory and contemporary theories of practice, course explores the rhetorical bases and implications of studying literacy and writing as embedded activity.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 75053  WRITING TECHNOLOGIES  3 Credit Hours
(Cross-listed with ENG 65053) Course critically examines theoretical and pedagogical claims concerning writing technologies and begins identifying the conceptual components of a grounded theory for technology-enhanced literacy learning.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 76002 BRITISH AND IRISH LITERATURE FROM THE EARLY ROMANTICS ONWARD 3 Credit Hours
(Cross-listed with ENG 66002) Broad, synchronic study of the literature identified with a single period in literary history embracing various genres and relating the literature to other cultural phenomena of the time.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76051 SHAKESPEARE 3 Credit Hours
(Cross-listed with ENG 66051) Close reading of selected plays and poems by Shakespeare with some emphasis on critical and interpretative problems.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76051 LITERATURE OF THE UNITED STATES THROUGH THE CIVIL WAR 3 Credit Hours
(Cross-listed with ENG 66051) Broad, synchronic study of U.S. literature identified with a single period in literary history embracing various genres and relating the literature to other cultural phenomena of the time.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76103 ETHNIC LITERATURE OF THE UNITED STATES 3 Credit Hours
(Cross-listed with ENG 66103) An examination of selected fiction and theory by ethnic American authors, or of literary representations of special topics relating to ethnic and racial identity.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76104 AFRICAN-AMERICAN LITERATURE 3 Credit Hours
(Cross-listed with ENG 66104) An examination of selected African-American fiction and theory, or of a special topic relating to literary representations of African-American culture, identity or history.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76202 POST-COLONIAL LITERATURE IN ENGLISH 3 Credit Hours
(Cross-listed with ENG 66202) An examination of selected fiction and theory in English by post-colonial authors from India, Africa, South Africa, the Caribbean and elsewhere.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76401 LITERARY MOVEMENTS 3 Credit Hours
(Cross-listed with ENG 66401) An examination of one particular movement in literary history via its writers, artists, benefactors, thinkers, political demagogues and critics.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76501 NARRATIVE LITERATURE 3 Credit Hours
(Cross-listed with ENG 66501) Close readings of selected novels, short stories, biographies, autobiographies, life writing, journals, and other forms of narrative and verse by British, American and other writers in English, from one or more periods in literary history.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76592 PRACTICUM IN TUTORING WRITING 1 Credit Hour
(Repeatable for credit) Practical training and experience in tutoring composition.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture, Practicum or Internship
**Contact Hours:** 1 lecture
**Grade Mode:** Standard Letter

ENG 76595 SPECIAL TOPICS: AUTHORS AND AUTHORSHIP 3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 66595) Research-based study of problems in the theory or practice of authorship. Typical courses include "the creative process ", "authors and printers ", "Faulkner in hollywood".
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

ENG 76706 METHODS IN THE STUDY OF LITERATURE 3 Credit Hours
(Cross-listed with ENG 66706) Analytical reading and interpretation of published research and criticism, its assumptions, trends, controversies; course will identify and contextualize present opportunities for research in field. Required for Ph.D.s specializing in Division II.
**Prerequisite:** Doctoral standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter
ENG 76791  SEMINAR: BRITISH AND IRISH LITERATURE  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 66791) In-depth treatment
of various topics from old English literature, Beowulf, Middle English
literature, and Chaucer.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 76891  SEMINAR: LITERATURE OF THE UNITED STATES  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 66891) This course will
examine the construction of American identities. Writers typically
discussed are Howells, Dreiser, Cahan, Anderson, Fitzgerald, Dos Passos,
Wright, Baldwin, Bellow, Ikada, Jen and others. Content varies.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 76895  SPECIAL TOPICS  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 66895) Study of selected
special topics in literature.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 76991  SEMINAR: GENRE  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 66991) In-depth
examination of one or more kinds of texts focusing on how forms are
defined historically and analytically, with special attention to current
approaches.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 77101  FEMINIST THEORY AND CRITICISM  3 Credit Hours
(Cross-listed with ENG 67101) Study of key issues and concepts in feminin
theory and criticism, including the nature, causes and effects
(political, social and psychological) of certain types of representation of
women and discourse practices employed by women.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 77103  PSYCHOANALYTIC THEORY AND CRITICISM  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 67103) Study of important
issues and concepts in psychoanalytic theory and criticism.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 77104  SOCIAL AND CULTURAL THEORY AND CRITICISM  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 67104) Study of important
issues and concepts in Marxist, new historicist, ethnic, post-colonialist
and other modes of social cultural theory and criticism.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 77591  SEMINAR: THEORY AND CRITICISM  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 67591) In-depth study of
important topics in contemporary theory and criticism.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 77691  SEMINAR: SCHOLARLY EDITING  3 Credit Hours
(Repeatable for credit when topic varies) (Cross-listed with ENG 67691)
In-depth treatment of various topics from modern scholarly editing.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 78093  VARIABLE TITLE WORKSHOP IN ENGLISH  2-6 Credit Hours
(Repeatable for a maximum of 8 credit hours) (Cross-listed with ENG 68093)
Designed to focus on concerns of the profession/discipline
to bring secondary teachers up to date on new developments in the field.
Maximum for degree credit is 4 hours.
Prerequisite: Doctoral standing.
Schedule Type: Workshop
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory

ENG 78096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 68096) Intensive study of
selected writer or special topic.
Prerequisite: Doctoral standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

ENG 78392  PRACTICUM IN TEACHING COLLEGE ENGLISH  3 Credit Hours
(Repeatable for credit) (Cross-listed with ENG 68392) Practical training
and experience in teaching beginning composition courses.
Prerequisite: Doctoral standing.
Schedule Type: Practicum or Internship
Contact Hours: 3 other
Grade Mode: Standard Letter

ENG 85024  DOMAIN RHETORICS AND THE CONSTRUCTION OF
KNOWLEDGE  3 Credit Hours
(Repeatable twice for credit) Course examines disciplinarity and
knowledge production as historically and socially situated practices and
how they are realized through linguistic, rhetorical and material processes
and systems.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
ENG 85025  THEORIES AND SYSTEMS OF WRITING AND REPRESENTATION  3 Credit Hours
Course examines the history and use of scripts and other means of constructing shared meaning and the attendant contemporary issues concerning writing and representation.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85033  THE RHETORICAL NATURE AND FUNCTION OF EXTENDED DISCOURSE  3 Credit Hours
Examines discourse as a rhetorical and socio-political practice that extends beyond the temporal and material boundaries of individual texts by considering how discursive practice is embedded within, sustains, and modifies other social, cultural, and political practices.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85041  FIELD RESEARCH METHODS IN WRITING  3 Credit Hours
Course focuses on qualitative methods for conducting field research in writing within communities of practice and particular contexts and for analyzing and interpreting data. Doctoral standing.
Prerequisite: 9 doctoral hours of ENG 75011 and ENG 75012 and ENG 75022 and ENG 75023 and ENG 73034 and ENG 75051 and ENG 75052 and ENG 75053 and ENG 75057.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85042  DISCOURSE ANALYSIS  3 Credit Hours
Explores various approaches to discourse analysis (e.g., critical discourse analysis, narrative theory, systemic functional linguistics) and teaches students how to use them to conduct linguistic analyses of discourse. We will examine discourse in terms of the key functions language serves as a form of social action: to represent the world, to invoke and create social relationships, interactions, and identities, and to organize utterances into meaningful discursive events and products.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85054  STUDIES IN LITERACY AND COMMUNITY  3 Credit Hours
Course expands on ENG 6/75052 by examining in more detail how literacy is embedded in the activities and practices of academic, civic and professional communities.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85055  THE NATURE AND RELATIONSHIP OF ACADEMIC AND NONACADEMIC LITERACY  3 Credit Hours
Course explores the relationship between academic and non-academic literacy, focusing on relationships pertaining to the school-to-work transitions that students make.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85056  INTRODUCTION TO THE STUDY OF WRITING ASSESSMENT: RESEARCH, THEORY AND PRACTICE  3 Credit Hours
Provides students with an introduction to the theory, research, and practice of writing assessment outside the classroom, as it is informed through the study of the literatures of college writing assessment and educational measurement. In addition to acquiring a basic understanding of measurement principles like reliability and validity for assessing student writing, students can complete projects of their own design for their own institutions.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85057  RHETORICAL METHODS  3 Credit Hours
Focuses on methodological practices associated with rhetorical theory and considers the epistemological and ontological underpinnings of these theories’ methodologies. The class investigates how these theories know and what they deem worth knowing. The course is designed around several significant approaches to analysis, both classical and contemporary. This orientation is intended to offer background and prompt students to apply those rhetorical methodologies in their own work.
Prerequisite: Minimum six credit hours from ENG 75012, ENG 75022, and 75023; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85060  DIRECTED READINGS IN WRITING AND RHETORIC  3 Credit Hours
Topics covered will vary according to the needs of students demonstrating deficiency in qualifying exams and/or requiring additional work before undertaking a dissertation project.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENG 85068  RESEARCH DOCTORAL  1-15 Credit Hours
(Repeatable for credit)Research or individual investigation for doctoral students who have not yet passed candidacy examination. Credits earned may be applied toward degree if department approves.
Prerequisite: Special approval of the graduate chairman and doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U

ENG 85098  DISSERTATION I  15 Credit Hours
(Repeatable for credit)Doctoral dissertation, for which registration in two semesters is required first of which will be the semester in which dissertation work is begun and continuing until completion of 30 hours.
Prerequisite: Doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Department of Geography

Environmental Studies (ENVS)

ENVS 22070  NATURE AND SOCIETY  3 Credit Hours
Provides an introduction to interdisciplinary perspectives in nature-society scholarship, focusing on human dimensions of environmental problem domains such as natural resources, ecosystems, climate, and sustainability. It provides a balance of theory and application to illustrative case studies.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ENVS 32091  ENVIRONMENTAL STUDIES AND SUSTAINABILITY  2 Credit Hours
(Repeatable for credit) Various aspects of environmental studies are explored. Topics will vary.
Prerequisite: ENVS 22070.
Schedule Type: Seminar
Contact Hours: 2 lecture
Grade Mode: Standard Letter

ENVS 42099  INTEGRATIVE SENIOR PROJECT (ELR) (WIC)  2 Credit Hours
This is the capstone course for the Environmental Studies major. All students in this course will learn about methods of investigation and presentation in the area of Environmental Studies. The course will culminate in a major research project developed and written by each student.
Prerequisite: ENVS 22070 and ENVS 32091.
Schedule Type: Seminar
Contact Hours: 2 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

Geography (GEOG)

GEOG 10160  INTRODUCTION TO GEOGRAPHY (KSS)  3 Credit Hours
A broad introduction to the study of geographic patterns on Earth. This course describes and explains spatial patterns of human activity and environmental processes, as well as the interaction between these two realms. Topics include weather, climate, landforms, human-environment interactions, population, culture, economy and politics.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Social Sciences, Transfer Module Social Sciences

GEOG 16001  SOIL AND HORTICULTURAL MANAGEMENT  3 Credit Hours
To provide students with an understanding of the relationship of soil, nutrients and fertilizers, and to understand how to properly plant trees, shrubs and flowers. Offered at Salem campus only.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 17063  WORLD GEOGRAPHY (DIVG) (KSS)  3 Credit Hours
An overview of the differences and similarities within and between regions of the world, studying the impacts of spatial processes as they operate at regional, global, and local scales. The course emphasizes the effects of globalization on culture, economies, geopolitical relationships, population and the environment.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

GEOG 17064  GEOGRAPHY OF THE UNITED STATES AND CANADA (DIVD) (KSS)  3 Credit Hours
An overview of the differences and similarities within and between regions of the U.S. and Canada. The class focuses on social, economic, settlement, and environmental patterns and processes.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, Transfer Module Social Sciences

GEOG 20195  SPECIAL TOPICS IN GEOGRAPHY  1-3 Credit Hours
(Repeatable for credit) Explores emerging topics in geography not covered in other existing courses. Variable content course.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 21062  PHYSICAL GEOGRAPHY (KBS)  3 Credit Hours
Introduction to the study of the spatial characteristics of the Earth's physical environment, including how humans interact with it. Topics include weather and climate, vegetation, soils, ecosystems, landforms and land-formation processes, human impacts on Earth systems and human societal adaptations to the physical environment.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Social and Behavioral Sciences, Transfer Module Natural Sciences
GEOG 21063  PHYSICAL GEOGRAPHY LABORATORY (KBS) (KLAB)  1 Credit Hour
This course offers practical experience examining physical geographic processes, including the study and manipulation of map projections, Earth-sun relationships and experiments relating to the atmosphere, biosphere, lithosphere and hydrosphere. This lab is taught in conjunction with the lecture, and is designed to expand and reinforce concepts discussed in lecture through hands on activities.
Corequisite: GEOG 21062.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, Transfer Module Natural Sciences

GEOG 22040  INTRODUCTION TO GLOBAL TOURISM (DIVG)  3 Credit Hours
(Cross-listed with RPTM 26060) Introduction to travel and tourism around the world, including tourism technologies, cultural and natural environments as attractions, benefits of travel, travel ethics, and sustainable development.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 22061  HUMAN GEOGRAPHY (DIVG) (KSS)  3 Credit Hours
Human Geography is an introduction to the spatial patterns and processes of human activity on Earth. This course examines how humans understand and interact with the world. It considers how cities are structured, economic and cultural differences, the interaction between politics and identity, and the environmental consequences of human activities.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

GEOG 29160  MAPPING OUR WORLD  3 Credit Hours
This course is a first step for students to understand the importance of maps. Exposure to case studies and various mapping techniques will allow students to learn both the fundamentals of cartography, what are spatial data, and how we solve real life problems using maps.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Social and Behavioral Sciences

GEOG 31062  FUNDAMENTALS OF METEOROLOGY  3 Credit Hours
Analysis of weather elements emphasizing energy exchanges and controls, and atmospheric circulation. Methods of weather prediction and man's modification of weather are highlighted.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 31064  PRINCIPLES OF CLIMATOLOGY  3 Credit Hours
A study of the physical processes causing the distribution of world climates. Focus on local and urban climates, climatic change and societal impacts of climate.
Prerequisite: GEOG 31062.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 31070  POPULATION AND THE ENVIRONMENT  3 Credit Hours
Course examines the interrelations of population growth, resource depletion and the environment from a geographic perspective, including the principal themes of space and place.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 31080  GEOGRAPHY OF WINE  3 Credit Hours
Examines the physical environment of viticulture including climate, soil and farm practices; the cultural tradition of wine making, consumption and trade; and regional production styles.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 31088  ENVIRONMENTAL GEOGRAPHY THROUGH FILM  3 Credit Hours
Cinema combines the art of storytelling and creation of landscape in such a way as to capture artifacts of the culture from which films emerge and as such, document in some way our cultural, social and political history and experiences. In this course, films are used to examine environmental issues and processes in their social and cultural context.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 32080  POLITICS AND PLACE (DIVG)  3 Credit Hours
Spatial aspects of political behavior as manifested in boundary changes, the sizes of states, interstate relations and spatial organization.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 34070  ECONOMIC GEOGRAPHY  3 Credit Hours
Examines economic patterns at global, national, regional, and local scales. Our interest goes beyond space to place: the recognition that these patterns are socially produced and as such, change over time. The approach of this course is to examine economic models and theories from a spatial perspective, but with a strong focus on real-life outcomes, debates and challenges.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 35065  GEOGRAPHY OF TRANSPORTATION AND SPATIAL INTERACTION  3 Credit Hours
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 36065  CITIES AND URBANIZATION (DIVG)  3 Credit Hours
Course examines what is a city, how it has evolved over time under changing economic conditions, what is its internal structure and how this has been influenced by transportation developments. Special attention is paid to the causes and consequences of social diversity within the city and how cities differ throughout the world.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37010  GEOGRAPHY OF OHIO  3 Credit Hours
Study of Ohio as a distinctive region, its environment and the varied characteristics of its population, its historical geographic development and contemporary patterns and problems.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 37040  GEOGRAPHY OF AFRICA (DIVG)  3 Credit Hours
This course deals with the complex geographical and cultural elements in Africa. It demonstrates how the interaction of these elements has affected Africa's linkages to other continents especially North America. Furthermore it, discusses how this diversity has affected Africa's economic development and political evolution.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37045  GEOGRAPHY OF THE MIDDLE EAST  3 Credit Hours
The Middle East is a world region where the interactions between human and physical geographies have shaped its history, culture, economies, and population patterns. This course uses a thematic approach to understand these interactions and how they shape the modern Middle East and its relationship with the wider world.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 37050  GEOGRAPHY OF RUSSIA AND THE COMMONWEALTH OF INDEPENDENT STATES (DIVG)  3 Credit Hours
Study of the physical, economical, political and cultural geography of Russia, Ukraine, Central Asia and other components of the former Soviet Union.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37066  GEOGRAPHY OF EUROPE (DIVG)  3 Credit Hours
Europe is unique in terms of its historical cultural influence around the world, but over recent decades it has undergone significant change and experienced many struggles. Its attempts to integrate have led to significant debates about just what it means to be "European". This class will cover Europe using a systematic approach. In addition to the physical, political, religious, linguistic, social, and economic environments within Europe, we'll explore the issues that tie Europeans to each other and to the outside world. We'll sum many of these aspects up with case studies of nations or regions that typify the issues that face Europe today.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37070  GEOGRAPHY OF EAST AND SOUTHEAST ASIA (DIVG)  3 Credit Hours
Analysis of the physical and cultural geography of East and Southeast Asia, extending from Japan and China to Burma and Indonesia.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37072  GEOGRAPHY OF CHINA  3 Credit Hours
Provides an overview of China's physical environment, natural and human resources, social, economic, and cultural characteristics, and its roles in today's global environment. Offers a comprehensive view of China's historical development and contemporary trends of growth and how it impacts the U.S..
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37084  GEOGRAPHY OF SOUTH AMERICA (DIVG)  3 Credit Hours
Overview of region and survey of each country emphasizes systematic similarities and differences in physical environment, culture, economic development, population, land use, politics and history.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

GEOG 37085  GEOGRAPHY OF LATIN AMERICA AND THE CARIBBEAN (DIVG)  3 Credit Hours
Latin America and the Caribbean is a traditional geographic region that has been uniquely shaped through multiple physical and cultural factors. In this course, a thematic approach is taken to understanding the interplay of these factors, and how they shape modern Latin America-Caribbean identity, the diversity of the environment and culture within the region, and how the region relates to the rest of the world.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global
GEOG 37095  SPECIAL TOPICS IN REGIONAL GEOGRAPHY  3 Credit Hours
(Repeatable for a maximum of 3 times) Special topics course in a specific region of the world.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 39002  STATISTICAL METHODS IN GEOGRAPHY  3 Credit Hours
Explores probability theory, spatial statistics, estimation procedures, hypothesis testing, spatial sampling, methods of areal association and regression analysis. Geographic applications are emphasized.
Prerequisite: MATH 11009 or MATH 11010 or MATH 10041.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 40093  VARIABLE TITLE WORKSHOP IN GEOGRAPHY  1-6 Credit Hours
(Repeatable for credit)S/u graded.
Prerequisite: Permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

GEOG 40191  SEMINAR IN GEOGRAPHY (ELR) (WIC)  3 Credit Hours
(Repeatable for a maximum of 6 credit hours)Advanced study of the historical development of geography and of contemporary issues in the field. Emphasis on methods of geographic investigation and presentation of results.
Prerequisite: Junior standing and geography (GEOG) major.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

GEOG 40192  PRACTICUM IN GEOGRAPHY (ELR)  1-3 Credit Hours
(Repeatable for credit)Practical experience in using or teaching geographic techniques and/or problem-solving. Faculty supervised.
Prerequisite: Permission.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

GEOG 40195  SPECIAL TOPICS IN GEOGRAPHY  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 50195 and GEOG 70195)
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 40292  FIELD EXPERIENCE IN GEOGRAPHY (ELR)  1-6 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 50292 and GEOG 70292) Examination of geographic landscapes in the field.
Prerequisite: special approval.
Schedule Type: Field Experience
Contact Hours: 12-72 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

GEOG 40392  PRACTICUM IN EMERGING GEOGRAPHIC TRENDS (ELR)  1-6 Credit Hours
(Repeatable for credit)Examination of newly emerging geographic topics and techniques.
Prerequisite: special approval.
Schedule Type: Practicum or Internship
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

GEOG 40492  STUDY AWAY IN GEOGRAPHY (ELR)  1-3 Credit Hours
(Repeatable 6 times for credit) Examination of geographic landscapes in the field.
Prerequisite: None.
Schedule Type: Field Experience
Contact Hours: 3-9 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

GEOG 40996  INDIVIDUAL INVESTIGATION IN GEOGRAPHY  1-3 Credit Hours
(Repeatable for credit)Individual undergraduate investigation or research on specific geographical problems.
Prerequisite: Permission.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GEOG 41051  NATURAL DISASTERS AND SOCIETY  3 Credit Hours
Study of natural disasters, the physical causes of the hazards associated with the disasters, their effects on humans and societies, spatial and temporal distributions, and strategies to reduce the occurrences of disasters. Natural disasters include hurricanes, tornadoes, floods, landslides, heat waves, wildfire, blizzards, earthquakes, tsunami, and volcanoes. Mitigation for disasters and responses to disasters are studied across economically developing nations and developed nations. Taught through the analysis of numerous case studies of natural disasters.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 41052  GLACIERS AND GLACIATION  3 Credit Hours
(Cross-listed with GEOL 44052, 54052 and 74052) Examination of how glacial ice masses change the shape of the Earth's surface, how they are integral to climate and sea level change, and how they pose high risk hazards.
Prerequisite: GEOG 21062 or GEOL 11040.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 40392  PRACTICUM IN EMERGING GEOGRAPHIC TRENDS (ELR)  1-6 Credit Hours
(Repeatable for credit)Examination of newly emerging geographic topics and techniques.
Prerequisite: special approval.
Schedule Type: Practicum or Internship
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

GEOG 40492  STUDY AWAY IN GEOGRAPHY (ELR)  1-3 Credit Hours
(Repeatable 6 times for credit) Examination of geographic landscapes in the field.
Prerequisite: None.
Schedule Type: Field Experience
Contact Hours: 3-9 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

GEOG 40996  INDIVIDUAL INVESTIGATION IN GEOGRAPHY  1-3 Credit Hours
(Repeatable for credit)Individual undergraduate investigation or research on specific geographical problems.
Prerequisite: Permission.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GEOG 41051  NATURAL DISASTERS AND SOCIETY  3 Credit Hours
Study of natural disasters, the physical causes of the hazards associated with the disasters, their effects on humans and societies, spatial and temporal distributions, and strategies to reduce the occurrences of disasters. Natural disasters include hurricanes, tornadoes, floods, landslides, heat waves, wildfire, blizzards, earthquakes, tsunami, and volcanoes. Mitigation for disasters and responses to disasters are studied across economically developing nations and developed nations. Taught through the analysis of numerous case studies of natural disasters.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 41065  APPLIED CLIMATOLOGY  3 Credit Hours
Aimed at providing a full appreciation for the range of applicability of climate data to real-world problems. There are three overarching goals of the course: To provide a broad overview of what weather and climate information is out there and how we synthesize weather and climate information for use in applied work; to enable a thorough appreciation for the breadth of disciplines in which applied climatology plays a role; and to provide real-world experience of working through an applied climatological problem, via the final project.
Prerequisite: GEOG 31062 or 31064.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 41066  GLOBAL CLIMATE CHANGE  3 Credit Hours
(Cross-listed with GEOG 51066 and GEOG 71066) Examination of the evidence and causes of climate change and how these data are assessed. Past, present and future impacts of climate change and variability are discussed along with policy implications.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 41073  CONSERVATION OF NATURAL RESOURCES  3 Credit Hours
(Cross-listed with GEOG 51073 and GEOG 71073) Evaluation of past and current problems associated with the management of natural resources and the environments associated with their utilization.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 41074  RESOURCE GEOGRAPHY  3 Credit Hours
Culture-technology and distance in relation to resource adequacy and management concepts for societal decisions about common property and situations with external economies.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 41082  GEOGRAPHY OF SOILS  3 Credit Hours
An edaphological approach to soils including morphology, formation, classification, geographical distribution and utilization. Field work required.
Prerequisite: GEOG 21062 or GEOL 11040.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 41195  SPECIAL TOPICS IN ENVIRONMENTAL GEOGRAPHY 1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 51195 and GEOG 71195) Special topics in environmental geography.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 41800  GLOBAL ENVIRONMENTAL ISSUES  3 Credit Hours
(Slashed with GEOG 51800 + GEOG 71800): This course examines environmental belief systems and explores various perceptions of the Earth's environment and its opportunities, constraints, and risks. The goals of this course are to develop a framework which will allow students to explore both their own relationship to the environment and to understand the sociocultural constructs which have informed their personal environmental beliefs and to apply this knowledge to critically assess various stakeholder perspectives of specific environmental issues. Prerequisites: None
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 42040  TOURISM DEVELOPMENT AND RECREATIONAL TRAVEL  3 Credit Hours
(Cross-listed with RPTM 46000) Investigation of travel and tourism development using an interdisciplinary social science approach.
Prerequisite: RPTM 36060.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 42052  MEDICAL GEOGRAPHY  3 Credit Hours
(Cross-listed with GEOG 52052 and GEOG 72052) This course explores the interconnection between geography and health. Past and present epidemics, global health risks and their variation, the link between disasters and disease, and the factors leading to health disparities will all be considered from a spatial perspective.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 42053  GEOGRAPHIES OF MEMORY AND HERITAGE  3 Credit Hours
(Cross-listed with GEOG 52053 and GEOG 72053) Gives students a working knowledge in, and ability to understand and analyze, the intersection of memory and landscape as a tangible re-presentation of the human past, oftentimes used as a tangible expression of cultural or political power. To this end the course focuses on memorialization, preservation, and tourism concepts and themes.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 42064  HISTORICAL GEOGRAPHY OF THE UNITED STATES AND CANADA  3 Credit Hours
(Cross-listed with GEOG 52064 and GEOG 72064) Regional origins and growth, evolution of spatial organization, changing evaluation of environments, and past geographies in United States and Canada from pre-Colonial times on.
Prerequisite: GEOG 17064.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 42070  SEMINAR IN ETHNIC, LIFESTYLE AND NATIONAL COMMUNITIES  3 Credit Hours  
(Slashed with GEOG 52070 and GEOG 72070) Covers the geographies of ethnic identity and nationalism, national identity and territory, borderlands and diasporas, national separatism and the variety of ways in which cultural difference asserts itself.  
Prerequisite: Junior standing; and special approval.  
Schedule Type: Seminar  
Contact Hours: 3 other  
Grade Mode: Standard Letter  

GEOG 42195  SPECIAL TOPICS IN SOCIAL GEOGRAPHY  1-3 Credit Hours  
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 52195 and 72195) Special topics in social geography.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 1-3 lecture  
Grade Mode: Standard Letter  

GEOG 44070  GEOGRAPHY OF THE GLOBAL ECONOMY (WIC)  3 Credit Hours  
Geographic analysis of the increasing interconnectedness of economic activity. The social, technological and political changes associated with globalization are also discussed.  
Prerequisite: GEOG 34070 or ECON 22061.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Writing Intensive Course  

GEOG 44070  SPATIAL ANALYSIS AND LOCATION THEORY  3 Credit Hours  
(Cross-listed with GEOG 54070 and GEOG 74070) Classical theories for location of economic activities and contemporary approach of spatial analysis, spatial organization of economic systems behavioral models in economic geography spatial allocation problems.  
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GEOG 45085  URBAN TRANSPORTATION  3 Credit Hours  
(Cross-listed with GEOG 55085 and GEOG 75085) Transportation may be the single most important force shaping our cities. Historically, cities have depended on their access to ports, canals, railroads, and highways. Today, transportation networks, the use of public transportation, provisions for bicycles and pedestrians, and transportation architecture continue to define how a city looks, feels, and acts.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GEOG 46070  URBAN AND REGIONAL PLANNING  3 Credit Hours  
(Cross-listed with GEOG 56070 and GEOG 76070) Examines how cities develop and what “people” – through government, quasi-public institutions, and private interests – can do to modify urban growth, the distribution of people and places, and urban design.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GEOG 46080  URBAN SUSTAINABILITY  3 Credit Hours  
(Slashed with GEOG 56080 and GEOG 76080) Provides an introduction to interdisciplinary perspectives on urban sustainability, focusing on environmental challenges caused by urbanization and the innovative ways urban dwellers seek to address those challenges. It provides background on relevant disciplinary perspectives and their application to environmental challenge domains.  
Prerequisite: None.  
Schedule Type: Lecture, Seminar  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GEOG 46081  SEMINAR IN URBAN GEOGRAPHY  3 Credit Hours  
(Slashed with GEOG 56081 and GEOG 76081) Through class discussions and readings, this course offers participants a better understanding of the various issues, projects and paradigms that make up the field of urban geography.  
Prerequisite: Junior standing; and special approval.  
Schedule Type: Seminar  
Contact Hours: 3 other  
Grade Mode: Standard Letter  

GEOG 46081  SEMINAR IN URBAN GEOGRAPHY  3 Credit Hours  
(Slashed with GEOG 56081 and GEOG 76081) Through class discussions and readings, this course offers participants a better understanding of the various issues, projects and paradigms that make up the field of urban geography.  
Prerequisite: Junior standing; and special approval.  
Schedule Type: Seminar  
Contact Hours: 3 other  
Grade Mode: Standard Letter  

GEOG 46092  INTERNSHIP IN GEOGRAPHY AND PLANNING (ELR)  3-6 Credit Hours  
(Repeatable for credit) (Cross-listed with GEOG 56092) Pre-professional work experience in local, regional and environmental planning agencies and in business designed to utilize and develop academic skills.  
Prerequisite: Controlled registration admission competitive based on student’s skills and interests and on number of positions available.  
Schedule Type: Practicum or Internship  
Contact Hours: 3-6 other  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement  

GEOG 49072  GEOGRAPHIC INFORMATION SCIENCE AND HEALTH  4 Credit Hours  
(Cross-listed with GEOG 59070 and GEOG 79070) Introduction to theories and methods for geographic data processing, including data capture and input data storage and management and data analysis and displays. Emphasis is on laboratory exercises using GIS software packages for real world applications. Non-geographers should contact the Department of Geography to discuss the course prerequisites.  
Prerequisite: None.  
Schedule Type: Combined Lecture and Lab  
Contact Hours: 3 lecture, 2 lab  
Grade Mode: Standard Letter  

GEOG 49072  GEOGRAPHIC INFORMATION SCIENCE AND HEALTH  3 Credit Hours  
(Cross-listed with GEOG 59072 and GEOG 79072) Geographic theory and methods serve as the connection among disparate disciplines focused on how and why "health" varies between regions, cities, and neighborhoods. This course examines how geospatial technologies, especially GIS, have become an important health analysis tool.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
GEOG 49075  GEOGRAPHIC INFORMATION SCIENCE: APPLICATIONS FOR SOCIAL PROBLEMS  3 Credit Hours
(Cross-listed with GEOG 59075 and GEOG 79075) This course provides a survey of Geographic Information Systems (GIS) and related mapping applications that are used to understand and solve a variety of social problems (e.g., crime, poor health and educational outcomes, exposure to environmental hazards). Through case studies, it focuses on teaching students about spatial data acquisition, basic spatial analysis, and forms of map-based visual communication to stakeholders and the general public.
Prerequisite: GEOG 49070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 49076  SPATIAL PROGRAMMING  3 Credit Hours
(Cross-listed with GEOG 59076 and GEOG 79076) Examination of the design, development and use of geographic information technologies with computer programming to model, process and visualize geographic phenomena.
Prerequisite: GEOG 49070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 49078  GEOGRAPHIC INFORMATION SCIENCE AND ENVIRONMENTAL HAZARDS  3 Credit Hours
(Slashed with GEOG 59078 and GEOG 79078) The study and management of natural hazards are inherently reliant on both physical and human processes and spatial patterns. Given the many variables involved and the variety of scales at which they operate, use of Geographic Information Systems (GIS) has become standard practice in research on hazards and in their management by government agencies at all levels. Exposes students to a wide array of spatial data that is used in these activities, as well as standard mapping and spatial analysis procedures and forms of data dissemination.
Prerequisite: GEOG 49070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 49080  ADVANCED GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
Provides both an overview of GIS data structures, analytical functions and usage, and modeling approaches. Students will learn how to manage GIS data in different formats or projections, select GIS analytical tools for solving different problems, and model changes of geographical phenomena as represented by GIS data.
Prerequisite: GEOG 49070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 49085  WEB AND MOBILE GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
(Slashed with GEOG 59085 and GEOG 79085) Explores how web and mobile phones present opportunities and challenges to the field of geographic information science (GIS). This includes the examination of the use, design and development of cyberinfrastructure-enabled GIS emphasizing web- and mobile-based interfaces and technologies. GIS experience recommended.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 49098  RESEARCH IN GEOGRAPHIC INFORMATION TECHNOLOGY (ELR)  1-3 Credit Hours
(Repeatable for credit) Individual research on a topic in geographic information technology.
Prerequisite: Special approval.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

GEOG 49162  CARTOGRAPHY AND GEOVISUALIZATION  3 Credit Hours
(Slashed with GEOG 59162 and GEOG 79162) Study of the design and production of dynamic, interactive, multimedia web-based mapping. Data acquisition and processing, symbolization, composition, text and color utilization.
Prerequisite: GEOG 49070.
Corequisite: GEOG 49163.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 49163  CARTOGRAPHY AND GEOVISUALIZATION LABORATORY  1 Credit Hour
(Cross-listed with GEOG 59163 and GEOG 79163) Practical experience in the techniques of data acquisition and processing for dynamic, multimedia, and online map production and geovisualizations.
Prerequisite: GEOG 49070.
Corequisite: GEOG 49162.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

GEOG 49195  SPECIAL TOPICS IN GEOGRAPHIC INFORMATION SCIENCE  1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 59195 and GEOG 79195) Special topics in geographic information sciences.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 49198  RESEARCH IN CARTOGRAPHY AND GEOGRAPHIC INFORMATION SYSTEMS (ELR)  1-3 Credit Hours
(Repeatable for credit) Individual research on a topic in cartography or GIS under the direction of any faculty member.
Prerequisite: special approval.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement
GEOG 49230 REMOTE SENSING  3 Credit Hours
(Cross-listed with GEOG 59230 and GEOG 79230 and GEOL 42030 and GEOL 52030 and GEOL 72030) Computer analysis of multispectral satellite datasets. Applications in Terrestrial Earth Science are emphasized.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 50093 VARIABLE TITLE WORKSHOP IN GEOGRAPHY  1-5 Credit Hours
(Repeatable for credit)Variable title workshop in geography.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-5 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOG 50195 SPECIAL TOPICS IN GEOGRAPHY  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 40195 and GEOG 70195) Topics vary according to research interest of person teaching the course.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 50292 FIELD EXPERIENCE IN GEOGRAPHY  1-6 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 40292 and GEOG 70292) Examination of geographic landscapes in the field.
Prerequisite: Special approval and graduate standing.
Schedule Type: Field Experience
Contact Hours: 12-72 other
Grade Mode: Satisfactory/Unsatisfactory

GEOG 50392 PRACTICUM IN EMERGING GEOGRAPHIC TRENDS  1-6 Credit Hours
(Repeatable for credit) Examination of newly emerging geographic topics and techniques.
Prerequisite: Special approval and graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

GEOG 50492 STUDY AWAY IN GEOGRAPHY  1-3 Credit Hours
(Repeatable 6 times for credit) Examination of geographic landscapes in the field.
Prerequisite: None.
Schedule Type: Field Experience
Contact Hours: 3-9 other
Grade Mode: Standard Letter

GEOG 51051 NATURAL DISASTERS AND SOCIETY  3 Credit Hours
Study of natural disasters, the physical causes of the hazards associated with the disasters, their effects on humans and societies, spatial and temporal distributions, and strategies to reduce the occurrences of disasters. Natural disasters include hurricanes, tornadoes, floods, landslides, heat waves, wildfire, blizzards, earthquakes, tsunami, and volcanoes. Mitigation for disasters and responses to disasters are studied across economically developing nations and developed nations. Taught through the analysis of numerous case studies of natural disasters.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 51052 GLACIERS AND GLACIATION  3 Credit Hours
(Cross-listed with GEOL 44052, 54052 and 74052) Examination of how glacial ice masses change the shape of the earth's surface, how they are integral to climate and sea level change and how they pose high risk hazards.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 51065 APPLIED CLIMATOLOGY  3 Credit Hours
Aimed at providing a full appreciation for the range of applicability of climate data to real-world problems. There are three overarching goals of the course: To provide a broad overview of what weather and climate information is out there and how we synthesize weather and climate information for use in applied work; to enable a thorough appreciation for the breadth of disciplines in which applied climatology plays a role; and to provide real-world experience of working through an applied climatological problem, via the final project.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 51066 GLOBAL CLIMATE CHANGE  3 Credit Hours
(Cross-listed with GEOG 41066 and GEOG 71066) Examination of the evidence and causes of climate change and how these data are assessed. Past, present and future impacts of climate change and variability are discussed along with policy implications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 51073 CONSERVATION OF OUR NATURAL RESOURCES  3 Credit Hours
(Cross-listed with GEOG 41073 and GEOG 71073) Examination of past and current problems associated with the management of natural resources and the environments associated with their utilization.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 51074 RESOURCE GEOGRAPHY  3 Credit Hours
Cultural attitudes, conceptual approaches and techniques in resource geography analysis of selected resource issues at various areal scales.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 51082 GEOGRAPHY OF SOILS  3 Credit Hours
(Cross-listed with GEOG 41082 and GEOG 71082) Study and analysis of different soil types in their relation to geographic factors.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 51195  SPECIAL TOPICS IN ENVIRONMENTAL GEOGRAPHY  1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 41195 and GEOG 71195) Special topics in environmental geography.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 51800  GLOBAL ENVIRONMENTAL ISSUES  3 Credit Hours
(Slashed with GEOG 41800 and GEOG 71800) This course examines environmental belief systems and explores various perceptions of the Earth's environment and its opportunities, constraints, and risks. The goals of this course are to develop a framework which will allow students to explore both their own relationship to the environment and to understand the sociocultural constructs which have informed their personal environmental beliefs and to apply this knowledge to critically assess various stakeholder perspectives of specific environmental issues. Prerequisites: Graduate standing
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 52052  MEDICAL GEOGRAPHY  3 Credit Hours
(Cross-listed with GEOG 42052 and GEOG 72052) This course explores the interconnection between geography and health. Past and present epidemics, global health risks and their variation, the link between disasters and disease, and the factors leading to health disparities will all be considered from a spatial perspective.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 52053  GEOGRAPHIES OF MEMORY AND HERITAGE  3 Credit Hours
(Cross-listed with GEOG 42053 and GEOG 72053) Gives students a working knowledge in, and ability to understand and analyze, the intersection of memory and landscape as a tangible re-presentation of the human past, oftentimes used as a tangible expression of cultural or political power. To this end the course focuses on memorialization, preservation, and tourism concepts and themes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 52064  HISTORICAL GEOGRAPHY OF THE UNITED STATES AND CANADA  3 Credit Hours
(Cross-listed with GEOG 42064 and GEOG 72064) Study of regional origins, growth evolution of spatial organization changing evaluation of environments and selective geographies in United States and Canada from precolonial times to present.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 52070  SEMINAR IN ETHNIC, LIFESTYLE AND NATIONAL COMMUNITIES  3 Credit Hours
(Slashed with GEOG 42070 and GEOG 72070) Covers the geographies of ethnic identity and nationalism, national identity and territory, borderlands and diasporas, national separatism and the variety of ways in which cultural difference asserts itself.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 52195  SPECIAL TOPICS IN SOCIAL GEOGRAPHY  1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 42195 and GEOG 72195) Special topics in social geography.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 54010  GEOGRAPHY OF THE GLOBAL ECONOMY  3 Credit Hours
(Cross-listed with GEOG 44010 and GEOG 74010) Geographic analysis of the increasing interconnectedness of economic activity. The social, technological and political changes associated with globalization are also discussed.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 54070  SPATIAL ANALYSIS AND LOCATION THEORY  3 Credit Hours
(Cross-listed with GEOG 44070 and GEOG 74070) Classical theories for location of economic activities and contemporary approach of spatial analysis, spatial organization of economic systems behavioral models in economic geography and spatial allocation problems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 55085  URBAN TRANSPORTATION  3 Credit Hours
(Cross-listed with GEOG 45085 and GEOG 75085) Transportation may be the single most important force shaping our cities. Historically, cities have depended on their access to ports, canals, railroads, and highways. Today, transportation networks, the use of public transportation, provisions for bicycles and pedestrians, and transportation architecture continue to define how a city looks, feels, and acts.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 56070  URBAN AND REGIONAL PLANNING  3 Credit Hours
(Cross-listed with GEOG 46070 and GEOG 76070) Examines how cities develop and what “people” – through government, quasi-public institutions, and private interests – can do to modify urban growth, the distribution of people and places, and urban design.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 56080  URBAN SUSTAINABILITY  3 Credit Hours
(Slashed with GEOG 46080 and GEOG 76080) Provides an introduction to interdisciplinary perspectives on urban sustainability, focusing on environmental challenges caused by urbanization and the innovative ways urban dwellers seek to address those challenges. It provides background on relevant disciplinary perspectives and their application to environmental challenge domains.
Prerequisite: Graduate standing.
Schedule Type: Lecture, Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 56081  SEMINAR IN URBAN GEOGRAPHY  3 Credit Hours
(Slashed with GEOG 46081 and GEOG 76081) Through class discussions and readings, this course offers participants a better understanding of the various issues, projects and paradigms that make up the field of urban geography.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 56092  INTERNSHIP IN GEOGRAPHY AND PLANNING  3-6 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 46092) Preprofessional work experience in local, regional and environmental planning agencies and private business designed to utilize and develop academic skills.
Prerequisite: Special approval and graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 3-6 other
Grade Mode: Standard Letter

GEOG 59070  GEOGRAPHIC INFORMATION SCIENCE  4 Credit Hours
(Cross-listed with GEOG 49070 and GEOG 79070) Introduction to theories and methods for geographic data processing, including data capture and input, data storage and management, and data analysis and displays. Emphasis is on laboratory exercises using GIS software packages for real world applications.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

GEOG 59072  GEOGRAPHIC INFORMATION SCIENCE AND HEALTH  3 Credit Hours
Geographic theory and methods serve as the connection among disparate disciplines focused on how and why "health" varies between regions, cities, and neighborhoods. Examines how geospatial technologies, especially GIS, have become an important health analysis tool.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 59075  GEOGRAPHIC INFORMATION SCIENCE:APPLICATIONS FOR SOCIAL PROBLEMS  3 Credit Hours
(Slashed with GEOG 49075 and GEOG 79075) This course provides a survey of Geographic Information Systems (GIS) and related mapping applications that are used to understand and solve a variety of social problems (e.g., crime, poor health and educational outcomes, exposure to environmental hazards). Through case studies, it focuses on teaching students about spatial data acquisition, basic spatial analysis, and forms of map-based visual communication to stakeholders and the general public.
Prerequisite: GEOG 49070 or GEOG 59070; and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 59076  SPATIAL PROGRAMMING  3 Credit Hours
(Cross-listed with GEOG 49076 and GEOG 79076) Examination of the design, development and use of geographic information technologies with computer programming to model, process and visualize geographic phenomena.
Prerequisite: GEOG 59070 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 59078  GEOGRAPHIC INFORMATION SCIENCE AND ENVIRONMENTAL HAZARDS  3 Credit Hours
(Slashed with GEOG 49078 and GEOG 79078) This course provides a survey of Geographic Information Systems (GIS) and related mapping applications that are used to understand and solve a variety of natural hazards. Through case studies, it focuses on teaching students about spatial data acquisition, basic spatial analysis, and forms of map-based visual communication to stakeholders and the general public.
Prerequisite: GEOG 49070 or 59070; and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 59080  ADVANCED GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
(Cross-listed with GEOG 49080 and GEOG 79080) Provides an overview of GIS data structures, analytical functions and usage, and modeling approaches. Students will learn how to manage GIS data in different formats or projections, select GIS analytical tools for solving different problems, and model changes of geographical phenomena as represented by GIS data.
Prerequisite: GEOG 49070 or GEOG 59070 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 59085  WEB AND MOBILE GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
(Slashed with GEOG 49085 and GEOG 79085) Explores how web and mobile phones present opportunities and challenges to the field of geographic information science (GIS). This includes the examination of the use, design and development of cyberinfrastructure-enabled GIS emphasizing web- and mobile-based interfaces and technologies. GIS experience recommended.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 59162  CARTOGRAPHY AND GEOVISUALIZATION  3 Credit Hours
(Slashed with GEOG 49162 and GEOG 79162) Study of the design and production of dynamic, interactive, multimedia web-based mapping. Data acquisition and processing, symbolization, composition, text and color utilization.
Prerequisite: GEOG 49070 or GEOG 59070; and graduate standing.
Corequisite: GEOG 59163.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 59163  CARTOGRAPHY AND GEOVISUALIZATION LABORATORY  1 Credit Hour
(Cross-listed with GEOG 49163 and GEOG 79163) Practical experience in the techniques of data acquisition and processing for dynamic, multimedia, and online map production and geovisualizations.
Prerequisite: GEOG 49070 or 59070; and graduate standing.
Corequisite: GEOG 59162.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter

GEOG 59195  SPECIAL TOPICS IN GEOGRAPHIC INFORMATION SCIENCE  1-3 Credit Hours
(Repeatable a maximum of 10 times) (Cross-listed with GEOG 49195 and GEOG 79195) Special topics in geographic information sciences.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 59230  REMOTE SENSING  3 Credit Hours
(Cross-listed with GEOG 49230 and GEOG 79230 and GEOL 42030 and GEOL 52030 and GEOL 72030) Computer analysis of multispectral satellite datasets. Applications in Terrestrial Earth Science are emphasized.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 60199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in single semester distributed over several semesters if desired.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOG 60299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: GEOG 60199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOG 60800  SEMINAR IN THE DEVELOPMENT OF GEOGRAPHIC THOUGHT  3 Credit Hours
(Cross-listed with GEOG 70800) Development of geographic knowledge and concepts with emphasis on recent development. Critical analysis of writings of representative geographers and scientists in related fields.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 60900  QUALITATIVE RESEARCH METHODS IN GEOGRAPY  3 Credit Hours
(Slashed with GEOG 70900) Introduces qualitative methods and research applications, along with methodological considerations of these approaches. Students consider the epistemology of qualitative research and learn the mechanics of conducting this research in the field. In class, these methods are put into practice and the results are put into writing.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 60996  RESEARCH IN GEOGRAPHY  1-3 Credit Hours
(Repeatable for credit) Individual research problems in geography.
Prerequisite: Special approval and graduate standing.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GEOG 60998  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits earned may be applied toward meeting degree requirements if the department approves.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U

GEOG 62062  BEHAVIORAL GEOGRAPHY  3 Credit Hours
Focuses on spatial perception, cognition and behavior. How we collect and process spatial information, behavior in space, locate space and interact in space.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 67091  SEMINAR IN REGIONAL GEOGRAPHY  3 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 77091) Seminar on one of the major regions of world offered by title in given semester.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 69004  QUANTITATIVE METHODS IN GEOGRAPHY  3 Credit Hours
(Slashed with GEOG 79004) Explores explores the methods and applications of some of the most common statistics found in geographic work. It explores probability theory, spatial statistics, estimation procedures, hypothesis testing, spatial sampling, methods of areal association, correlation and regression analysis, and principal components analysis. Theory and execution of these methods are equally emphasized, and applications to geographic problems are examined within each theme.
Prerequisite: GEOG 59070; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69007  SPATIOTEMPORAL ANALYTICS  3 Credit Hours
Equips students with essential spatiotemporal thinking and technical skills in mapping, analyzing, visualizing, communicating, and simulating the spatiotemporal data. ArcGIS and free packages in R and Netlogo will be used in the instruction.
Prerequisite: GEOG 59070; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69073  GEOGRAPHIC INFORMATION SCIENCE: GLOBAL HEALTH  3 Credit Hours
Emerging and re-emerging diseases in non-developed countries pose one of the greatest health challenges of current times. Geospatial approaches often provide one of the only information sources in data poor and challenging environments. This course will expose students to these health issues and disease environments through varied case studies, while simultaneously highlighting the geospatial methods and approaches used to understand and combat disease.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69074  GEOGRAPHIC INFORMATION SCIENCE: SPATIAL ANALYSIS FOR HEALTH GEOGRAPHY  3 Credit Hours
Spatial analysis is used to verify patterns and associations in health data maps. These results can then be used to further hone the scientific question, or help design an intervention strategy. This course will introduce spatial analytical approaches used by health researchers and practitioners in the exploratory investigation of health data. Students will also be exposed to new mobile technologies that can be used to enrich more traditional spatial data sources.
Prerequisite: GEOG 59070 or GEOG 59072; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69079  ENVIRONMENTAL GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
GPS and environmental spatial data are commonly used in a variety of management and assessment plans in fields related to environmental science to achieve effective decision making and environmental resource management. This course will focus on techniques used to process, manage, visualize, and analyze environmental data using GIS. Students will learn how to collect and process GPS and online sources of geospatial data and how to employ techniques such as suitability modeling, measuring distributions, and calculating landscape metrics.
Prerequisite: GEOG 59070; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69082  CYBERGIS  3 Credit Hours
(Slashed with GEOG 79082) Explores cyberinfrastructure-enabled geographic information systems (i.e. cyberGIS) and related technologies including a broad introduction to the use, design, and development of cyberinfrastructure, spatial data infrastructures, geographic information services, and web-enabled mapping technologies. Situates CyberGIS in the broader context of geographic information science focusing on the how synthesizing computational thinking and spatial thinking influence methodological approaches.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69083  GEODATABASES  3 Credit Hours
Essential concepts and skills needed to efficiently create a geodatabase, add data to it, and realistically model the real-world spatial relationships inherent to the data. Students will learn about geodatabase features that help ensure data integrity over time and about storing and managing geographic data.
Prerequisite: GEOG 59070; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69164  CARTOGRAPHIC DESIGN  4 Credit Hours
Introduces students to the principles of map design and the art of map construction. Students will become familiar with the cartographic process, especially as they apply basic mapping concepts such as scale, projections, typography, generalization, symbols, color scheme, and classification to the design and production of thematic maps. Students will also learn how to describe and manipulate spatial data and how to select an appropriate map type for a given task and data set. This course builds on students’ experiences with GIS to focus on the design needed to disseminate information beyond users of the software and produce effective print and web maps. Class exercises will provide hands-on experience in using GIS and graphic software packages. Principles and experiences learned in class will equip students with the fundamental skills necessary to effectively communicate graphic information through maps.
Prerequisite: GEOG 49070 or GEOG 59070 and Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter
GEOG 69231 ENVIRONMENTAL REMOTE SENSING 3 Credit Hours
Introduction to the basic principles of environmental remote sensing, including the electromagnetic spectrum, spectral properties of Earth objects, aerial photograph analysis and interpretation and satellite image analysis and interpretation. Special focus will be on environmental applications, especially as they pertain to understanding vegetation, water, and land use mapping and impacts.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 69392 PRACTICUM IN GEOGRAPHIC INFORMATION SCIENCE 6 Credit Hours
Culminating experience for students in the MGISC program. It will be taken in place of two CarouselSpecialist courses on the schedule for the student’s final semester. It is designed to provide practical experience in the application of MGISC course content in real-world professional settings. Students will select a professional project in consultation with their employer and program faculty and then will design, implement, and report on their activities in a culminating professional paper.
Prerequisite: GEOG 59070 and GEOG 59080 and GEOG 69164; and two additional graduate-level GEOG courses; and graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 18 other
Grade Mode: Standard Letter

GEOG 69701 RESEARCH AND PRESENTATION OF GEOGRAPHIC DATA 3 Credit Hours
Critical discussion of techniques of geographic research and preparation and presentation of research papers.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 70093 VARIABLE TITLE WORKSHOP IN GEOGRAPHY 1-5 Credit Hours
(Repeatable for credit)Variable title workshop in geography.
Prerequisite: Doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-5 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOG 70191 SEMINAR IN TOPICAL GEOGRAPHY 3 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 60191) Seminar in one of the major topical fields in geography offered by title in given semester.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 70195 SPECIAL TOPICS IN GEOGRAPHY 1-3 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 40195 and GEOG 50195) Special topics in geography.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 70292 FIELD EXPERIENCE IN GEOGRAPHY 1-6 Credit Hours
(Repeatable for credit) Examination of geographic landscapes in the field.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Field Experience
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

GEOG 70392 PRACTICUM IN EMERGING GEOGRAPHIC TRENDS 1-6 Credit Hours
(Repeatable for credit) Examination of newly emerging geographic topics and techniques.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Practicum or Internship
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

GEOG 70492 STUDY AWAY IN GEOGRAPHY 1-3 Credit Hours
(Repeatable 6 times for credit) Examination of geographic landscapes in the field.
Prerequisite: None.
Schedule Type: Field Experience
Contact Hours: 3-9 other
Grade Mode: Standard Letter

GEOG 70800 SEMINAR IN THE DEVELOPMENT OF GEOGRAPHIC THOUGHT 3 Credit Hours
(Cross-listed with GEOG 60800) Development of geographic knowledge and concepts with emphasis on recent development. Critical analysis of writings of representative geographers and scientists in related fields.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 70900 QUALITATIVE RESEARCH METHODS IN GEOGRAPHY 3 Credit Hours
(Slashed with GEOG 60900) Introduces qualitative methods and research applications, along with methodological considerations of these approaches. Students consider the epistemology of qualitative research and learn the mechanics of conducting this research in the field. In class, these methods are put into practice and the results are put into writing.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 71051 NATURAL DISASTERS AND SOCIETY 3 Credit Hours
Study of natural disasters, the hazards associated with the disasters, their effects on humans and societies, spatial and temporal distributions, and strategies to reduce the occurrences of disasters. Natural disasters include hurricanes, tornadoes, floods, landslides, heat waves, wildfires, blizzards, earthquakes, tsunami and volcanoes. Mitigation for disasters and responses to disasters are studied across economically developing nations and developed nations. Taught through the analysis of numerous case studies of natural disasters.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71052 GLACIERS AND GLACIATION 3 Credit Hours
(Cross-listed with GEOL 44052, 54052 and 74052) Examination of how glacial ice masses change the shape of the earth’s surface, how they are integral to climate and sea level change and how they pose high risk hazards.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71065 APPLIED CLIMATOLOGY 3 Credit Hours
Aimed at providing a full appreciation for the range of applicability of climate data to real-world problems. There are three overarching goals of the course: To provide a broad overview of what weather and climate information is out there and how we synthesize weather and climate information for use in applied work; to enable a thorough appreciation for the breadth of disciplines in which applied climatology plays a role; and to provide real-world experience of working through an applied climatological problem, via the final project.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71066 GLOBAL CLIMATE CHANGE 3 Credit Hours
(Cross-listed with GEOG 41066 and GEOG 51066) Examination of the evidence and causes of climate change and how these data are assessed. Past, present and future impacts of climate change and variability are discussed along with policy implications.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71073 CONSERVATION OF OUR NATURAL RESOURCES 3 Credit Hours
(Cross-listed with GEOG 41073 and GEOG 51073) Evaluation of past and current problems associated with the management of natural resources and the environments associated with their utilization.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71074 RESOURCE GEOGRAPHY 3 Credit Hours
Cultural attitudes, conceptual approaches and techniques in resource geography; analysis of selected resource issues at various areal scales.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71082 GEOGRAPHY OF SOILS 3 Credit Hours
(Cross-listed with GEOG 41082 and GEOG 51082) Study and analysis of different soil types in their relation to geographic factors.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 71195 SPECIAL TOPICS IN ENVIRONMENTAL GEOGRAPHY
1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 41195 and GEOG 51195) Special topics in environmental geography.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
GEOG 71800 GLOBAL ENVIRONMENTAL ISSUES 3 Credit Hours
(Slashed with GEOG 41800 and GEOG 51800) This course examines environmental belief systems and explores various perceptions of the Earth’s environment and its opportunities, constraints, and risks. The goals of this course are to develop a framework which will allow students to explore both their own relationship to the environment and to understand the sociocultural constructs which have informed their personal environmental beliefs and to apply this knowledge to critically assess various stakeholder perspectives of specific environmental issues. Prerequisites: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 72052 MEDICAL GEOGRAPHY 3 Credit Hours
(Cross-listed with GEOG 42052 and GEOG 52052) This course explores the interconnection between geography and health. Past and present epidemics, global health risks and their variation, the link between disasters and disease, and the factors leading to health disparities, will all be considered from a spatial perspective.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 72053 GEOGRAPHIES OF MEMORY AND HERITAGE 3 Credit Hours
(Cross-listed with GEOG 42053 and GEOG 52053) Gives students a working knowledge in, and ability to understand and analyze, the intersection of memory and landscape as a tangible re-presentation of the human past, oftentimes used as a tangible expression of cultural or political power. To this end the course focuses on memorialization, preservation, and tourism concepts and themes.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 72062 BEHAVIORAL GEOGRAPHY 3 Credit Hours
Focuses on spatial perception, cognition, and behavior. How we collect and process spatial information behavior in space, locate space and interact in space.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOG 72064  HISTORICAL GEOGRAPHY OF THE UNITED STATES AND CANADA  3 Credit Hours
(Cross-listed with GEOG 42064 and GEOG 52064) Study of regional origins, growth, evolution of spatial organization, changing evaluation of environments and selective geographies in United States and Canada from pre-colonial times to present.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 72070  SEMINAR IN ETHNIC, LIFESTYLE AND NATIONAL COMMUNITIES  3 Credit Hours
(Slashed with GEOG 42070 and GEOG 42070) Covers the geographies of ethnic identity and nationalism, national identity and territory, borderlands and diasporas, national separatism and the variety of ways in which cultural difference asserts itself.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 72195  SPECIAL TOPICS IN SOCIAL GEOGRAPHY  1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 42195 and GEOG 52195) Special topics in social geography.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 74010  GEOGRAPHY OF THE GLOBAL ECONOMY  3 Credit Hours
(Cross-listed with GEOG 44010 and GEOG 54010) Geographic analysis of the increasing interconnectedness of economic activity. The social, technological and political changes associated with globalization are also discussed.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 74070  SPATIAL ANALYSIS AND LOCATION THEORY  3 Credit Hours
(Cross-listed with GEOG 44070 and GEOG 54070) Classical theories for location of economic activities and contemporary approach of spatial analysis, spatial organization of economic systems, behavioral models in economic geography and spatial allocation problems.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 75085  URBAN TRANSPORTATION  3 Credit Hours
(Cross-listed with GEOG 45085 and GEOG 55085) Transportation may be the single most important force shaping our cities. Historically, cities have depended on their access to ports, canals, railroads, and highways. Today, transportation networks, the use of public transportation, provisions for bicycles and pedestrians, and transportation architecture continue to define how a city looks, feels, and acts.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 76070  URBAN AND REGIONAL PLANNING  3 Credit Hours
(Cross-listed with GEOG 46070 and GEOG 56070) Examines how cities develop and what "people" — through government, quasi-public institutions, and private interests — can do to modify urban growth, the distribution of people and places, and urban design.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 76080  URBAN SUSTAINABILITY  3 Credit Hours
(Slashed with GEOG 46080 and GEOG 56080) Provides an introduction to interdisciplinary perspectives on urban sustainability, focusing on environmental challenges caused by urbanization and the innovative ways urban dwellers seek to address those challenges. It provides background on relevant disciplinary perspectives and their application to environmental challenge domains.
Prerequisite: Doctoral standing.
Schedule Type: Lecture, Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 76081  SEMINAR IN URBAN GEOGRAPHY  3 Credit Hours
(Slashed with GEOG 46081 and GEOG 56081) Through class discussions and readings, this course offers participants a better understanding of the various issues, projects and paradigms that make up the field of urban geography.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 77091  SEMINAR IN REGIONAL GEOGRAPHY  3 Credit Hours
(Repeatable for credit) (Cross-listed with GEOG 67091) Seminar on one of the major regions of world offered by title in given semester.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

GEOG 79004  QUANTITATIVE METHODS IN GEOGRAPHY  3 Credit Hours
(Slashed with GEOG 69004) Explores the methods and applications of some of the most common statistics found in geographic work. It explores probability theory, spatial statistics, estimation procedures, hypothesis testing, spatial sampling, methods of areal association, correlation and regression analysis, and principal components analysis. Theory and execution of these methods are equally emphasized, and applications to geographic problems are examined within each theme.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79070  GEOGRAPHIC INFORMATION SCIENCE  4 Credit Hours
(Cross-listed with GEOG 49070 and GEOG 59070) Introduction to theories and methods for geographic data processing, including data capture and input data storage and management and data analysis and displays. Emphasis is on laboratory exercises using GIS software packages for real world applications.
Prerequisite: Doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter
GEOG 79072  GEOGRAPHIC INFORMATION SCIENCE AND HEALTH  3 Credit Hours
Geographic theory and methods serve as the connection among disparate disciplines focused on how and why "health" varies between regions, cities, and neighborhoods. This course examines how geospatial technologies, especially GIS, have become an important health analysis tool.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79075  GEOGRAPHIC INFORMATION SCIENCE: APPLICATIONS FOR SOCIAL PROBLEMS  3 Credit Hours
(Cross-listed with GEOG 49075 and GEOG 59075) This course provides a survey of Geographic Information Systems (GIS) and related mapping applications that are used to understand and solve a variety of social problems (e.g., crime, poor health and educational outcomes, exposure to environmental hazards). Through case studies, it focuses on teaching students about spatial data acquisition, basic spatial analysis, and forms of map-based visual communication to stakeholders and the general public.
Prerequisite: GEOG 49070 or 59070 or 79070; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79076  SPATIAL PROGRAMMING  3 Credit Hours
(Cross-listed with GEOG 49076 and GEOG 59076) Examination of the design, development and use of geographic information technologies with computer programming to model process and visualize geographic phenomena.
Prerequisite: GEOG 79070 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79078  GEOGRAPHIC INFORMATION SCIENCE AND ENVIRONMENTAL HAZARDS  3 Credit Hours
(Slashed with GEOG 49078 and GEOG 59078) The study and management of natural hazards are inherently reliant on both physical and human processes and spatial patterns. Given the many variables involved and the variety of scales at which they operate, use of Geographic Information Systems (GIS) has become standard practice in research on hazards and in their management by government agencies at all levels. Exposes students to a wide array of spatial data that is used in these activities, as well as standard mapping and spatial analysis procedures and forms of data dissemination.
Prerequisite: GEOG 49070 or 59070 or 79070; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79080  ADVANCED GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
(Cross-listed with GEOG 49080 and GEOG 59080) AProvides both an overview of GIS data structures, analytical functions and usage, and modeling approaches. Students will learn how to manage GIS data in different formats or projections, select GIS analytical tools for solving different problems, and model changes of geographical phenomena as represented by GIS data.
Prerequisite: GEOG 4/5/79070 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79082  CYBERGIS  3 Credit Hours
(Slashed with GEOG 69082) Explores cyberinfrastructure-enabled geographic information systems (i.e. cyberGIS) and related technologies including a broad introduction to the use, design, and development of cyberinfrastructure, spatial data infrastructures, geographic information services, and web-enabled mapping technologies. Situates cyberGIS in the broader context of geographic information science focusing on the how synthesizes computational thinking and spatial thinking influence methodological approaches.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79085  WEB AND MOBILE GEOGRAPHIC INFORMATION SCIENCE  3 Credit Hours
(Slashed with GEOG 49085 and 59085) Explores how web and mobile phones present opportunities and challenges to the field of geographic information science (GIS). This includes the examination of the use, design and development of cyberinfrastructure-enabled GIS emphasizing web- and mobile-based interfaces and technologies. GIS experience recommended.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79162  CARTOGRAPHY AND GEOVISUALIZATION  3 Credit Hours
(Slashed with GEOG 49162 and GEOG 59162) Study of the design and production of dynamic, interactive, multimedia web-based mapping. Data acquisition and processing, symbolization, composition, text and color utilization.
Prerequisite: GEOG 49070 or GEOG 59070 or GEOG 79070; and doctoral standing.
Corequisite: GEOG 79163.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 79163  CARTOGRAPHY AND GEOVISUALIZATION LABORATORY  1 Credit Hour
(Cross-listed with GEOG 49163 and GEOG 59163) Practical experience in the techniques of data acquisition and processing for dynamic, multimedia, and online map production and geovisualizations.
Prerequisite: GEOG 49070 or 59070 or 79070; and doctoral standing.
Corequisite: GEOG 79162.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter
GEOG 79195  SPECIAL TOPICS IN GEOGRAPHIC INFORMATION SCIENCE  1-3 Credit Hours
(Repeatable for a maximum of 10 times) (Cross-listed with GEOG 49195 and GEOG 59195). Special topics in geographic information sciences.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOG 79230  REMOTE SENSING  3 Credit Hours
(Cross-listed with GEOG 49230 and GEOG 59230 and GEOL 42030 and GEOL 52030 and GEOL 72030) Computer analysis of multispectral satellite datasets. Applications in Terrestrial Earth Science are emphasized.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOG 80199  DISSERTATION I  15 Credit Hours
(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOG 80299  DISSERTATION II  15 Credit Hours
(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.
Prerequisite: GEOG 80199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOG 80998  RESEARCH IN CARTOGRAPHY  1-3 Credit Hours
(Repeatable for credit) Investigations into function of map as medium of scientific expression; problem of map design in relation to human perception of graphically expressed spatial information.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Standard Letter

Department of Geology
Geology (GEOL)

GEOL 11040  HOW THE EARTH WORKS (KBS)  3 Credit Hours
Explores processes that shape Earth’s landscapes (volcanism, flooding, landslides, sea-level rise, mountain building) and that are of vital interest to humans (earthquakes, groundwater, energy and mineral resources, climate change).
Prerequisite: None.
Schedule Type: Laboratory
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Science, Transfer Module Natural Sciences

GEOL 11041  HOW THE EARTH WORKS LABORATORY (KBS) (KLAB)  1 Credit Hour
Lab experience with earth materials (mineral crystals, common and unusual rock specimens), Google Earth images, and experiments demonstrating processes at earth’s surface such as groundwater pollution, flooding, and on-line earthquake simulations.
Pre/corequisite: GEOL 11040.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science, Transfer Module Natural Sciences

GEOL 11042  EARTH AND LIFE THROUGH TIME (KBS)  3 Credit Hours
Explores major events in the history of Earth including mass extinctions, Snowball Earth, birth and death of oceans, growth of continents, explosion of life, dinosaurs, and the surprising inter-relatedness of earth and life processes.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Science, Transfer Module Natural Sciences

GEOL 11043  EARTH AND LIFE THROUGH TIME LABORATORY (KBS) (KLAB)  1 Credit Hour
Lab experience with interesting fossils, rocks, and sedimentary features, a river process simulator, and the concept of deep time.
Pre/corequisite: GEOL 11042.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science, Transfer Module Natural Sciences
GEOL 20000 INTRODUCTORY GEOLOGY SEMINAR (ELR) 1 Credit Hour
Provides new Geology and Earth Science majors with an overview of career paths and opportunities within these majors. Components of the course include a journal club, informational presentations by geoscientists in industry, government, and academia, and skills training needed for the major. Required overnight field trip.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

GEOL 21062 ENVIRONMENTAL EARTH SCIENCE (KBS) 3 Credit Hours
Application of Earth Science to environmental problems, including natural resource extraction, water supply, pollution, waste disposal, landslides, floods and land use planning. Local field trip.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

GEOL 21080 ALL ABOUT THE OCEANS (KBS) 3 Credit Hours
Explores the many fascinating (and some still little known) features and processes of the Earth’s Oceans including mid-ocean ridges, hydrothermal vents, tsunamis, tides, rogue waves, marine life, and the role of the Ocean in climate change.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

GEOL 21082 GENETIC EARTH SCIENCE 3 Credit Hours
Concepts applied to study of commonly preserved invertebrate organisms; identification of common North American fossils. Lecture three hours, lab two hours weekly. Required field trip.
Prerequisite: GEOL 11042 and GEOL 11043.
Corequisite: CHEM 10002 or 10110.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

GEOL 31070 EARTH MATERIALS II (WIC) 4 Credit Hours
Occurrence and origin of igneous, sedimentary and metamorphic rocks. Laboratory identification, description and classification of hand specimens. Lecture three hours, lab two hours weekly. Required field trip.
Prerequisite: GEOL 23063.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter
Attributes: TAG Science

GEOL 31080 STRUCTURAL GEOLOGY 4 Credit Hours
Mechanical principles of rock deformation. Structures in sedimentary igneous and metamorphic rocks. Lecture three hours lab two hours weekly. Required field trip.
Prerequisite: none.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 other
Grade Mode: Standard Letter

GEOL 31082 GERMAN FOR GEOLOGISTS 1 Credit Hour
An introduction to basic vocabulary and grammar in German, with an emphasis on scientific topics. Opportunities for career enhancement in the international scientific community. Limited to 3 credits before completion of GEOL 21062.
Prerequisite: None.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GEOL 31086 GEOMORPHOLOGY 4 Credit Hours
Earth’s surface features as functions of geological structures, processes and time. Landform analysis using topographic maps and some stereographic aerial photos. Lecture three hours, lab two hours weekly. Trigonometry recommended.
Prerequisite: GEOL 11040 and GEOL 11041.
Schedule Type: Combined Lecture and Lab
Contact Hours: 4 other
Grade Mode: Standard Letter

GEOL 32066 GEOMORPHOLOGY 4 Credit Hours
Explores the many fascinating (and some still little known) features and processes of the Earth’s Oceans including mid-ocean ridges, hydrothermal vents, tsunamis, tides, rogue waves, marine life, and the role of the Ocean in climate change. Required overnight field trip.
Prerequisite: GEOL 11042 and GEOL 11043.
Corequisite: CHEM 10002 or 10110.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

GEOL 40093 VARIABLE TITLE WORKSHOP IN GEOLOGY 1-8 Credit Hours
(Repeatable for credit) Workshop and/or training program focused on a specific professional or disciplinary topic.
Prerequisite: Special approval.
Schedule Type: Workshop
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 40095 SELECTED TOPICS IN GEOLOGY 1-3 Credit Hours
(Repeatable for credit) Directed field, laboratory and/or library research. Written report required. Open on special approval of faculty member directing work. Only 3 hours will be applied toward baccalaureate degree.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GEOL 41025 GENERAL GEOPHYSICS 3 Credit Hours
Physics of Earth, seismology, geomagnetism, heat flow, radioactivity, geochronology, geotectonic models. Required field trip.
Prerequisite: GEOL 31070 and GEOL 31080 and MATH 12002; and PHY 13001 or PHY 23101.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOL 41073  GEODESIE 3 Credit Hours
(Cross-listed with GEOL 51073) Describes modern geodesie methods and their applications in geospatial applications. Required field trips. Does not satisfy requirements of geology major.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 6 lecture
Grade Mode: Standard Letter

GEOL 41077  GEODESIE OF THE NATIONAL PARKS 3 Credit Hours
(Cross-listed with GEOL 51077) Introduction to the geodesie of selected major national parks, emphasizing basic geodetic principles and the processes which have produced the spectacular scenery, rocks and fossils in each park. Not counted toward requirements for a major in geodesie.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 41079  ALL ABOUT DINOSAURS 3 Credit Hours
(Cross-listed with GEOL 51079) Dinosaurs (and some relatives) and their world, emphasizing how to interpret evidence concerning their history, biology and evolutionary relationships. Does not satisfy requirements of geology major.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 41080  TECTONICS AND OROGENY 3 Credit Hours
(Cross-listed with GEOL 51080) Introduces advanced concepts of plate tectonics and mountain building with emphasis on Western United States and Appalachians. Required field trip to New England.
Prerequisite: GEOL 31080.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 41082  ADVANCED STRUCTURAL GEOLOGY 3 Credit Hours
(Cross-listed with GEOL 51082) Theoretical and applied studies in structural geology, including mechanical, mathematical, model and field investigations. Required field trip.
Prerequisite: GEOL 31080.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 41092  SUMMER FIELD CAMP (ELR) 6 Credit Hours
(Cross-listed with GEOL 51092) Five weeks devoted to geologic mapping and solving structural and stratigraphic problems in Black Hills, S.D. Special fee on actual cost basis.
Prerequisite: GEOL 31070 and GEOL 31080.
Schedule Type: Practicum or Internship
Contact Hours: 42 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

GEOL 42030  REMOTE SENSING 3 Credit Hours
(Cross-listed with GEOL 52030 and GEOL 72030 and GEOG 49230 and GEOG 59230 and GEOG 79230) Computer analysis of multispectral satellite datasets. Applications in Terrestrial Earth Science are emphasized.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 42035  SCIENTIFIC METHODS IN GEOLOGY 3 Credit Hours
(Cross-listed with GEOL 52035) Applying scientific methods to geologic data in the field and lab; models and sampling procedures. Collecting and analyzing data. Formulating and testing hypotheses. Provides background necessary for upper-level geology courses for majors. Lecture two hours, lab two hours weekly.
Prerequisite: None.
Schedule Type: Combined Lecture and Lab
Contact Hours: 2 lecture, 2 lab
Grade Mode: Standard Letter

GEOL 42065  WATERSHED HYDROLOGY 3 Credit Hours
(Slashed with GEOL 52065) Study of water movement, storage, and transformation across landscapes.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 42067  INTRODUCTORY HYDROGEOLOGY 3 Credit Hours
(Slashed with GEOL 52067) Occurrence of ground water in geologic materials; emphasizing utilization, conservation and management of ground water resources.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 42068  CONTAMINANT HYDROLOGIE AND HYDROGEOLOGY 3 Credit Hours
(Slashed with GEOL 52068) An introduction to the basic principles of chemical and physical behavior of contaminants introduced by humans into the environment. Students are expected to understand concepts and work practical quantitative problems.
Prerequisite: GEOL 42067 and CHEM 10060 and CHEM 10061 and CHEM 10062 and CHEM 10063.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 42069  HYDROGEOCHEMISTRY 3 Credit Hours
(Cross-listed with GEOL 52069 and GEOL 72069) Processes and evolution of the chemical composition of water in the natural hydrologic cycle. Methods of hydrochemical interpretation applied to ground water and pollution problems. Lecture three hours weekly.
Prerequisite: 10 hours of chemistry.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOL 42074 ENVIRONMENTAL CORE AND WELL LOGGING 3 Credit Hours
(Cross-listed with GEOL 52074) Examination of subsurface processes and the distribution of stratigraphic layers using core and well logging techniques based on analysis of physical properties of sediment, rock and pore fluids. Applications to paleoclimate, hydrogeology, engineering geology, oil and gas exploration and environmental remediation.
Prerequisite: GEOL 31070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 42078 ENGINEERING GEOLOGY 4 Credit Hours
(Cross-listed with GEOL 52078) Engineering properties of soils and rocks. Site evaluation for building foundations, dams, tunnels, and highways. Slope stability. Lecture three hours and lab two hours weekly.
Prerequisite: Geology (GEOL) or Earth Science (ESCI) major with junior standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 4 other
Grade Mode: Standard Letter

GEOL 43040 PRINCIPLES OF GEOCHEMISTRY 3 Credit Hours
(Cross-listed with GEOL 53040) Introduction to chemical thermodynamics and its applications in solving geochemical problems. Distributions of elements and isotopes in the earth and laws governing these distributions.
Prerequisite: GEOL 31070; and MATH 12002; and CHEM 10060 and CHEM 10061.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 43042 ENVIRONMENTAL GEOCHEMISTRY 3 Credit Hours
(Cross-listed with GEOL 53042 and GEOL 73042) Explores chemical processes that influence the natural environment, including anthropogenic impacts. Topics include atmospheric chemistry and air pollution, energy and climate change, toxic organic compounds, water chemistry and water pollution, metals, soils, sediments and waste disposal. Environmental problem solving using steady state and non-steady state box models, thermodynamics and energy transfer, and chemical reactions and equilibria is emphasized. Required half-day field trip.
Prerequisite: CHEM 10060 and CHEM 10061.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 43044 ENVIRONMENTAL ISOTOPES 3 Credit Hours
(Cross-listed with GEOL 53044 and GEOL 73044) Deals with the fundamentals of isotope geochemistry and the application of primarily light stable isotopes (H, O, C, N) to earth system processes (involving the hydrosphere, biosphere, and upper geosphere).
Prerequisite: CHEM 10060 and CHEM 10061.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 43066 OPTICAL PETROGRAPHY 3 Credit Hours
(Cross-listed with GEOL 53066) Theory of optical crystallography and the microscopic examination and identification of igneous, sedimentary and metamorphic rocks in thin section. Lecture two hours, lab two hours weekly.
Prerequisite: GEOL 31070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 44052 GLACIERS AND GLACIATION 3 Credit Hours
(Cross-listed with GEOG 41052, GEOG 51052 and GEOG 71052) Examination of how glacial ice masses change the shape of the earth’s surface, how they are integral to climate and sea level change, and how they pose high risk hazards.
Prerequisite: GEOG 21062 or GEOG 11040.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 44070 SEDIMENTOLOGY AND STRATIGRAPHY 4 Credit Hours
( Slashed with GEOL 54070) Students are introduced to the principles regarding the systematics of sedimentary rocks and the relationships between geologic formations at various spatial and temporal scales. Lectures are integrated with readings from the open literature and required labs and field trips.
Prerequisite: GEOL 31070.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter

GEOL 44074 PALEOCEANOGRAPHY 3 Credit Hours
A broad spectrum of geological approaches, including paleontology, geochemistry and stratigraphy is employed to interpret the history of earth’s oceans.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 50093 VARIABLE TITLE WORKSHOP IN GEOLOGY 1-8 Credit Hours
(Repeatable for credit) Workshop or training program focused on a specific professional or disciplinary topic within geology.
Prerequisite: Graduate standing and special approval.
Schedule Type: Workshop
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 50095 SELECTED TOPICS IN GEOLOGY 1-3 Credit Hours
(Cross-listed with GEOL 40095) (Repeatable for credit) Selected topics presented by visiting professors or one-time offerings presented by regular faculty.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
GEOL 51025  GENERAL GEOPHYSICS  3 Credit Hours
Physics of Earth. Seismology, geomagnetism; heat flow, radioactivity, geochronology, gravity and isostasy, geotectonic models. Lecture 3 hours weekly. Required field trip.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 51073  GEOLOGY OF OHIO  3 Credit Hours
(Cross-listed with GEOL 41073) Minerals, rocks, fossils, structural geology, physiography, environmental geology, geologic resources. Required field trips. Does not satisfy requirements for major in geology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 51077  GEOLOGY OF THE NATIONAL PARKS  3 Credit Hours
(Cross-listed with GEOL 41077) Introduction to the geology of selected major national parks, emphasizing basic geological principles and the processes which have produced the spectacular scenery, rocks and fossils in each park. Not counted toward requirements for a major in geology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 51079  ALL ABOUT DINOSAURS  3 Credit Hours
(Cross-listed with GEOL 41079) Dinosaurs (and some relatives) and their world, emphasizing how to interpret evidence concerning their history, biology and evolutionary relationships. Does not satisfy requirements of geology major.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 51080  TECTONICS AND OROGENY  3 Credit Hours
Introduces advanced concepts of plate tectonics and mountain building with emphasis on Western United States and Appalachians. Required field trip to New England.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 51082  ADVANCED STRUCTURAL GEOLOGY  3 Credit Hours
(Cross-listed with GEOL 41082) Theoretical and applied studies in structural geology, including mechanical, mathematical, model and field investigations.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 51092  SUMMER FIELD CAMP  6 Credit Hours
(Repeatable for credit) Five weeks devoted to geologic mapping and solving structural and stratigraphic problems in Black Hills, S.D. Special fee on actual cost basis.
Prerequisite: graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 42 other
Grade Mode: Standard Letter-IP

GEOL 52030  REMOTE SENSING  3 Credit Hours
(Cross-listed with GEOL 42030 and GEOL 72030 and GEOG 41052 and GEOG 51052 and GEOG 71052) Computer analysis of multispectral satellite datasets. Applications in Terrestrial Earth Science are emphasized.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 52035  SCIENTIFIC METHODS IN GEOLGY  3 Credit Hours
(Cross-listed with GEOL 42035) Applying scientific methods to geologic data in the field and lab; models and sampling procedures. Collecting and analyzing data. Formulating and testing hypotheses. Lecture two hours, lab two hours.
Prerequisite: graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 2 lecture, 2 lab
Grade Mode: Standard Letter

GEOL 52065  WATERSHED HYDROLOGY  3 Credit Hours
(Slashed with GEOL 42065) Study of water movement, storage, and transformation across landscapes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 52067  INTRODUCTORY HYDROGEOLOGY  3 Credit Hours
(Slashed with GEOL 42067) Occurrence of ground water in geologic materials; emphasizing utilization, conservation and management of ground water resources.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 52068  CONTAMINANT HYDROLOGY AND HYDROGEOLOGY  3 Credit Hours
(Cross-listed with GEOL 42068) An introduction to the basic principles of chemical and physical behavior of contaminants introduced by humans into the environment. Students are expected to understand concepts and work practical quantitative problems.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 52069  HYDROGEOCHEMISTRY  3 Credit Hours
(Cross-listed with GEOL 42069 and GEOL 72069) Processes and evolution of the chemical composition of water in the natural hydrologic cycle. Methods of hydrochemical interpretation applied to ground water and pollution problems. Lecture three hours weekly.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOL 52074 ENVIRONMENTAL CORE AND WELL LOGGING 3 Credit Hours
(Cross-listed with GEOL 42074) Examination of subsurface processes and the distribution of stratigraphic layers using core and well logging techniques based on analysis of physical properties of sediment, rock and pore fluids. Applications to paleoclimate, hydrogeology, engineering geology, oil and gas exploration and environmental remediation.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 52078 ENGINEERING GEOLOGY 4 Credit Hours
(Cross-listed with GEOL 42078) Engineering properties of soils and rocks. Site evaluation for building foundations, dams, tunnels and highways. Slope stability. Lecture three hours and lab two hours weekly.
Prerequisite: Graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 4 other
Grade Mode: Standard Letter

GEOL 53040 PRINCIPLES OF GECHEMISTRY 3 Credit Hours
(Cross-listed with GEOL 43040) Introduction to chemical thermodynamics and its applications in solving geochemical problems. Distributions of elements and isotopes in the Earth and laws governing these distributions.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 53042 ENVIRONMENTAL GEOCHEMISTRY 3 Credit Hours
(Cross-listed with GEOL 43042 and GEOL 73042) Explores chemical processes that influence the natural environment including anthropogenic impacts. Topics include atmospheric chemistry and air pollution, energy and climate change, toxic organic compounds, water chemistry and water pollution, metals, soils, sediments and waste disposal. Environmental problem solving using steady state and non-steady state box models, thermodynamics and energy transfer, and chemical reactions and equilibria is emphasized. Required half-day field trip.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 53044 ENVIRONMENTAL ISOTOPES 3 Credit Hours
(Cross-listed with GEOL 43044 and GEOL 73044) Deals with the fundamentals of isotope geochemistry and the application of primarily light stable isotopes (H, O, C, N) to earth system processes (involving the hydrosphere, biosphere, and upper geosphere).
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 53066 OPTICAL PTEROGRAPHY 3 Credit Hours
(Cross-listed with GEOL 43066) Theory of optical crystallography and the microscopic examination and identification of igneous, sedimentary and metamorphic rocks in thin section. Lecture two hours, laboratory two hours weekly.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 54052 GLACIERS AND GLACIATION 3 Credit Hours
(Cross-listed with GEOL 41052, GEOG 51052 and GEOG 71052) Examination of how glacial ice masses change the shape of the earth’s surface, how they are integral to climate and sea level change and how they pose high risk hazards.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 54070 SEDIMENTOLOGY AND STRATIGRAPHY 4 Credit Hours
(Cross-listed with GEOL 44070) Students are introduced to the principles regarding the systematics of sedimentary rocks and the relationships between geologic formations at various spatial and temporal scales. Lectures are integrated with readings from the open literature and required labs and field trips.
Prerequisite: graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab, 1 other
Grade Mode: Standard Letter

GEOL 54074 PALEOCEANOGRAPHY 3 Credit Hours
(Cross-listed with GEOL 44074) A broad spectrum of geological approaches, including paleontology, geochemistry and stratigraphy is employed to interpret the history of Earth’s oceans.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 60080 RESEARCH ORIENTATION 1 Credit Hour
(Cross-listed with GEOL 70080) Faculty research presentations; thesis/dissertation proposal preparation; discussion of professional organizations, preparation of manuscripts and oral presentation of papers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

GEOL 60084 GEOLOGY GRADUATE STUDENT ORIENTATION 1 Credit Hour
(Slashed with GEOL 70084) Introduction to departmental resources, procedures, and expectations as well as approaches to successfully conduct research at a graduate level. Training and experience in presentation of data and college teaching of applied geology, as well as a discussion forum on professional ethics and responsibilities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

GEOL 60091 SEMINAR 1-2 Credit Hours
(Cross-listed with GEOL 70091) (Repeatable for credit) Specialized topics in geology. Precise title to be inserted in schedule of classes.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1-2 other
Grade Mode: Standard Letter-S/U
GEOL 60094  COLLEGE TEACHING OF APPLIED GEOLOGY  1 Credit Hour
(Cross-listed with GEOL 70094) (Repeatable for credit) Training and experience in presentation of data and college teaching of applied geology, as well as a discussion forum on professional ethics and responsibilities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter-S/U

GEOL 60095  SELECTED TOPICS IN GEOLOGY  1-3 Credit Hours
(Repeatable for credit) Selected topics presented by visiting professors or one-time offerings presented by regular faculty.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOL 60098  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research for master’s level students. Credits earned may be applied toward degree if department approves.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOL 60199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOL 60299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: GEOL 60199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOL 61093  WORKSHOP IN COLLEGE TEACHING  1-2 Credit Hours
(Repeatable for credit) Workshop in college teaching.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-2 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 62011  HYDROLOGY  3 Credit Hours
(Cross-listed with GEOL 72011) Introduction to hydrologic measurements, properties of water precipitation, evapotranspiration runoff computations, streamflow and flood routing.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 62068  ADVANCED HYDROGEOLOGY  3 Credit Hours
(Cross-listed with GEOL 72068) Quantitative approach to occurrence of ground water; methods of investigation, evaluation and development of ground water resources emphasizing optimization and maximal exploitation without environmental changes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 62079  ADVANCED ENGINEERING GEOLOGY  3 Credit Hours
(Cross-listed with GEOL 72079) Role of geology in site selection, design and construction relative to dams, tunnels, highways, slope stability and nuclear power plants. Selected case histories. Lecture three hours weekly. Field trip and term paper required.
Prerequisite: GEOL 4/52078 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 62082  INTRODUCTION TO SOIL MECHANICS  4 Credit Hours
(Cross-listed with GEOL 72082) Engineering properties and engineering behavior of soils including classification properties, compaction permeability strength and compressibility. Lecture three hours and lab two hours weekly.
Prerequisite: graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOL 62083  ROCK SLOPE STABILITY  3 Credit Hours
(Cross-listed with GEOL 72083) Provide information used to recognize, avoid, design for, control and correct slope movements in rocks; determination of shear strength along rock discontinuities; stability analysis of rock slopes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 62084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 72082; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 63063  SEDIMENTARY PETROLOGY  3 Credit Hours
(Cross-listed with GEOL 73063) Classification, texture, composition, provenance and diagenesis of sandstones and carbonates, following review of optical mineralogy. Petrographic microscopy and other laboratory techniques are emphasized.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOL 63067 CARBONATE ROCKS  3 Credit Hours
(Cross-listed with GEOL 73067) Basic principles of carbonate
sedimentology including composition, classification, origin and
distribution of carbonate sediments their diagenesis and lithification.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64028 PALEEOECOLOGY  3 Credit Hours
(Cross-listed with GEOL 74028) Relationships between ancient organisms
and their environments, as interpreted from fossils, enclosing rock strata
and recent analogs. Field and laboratory studies. Saturday field trips.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64065 SEDIMENTOLOGY  3 Credit Hours
(Cross-listed with GEOL 74065) Fluid dynamics, grain transport,
sedimentary structures, granulometry, bedform and facies sequences,
and facies architecture. Interpretation of continental and marine clastic
depositional environments and processes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64067 CARBONATE ROCKS  3 Credit Hours
(Cross-listed with GEOL 73067) Basic principles of carbonate
sedimentology including composition, classification, origin and
distribution of carbonate sediments their diagenesis and lithification.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64068 PALEOECOLOGY  3 Credit Hours
(Cross-listed with GEOL 74028) Relationships between ancient organisms
and their environments, as interpreted from fossils, enclosing rock strata
and recent analogs. Field and laboratory studies. Saturday field trips.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64030 SYSTEMATIC INVERTEBRATE PALEONTOLOGY I  3 Credit Hours
(Cross-listed with GEOL 74030) Detailed investigation and examination of
important literature concerning taxonomic characters of invertebrate
phyla: Protista, Porifera, Cnidaria and Bryozoa. Numerous oral reports,
specimen examination.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64031 SYSTEMATIC INVERTEBRATE PALEONTOLOGY II  3 Credit Hours
(Cross-listed with GEOL 74031) Detailed investigation and examination of
important literature concerning taxonomic characters of invertebrate
phyla: Brachiopoda, Mollusca, Arthropoda and Echinodermata. Numerous
oral reports, specimen examination.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64032 SYSTEMATIC INVERTEBRATE PALEONTOLOGY II  3 Credit Hours
(Cross-listed with GEOL 74032) Detailed investigation and examination of
important literature concerning taxonomic characters of invertebrate
phyla: Brachiopoda, Mollusca, Arthropoda and Echinodermata. Numerous
oral reports, specimen examination.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64033 PALEOECOLOGY  3 Credit Hours
An overview of significant topics and applications in paleolimnology of
Holocene (last 10,000 years) and Pleistocene (last 2 million years)
records, including current issues in environmental and climatic
reconstruction. Extensive reading expected.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64035 SEDIMENTOLOGY  3 Credit Hours
An overview of significant topics and applications in paleolimnology of
Holocene (last 10,000 years) and Pleistocene (last 2 million years)
records, including current issues in environmental and climatic
reconstruction. Extensive reading expected.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64036 CENOZOIC CLIMATE CHANGE  3 Credit Hours
(Cross-listed with GEOL 74036) An overview of the concepts and
principles involved in interpreting global and hemispheric Cenozoic
climate change (past 65 million years). Emphasis on particular temporal
and spatial scales and cycles. Extensive reading in scientific journals.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64037 SEDIMENTOLOGY  3 Credit Hours
An overview of significant topics and applications in paleolimnology of
Holocene (last 10,000 years) and Pleistocene (last 2 million years)
records, including current issues in environmental and climatic
reconstruction. Extensive reading expected.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64038 PALEOLIMNOLOGY  3 Credit Hours
An overview of significant topics and applications in paleolimnology of
Holocene (last 10,000 years) and Pleistocene (last 2 million years)
records, including current issues in environmental and climatic
reconstruction. Extensive reading expected.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 64039 SEDIMENTOLOGY  3 Credit Hours
An overview of significant topics and applications in paleolimnology of
Holocene (last 10,000 years) and Pleistocene (last 2 million years)
records, including current issues in environmental and climatic
reconstruction. Extensive reading expected.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 70094 COLLEGE TEACHING OF APPLIED GEOLOGY  1 Credit Hour
(Repeatable for credit) Training and experience in presentation of data and college teaching of applied geology, as well as a discussion forum on professional ethics and responsibilities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70095 SEMINAR  1-2 Credit Hours
(Repeatable for credit) Seminar in geology. Precise title to be inserted in schedule of classes.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1-2 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70096 WORKSHOP IN GEOLOGY  1-4 Credit Hours
(Repeatable for credit) Workshop and/or training program, of varying
duration focused on a specific professional or disciplinary topic.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-4 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70097 VARIABLE TITLE WORKSHOP IN GEOLOGY  1-8 Credit Hours
(Repeatable for credit) Workshop and/or training program, of varying
duration focused on a specific professional or disciplinary topic.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70098 RESEARCH ORIENTATION  1 Credit Hour
(Repeatable for credit) Research orientation and preparation; discussion of professional organizations, preparation of manuscripts and oral presentation of papers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70099 VARIOUS TITLE WORKSHOP IN GEOLOGY  1-8 Credit Hours
(Repeatable for credit) Workshop and/or training program, of varying
duration focused on a specific professional or disciplinary topic.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70100 EXPERIENTIAL LEARNING  1-4 Credit Hours
(Repeatable for credit) Credit for experiences not covered in a traditional course.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-4 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 70101 EXPERIENTIAL LEARNING  1-8 Credit Hours
(Repeatable for credit) Credit for experiences not covered in a traditional course.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-8 other
Grade Mode: Satisfactory/Unsatisfactory
GEOL 71093  WORKSHOP IN COLLEGE TEACHING  1-2 Credit Hours
(Repeatable for credit) Workshop in college teaching.
Prerequisite: Doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-2 other
Grade Mode: Satisfactory/Unsatisfactory

GEOL 72011  HYDROLOGY  3 Credit Hours
(Cross-listed with GEOL 62011) Introduction to hydrologic measurements, properties of water precipitation, evapotranspiration, runoff computations, streamflow and flood routing.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72030  REMOTE SENSING  3 Credit Hours
(Cross-listed with GEOL 42030 and GEOL 52030 and GEOG 41052 and GEOG 51052) Computer analysis of multispectral satellite datasets. Applications in Terrestrial Earth Science are emphasized.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72068  ADVANCED HYDROGEOLOGY  3 Credit Hours
Quantitative approach to occurrence of ground water; methods of investigation evaluation and development of ground water resources emphasizing optimization and maximal exploitation without environmental changes.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72069  HYDROGEOCHEMISTRY  3 Credit Hours
(Cross-listed with GEOL 42069 and GEOL 52069) Processes and evolution of the chemical composition of water in the natural hydrologic cycle. Methods of hydrochemical interpretation applied to ground water and pollution problems. Lecture three hours weekly.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72079  ADVANCED ENGINEERING GEOLOGY  3 Credit Hours
(Cross-listed with GEOL 62079) Role of geology in site selection, design and construction relative to dams tunnels highways slope stability and nuclear power plants. Selected case histories. Lecture three hours weekly. Field trip and term paper required.
Prerequisite: GEOL 4 52078 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72082  INTRODUCTION TO SOIL MECHANICS  4 Credit Hours
(Cross-listed with GEOL 62082) Engineering properties and engineering behavior of soils including classification properties, compaction, permeability strength and compressibility. Lecture three hours and lab two hours weekly.
Prerequisite: doctoral standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 other
Grade Mode: Standard Letter

GEOL 72083  ROCK SLOPE STABILITY  3 Credit Hours
Provide information used to recognize, avoid design for control and correct slope movements in rocks determination of shear strength along rock discontinuities stability analysis of rock slopes.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 73042  ENVIRONMENTAL GEOCHEMISTRY  3 Credit Hours
(Cross-listed with GEOL 43042 and GEOL 53042) Explores chemical processes that influence the natural environment including anthropogenic impacts. Topics include atmospheric chemistry and air pollution, energy and climate change, toxic organic compounds, water chemistry and water pollution, metals, soils, sediments and waste disposal. Environmental problem solving using steady state and non-steady state box models, thermodynamics and energy transfer, and chemical reactions and equilibria is emphasized. Required half-day field trip.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 73042  ENVIRONMENTAL GEOCHEMISTRY  3 Credit Hours
(Cross-listed with GEOL 43042 and GEOL 53042) Explores chemical processes that influence the natural environment including anthropogenic impacts. Topics include atmospheric chemistry and air pollution, energy and climate change, toxic organic compounds, water chemistry and water pollution, metals, soils, sediments and waste disposal. Environmental problem solving using steady state and non-steady state box models, thermodynamics and energy transfer, and chemical reactions and equilibria is emphasized. Required half-day field trip.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 73042  ENVIRONMENTAL GEOCHEMISTRY  3 Credit Hours
(Cross-listed with GEOL 43042 and GEOL 53042) Explores chemical processes that influence the natural environment including anthropogenic impacts. Topics include atmospheric chemistry and air pollution, energy and climate change, toxic organic compounds, water chemistry and water pollution, metals, soils, sediments and waste disposal. Environmental problem solving using steady state and non-steady state box models, thermodynamics and energy transfer, and chemical reactions and equilibria is emphasized. Required half-day field trip.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 73043  ENVIRONMENTAL ISOTOPES  3 Credit Hours
(Cross-listed with GEOL 43043 and GEOL 53043) Explores chemical processes that influence the natural environment including anthropogenic impacts. Topics include atmospheric chemistry and air pollution, energy and climate change, toxic organic compounds, water chemistry and water pollution, metals, soils, sediments and waste disposal. Environmental problem solving using steady state and non-steady state box models, thermodynamics and energy transfer, and chemical reactions and equilibria is emphasized. Required half-day field trip.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 73044  ENVIRONMENTAL ISOTOPES  3 Credit Hours
(Cross-listed with GEOL 43044 and GEOL 53044) Deals with the fundamentals of isotope geochemistry and the application of primarily light stable isotopes (H, O, C, N) to earth system processes (involving the hydrosphere, biosphere, and upper geosphere).
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 73044  ENVIRONMENTAL ISOTOPES  3 Credit Hours
(Cross-listed with GEOL 43044 and GEOL 53044) Deals with the fundamentals of isotope geochemistry and the application of primarily light stable isotopes (H, O, C, N) to earth system processes (involving the hydrosphere, biosphere, and upper geosphere).
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 72084  FOUNDATION ENGINEERING  3 Credit Hours
Prerequisite: GEOL 42078 or 52078 or 42082 or 52082 or 72082; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GEOL 74028  PALEOECOLOGY  3 Credit Hours
(Cross-listed with GEOL 64028) Relationships between ancient organisms and their environments, as interpreted from fossils, enclosing rock strata and recent analogs. Field and laboratory studies. Saturday field trips.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 74030  SYSTEMATIC INVERTEBRATE PALEONTOLOGY I  3 Credit Hours
(Cross-listed with GEOL 64030) Detailed investigation and examination of important literature concerning taxonomic characters of invertebrate phyla: Protista, Porifera, Cnidaria and Bryozoa. Numerous oral reports, specimen examination.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 74032  SYSTEMATIC INVERTEBRATE PALEONTOLOGY II  3 Credit Hours
(Cross-listed with GEOL 64032) Detailed investigation and examination of important literature concerning taxonomic characters of invertebrate phyla: Brachiopoda, Mollusca, Arthropoda and Echinodermata. Numerous oral reports, specimen examination.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 74036  CENOZOIC CLIMATE CHANGE  3 Credit Hours
(Cross-listed with GEOL 64036) An overview of the concepts and principles involved in interpreting global and hemispheric Cenozoic climate change (past 65 million years). Emphasis on particular temporal and spatial scales and cycles. Extensive reading in scientific journals.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 74038  PALEOLIMNOLOGY  3 Credit Hours
An overview of significant topics and applications in paleolimnology of Holocene (last 10,000 years) and Pleistocene (last 2 million years) records, including current issues in environmental and climatic reconstruction. Extensive reading expected.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 74052  GLACIERS AND GLACIATION  3 Credit Hours
(Cross-listed with GEOG 41052, GEOG 51052 and GEOG 71052) Examination of how glacial ice masses change the shape of the earth’s surface, how they are integral to climate and sea level change and how they pose high risk hazards.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 74065  SEDIMENTOLOGY  3 Credit Hours
(Cross-listed with GEOL 64065) Fluid dynamics, grain transport, sedimentary structures, granulometry, bedform and facies sequences and facies architecture. Interpretation of continental and marine clastic depositional environments and processes.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GEOL 80091  SEMINAR IN APPLIED GEOLOGY  1-2 Credit Hours
(Repeatable for credit) Specialized topics in applied geology. Precise title to be inserted in schedule of classes.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-2 other
Grade Mode: Standard Letter-S/U

GEOL 80095  ADVANCED TOPICS IN GEOLOGY  1-3 Credit Hours
(Repeatable for credit) Advanced topics presented by visiting professors or one-time offerings presented by regular faculty.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

GEOL 80098  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research for doctoral students. Credits earned may be applied toward degree if department approves.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOL 80199  DISSERTATION I  15 Credit Hours
(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.
Prerequisite: Admission to candidacy for doctoral degree and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

GEOL 80299  DISSERTATION II  15 Credit Hours
(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation, continuing until all degree requirements are met.
Prerequisite: GEOL 80199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Department of History

History (HIST)

HIST 11050 WORLD HISTORY: ANCIENT AND MEDIEVAL (DIVG) (KHUM) 3 Credit Hours
World history from early human societies through the mid-17th century.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, TAG History, Transfer Module Humanities

HIST 11051 WORLD HISTORY: MODERN (DIVG) (KHUM) 3 Credit Hours
World history from mid-17th century to the present.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, TAG History, Transfer Module Humanities

HIST 12070 EARLY AMERICA: FROM PRE-COLONIZATION TO CIVIL WAR AND RECONSTRUCTION (DIVD) (KHUM) 3 Credit Hours
A survey of United States history through 1877.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Humanities, TAG History, Transfer Module Humanities

HIST 12071 MODERN AMERICA: FROM INDUSTRIALIZATION TO GLOBALIZATION (DIVD) (KHUM) 3 Credit Hours
A survey of United States history since 1877.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Humanities, TAG History, Transfer Module Humanities

HIST 31024 WORLD WAR II 3 Credit Hours
Survey of one of the greatest political and military events in history, focusing especially on causes, major personalities and chief political, ideological, moral, scientific and diplomatic aspects.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31027 HISTORY OF ENGLAND TO 1688 3 Credit Hours
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31028 ENGLAND SINCE 1688 3 Credit Hours
Survey of national development from the Glorious Revolution through the Second World war, with special attention to leaders, prominent individuals and problems of change.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31030 NATO: THE ENDURING ALLIANCE 3 Credit Hours
Examination of the historical and contemporary roles of the North Atlantic Treaty Organization.
Prerequisite: Junior standing or special approval of instructor.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31031 THE PROTESTANT AND CATHOLIC REFORMATIONS 3 Credit Hours
Comprehensive course dealing with the religious, political, economic and social change accompanying the religious upheavals of the 16th century.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31032 SEVENTEENTH-CENTURY EUROPE 3 Credit Hours
This course will analyze those political, economic, social, religious and intellectual factors leading to economic crisis and civil wars in Europe.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31033 WITCHES AND EUROPEAN HISTORY, 1500-1800 3 Credit Hours
This course explores fifteenth- through seventeenth-century European witch-hunts and their decline in the eighteenth century through lecture and class discussions of both primary and secondary sources. The course has four parts. The first investigates the development of notions of diabolical witchcraft from the ancient world, while Part two examines the intellectual, gender, religious, social and legal backgrounds that helped cause witch-hunts. The final sections explore the dynamics of witchcraft trials. The final section explores the decline of witchcraft.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31035 THE GLOBAL COLD WAR 3 Credit Hours
Explores the Cold War through a global lens. Includes political, diplomatic, cultural, and social perspectives.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 31040  AMERICAN HISTORY THROUGH POPULAR MUSIC  3 Credit Hours
Allows students to develop an understanding of the interconnection between the rise of popular music in the period after 1865 to the social, political, and technological changes that this period witnessed and how this helps to understand the meaning and significance of cultural identity in modern American history.  
Prerequisite: sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31050  HISTORY AND SOCIETY OF MODERN GREECE  3 Credit Hours
Study of modern Greece concentrating on political, economic, cultural and societal developments since 1821.  
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31052  HISTORY OF MODERN FRANCE  3 Credit Hours
Survey of French history from 1815 to the present. Topics include industrialization, republicanism and revolution, the experience of war and defeat, empire and decolonization.  
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31053  MODERN EUROPE, 1815 TO PRESENT  3 Credit Hours
Covers the political, social, and cultural history of Europe from the peace at the end of the Napoleonic wars to the present.  
Prerequisite: sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31056  EUROPE IN THE RENAISSANCE  3 Credit Hours
Analysis of the various factors leading Europe from a rural, feudal, ecclesiastical society to one characterized by urbanism, trade, secularism and the state.  
Prerequisite: Junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31061  HISTORY OF OHIO  3 Credit Hours
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31071  US FOREIGN RELATIONS THROUGH 1898  3 Credit Hours
Explores the foundational period of U.S. foreign relations. Includes consideration of the roots and principles of U.S. foreign policy, continental consolidation, and U.S. incursions in the Western Hemisphere.  
Prerequisite: Junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31072  US FOREIGN RELATIONS, 1898-1945  3 Credit Hours
Explores the evolving U.S. world role from the Spanish-American War through World War II. Includes consideration of the expanding U.S. interest in Latin America, Asia, and elsewhere as well as the liberal international vision that impelled such interest.  
Prerequisite: Junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31073  US FOREIGN RELATIONS SINCE 1945  3 Credit Hours
Explores the rise and fall of U.S. global hegemony since World War II. Includes consideration of the Cold War, decolonization, détente, and the post-Cold War era.  
Prerequisite: Junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31074  HISTORY OF ESPIONAGE: FROM JOSHUA TO ERIC SNOWDEN  3 Credit Hours
This course traces the history of intelligence gathering from the ancient world through the 21st century. The study of spy-networks provides students with an understanding of emerging intelligence systems, including both examples of espionage and counter-intelligence. The course assesses the cultural and political impact of intelligence gathering on society at large and discusses ethical issues such as the balance between privacy and security. While most of the focus is on the United States, the lectures and discussions will also cover Britain, Germany, Japan, China, Israel, and Russia, with considerable attention to World Wars I and II, and the Cold War. Prerequisites: None  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31075  HISTORY OF WOMEN IN THE UNITED STATES  3 Credit Hours
(Cross-listed with WMST 30100) An exploration of the political, economic, social, intellectual, and cultural forces that have shaped women's lives, women’s thought, perceptions of womanhood, and feminism for 1607 to the present in what is now the United States.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

HIST 31077  HISTORY OF SEXUALITY IN THE UNITED STATES  3 Credit Hours
This course explores how people living in the United States learned about sex. Together, Americans in all time periods have developed sexual cultures and norms, accommodated themselves to, ignored, creatively interpreted or defied, or changed these cultures and norms over time. We will focus on how sexual cultures and norms of were taught and enforced, and how different types of institutions and professionals (religious leaders, mental health professionals, law enforcement officers, journalists and popular cultural figures), played roles in this process. Prerequisites: None  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
HIST 31080  AFRICAN AMERICAN HISTORY: SLAVERY TO FREEDOM
3 Credit Hours
(Cross-listed with PAS 33101) Survey of African American history from the
colonial period to 1877. Course provides a general knowledge of the
social, political and cultural history of African Americans from colonial
times to the end of the Reconstruction.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31087  SECTIONAL CONFLICT AND CIVIL WAR
3 Credit Hours
Differences within the United States, including the controversy over
slavery; the Civil War in all its aspects.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31100  RECONSTRUCTION AND THE LATER SOUTH
3 Credit Hours
Controversy during and after the Civil War as to racial and sectional
relationships; the post-Reconstruction compromises and their undoing.
Prerequisite: Junior standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31101  WAR AND SOCIETY IN THE UNITED STATES FROM 1607
THROUGH 1865
3 Credit Hours
An examination of the impact of conflict and the military upon the
society, culture, economy and diplomacy of the United States. Topics
include colonial Indian wars, the Revolutionary War, the War of 1812, the
Mexican-American War and the Civil War.
Prerequisite: HIST 12070.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31102  WAR AND SOCIETY IN THE UNITED STATES FROM 1865
TO THE PRESENT
3 Credit Hours
An examination of the impact of conflict and the military on the society,
culture, economy and diplomacy of the United States. Topics include the
frontier Army, the Spanish-American War and empire in the Pacific, the
two world wars, the Cold War and the War on Terror.
Prerequisite: HIST 12071.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31104  MIGRATIONS TO AMERICA, 1607 TO PRESENT
3 Credit Hours
Examines the coming together of people from five continents to the
United States and provides an overview of shifting patterns of migration
both coerced and free to the United States. Starting in the colonial
era, when slaves and servants typified the migration to America, this
course then follows the migrations of pre-industrial, industrial, and
post-industrial immigrants, their reception by American institutions and
natives, and their efforts to construct communities in a new country.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31106  PROGRESSIVE AMERICA: THE UNITED STATES,
1896-1919
3 Credit Hours
Major political, economic, social, cultural and diplomatic events from the
crisis of the 1890s through the first World War.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31107  NEW ERA THROUGH WORLD WAR: THE UNITED STATES,
1920-1945
3 Credit Hours
Major political, economic, social, cultural and diplomatic events from the
new era of the 1920s through the second World War.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31108  RECENT AMERICA: THE UNITED STATES, 1945-PRESENT
3 Credit Hours
Examines everyday life and culture, assesses the degree to which
presidents and their administrations are the reflections of their
constituencies, and evaluates the significant events and themes of U.S.
history since 1945.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31112  CHINESE CIVILIZATION
3 Credit Hours
General survey of evolution of Chinese civilization from the Bronze Age to
the rise of communism.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31113  HISTORY OF JAPAN
3 Credit Hours
General survey of the development of Japan from a loose confederation
of clans to a modern industrial state.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31114  TRADITION AND REVOLUTION IN SOUTHEAST ASIA
3 Credit Hours
Focusing on Southeast Asia, this course is organized chronologically
around three broad periods: traditional states and societies (to 1800);
colonial transformations and indigenous responses (1800-1945); and
the emergence of modern nations (since 1945). Within these broad time
frames, the course will explore several themes, including the origins
of indigenous states; the impact of colonial domination; responses
to colonial rule; and the nature of post-colonial societies and political
systems. Given the size and diversity of the region, the course will
concentrate on four nation-states: Burma, Thailand, the Philippines, and
Indonesia.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 31115  INDIA SINCE 1526  3 Credit Hours
Presents a broad introduction to the modern history and culture of India, or South Asia. Students will gain an understanding of the geography, traditions, religions, and culture that make India a distinct civilization. The course traces the history of Modern India from the Mughal Empire through the British Raj, Ghandi and nationalism, partition, and the Republic of India. Finally, the course examines the recent rise of Hindu fundamentalism and its implications for the world’s largest democracy.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31118  VIETNAM WAR  3 Credit Hours
Study of the causes, evolution and effects of warfare in Vietnam from 1946 to 1975 with special attention to colonialism, nationalism, communism and American intervention.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31119  THE SIXTIES: A THIRD WORLD VIEW  3 Credit Hours
Examines the political, social and cultural upheaval of the 1960s in Latin America, Africa and Asia.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31120  COMPARATIVE THIRD WORLD REVOLUTIONS  3 Credit Hours
Examination of 20th-century revolutions in Latin America, Africa and Asia focusing on ideologies and political leadership.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31123  HISTORY OF CONTEMPORARY AFRICA  3 Credit Hours
Seeks to challenge students to deconstruct the specific causes, meanings, and consequences of political violence in 20th and 21st century Africa and the impact such violence has had on African democratic traditions. We will explore recent and current categories of political violence including state violence against ethnic and regional minorities. (Darfur, Southern Sudan, Uganda, Ethiopia, Rwanda); movements by militias and private armies to carve out control of resource-rich areas (the DRC, Sierra Leone, Liberia, Nigeria), and cross-border conflicts.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31124  HIGHLIFE HISTORIES: MODERN AFRICAN URBAN EXPERIENCE  3 Credit Hours
The term “high-life” is most often associated with a musical style originating in Ghana and Sierra Leone in the 1920s and popular to the present day. The music mixed the sounds of American, European, and Caribbean influences within African musical traditions. Just like the music, African urban life has been a mixture of Western notions of town planning, architecture, and politics with African cultural and interpersonal traditions. The history of the African city offers a useful lens into the complicated and creative mixture of African and global sources. This course will focus on this mixing over the 20th century, concentrating on cities such as Harare, Zimbabwe; Accra, Ghana; Lagos, Nigeria; and Nairobi, Kenya.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31126  HISTORY OF THE MIDDLE EAST  3 Credit Hours
A survey of Islamic civilization in Middle Eastern context from the earliest days to the present.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31127  ANCIENT AND EARLY MEDIEVAL JEWISH HISTORY  3 Credit Hours
Deals with the ancient and early medieval Jewish history from approximately 2000 B.C. to approximately 1200 A.D.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31128  LATE MEDIEVAL AND MODERN JEWISH HISTORY  3 Credit Hours
Survey of Jewish history in Europe and the middle east from the age of the crusades to the 20th century.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31130  HISTORY OF AFRICAN CIVILIZATION  3 Credit Hours
Survey of cultural, political, social and economic history of Africa from antiquity to European conquest. Emphasis on precolonial.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31140  MODERN LATIN AMERICA (DIVG)  3 Credit Hours
Focuses on 20th-century Latin America and the efforts by social classes and their political leaderships to overcome obstacles of underdevelopment. Emphasis on Argentina, Brazil, Chile, Mexico, Cuba and Central America.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global
HIST 31141  EARLY LATIN AMERICA  3 Credit Hours
Examines Latin America from precolonial times to the late 19th century. Lectures emphasize political and economic questions while readings focus on social history.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31500  FOUNDATIONS IN THE HISTORY AND PHILOSOPHY OF SCIENCE  3 Credit Hours
(Cross-listed with PHIL 31080) An introduction to the study of science as a social, cultural, and historical phenomenon with an emphasis on the history of science primarily in Western civilization since 1500 and the major philosophical approaches to science developed in the twentieth century.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31543  THE SCIENTIFIC REVOLUTION  3 Credit Hours
A survey of the major social, cultural, and historical developments in the sciences and medicine in Europe from 1500 to 1750.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 31550  MEDICINE IN THE MODERN WORLD SINCE 1500  3 Credit Hours
An introduction to the main social, cultural, and intellectual developments in the history of medicine from the Renaissance to the twentieth century using an approach to the history of medicine which emphasizes the interactions between ideas, institutions, and individuals.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 32050  HISTORICAL RESEARCH METHODS  3 Credit Hours
Introduction to the study and practice of historical writing including historical methods, historiography, primary and secondary source research, critical analysis or documentary sources, historical reasoning and the preparation of written reports. Emphasis on developing effective communication skills and research procedures, record-keeping, citation, and bibliography.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 38095  SPECIAL TOPICS IN UNITED STATES HISTORY  3 Credit Hours
(Repeatable for credit) Special course in the history of the United States, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 college credit
Grade Mode: Standard Letter

HIST 38195  SPECIAL TOPICS IN EUROPE SINCE 1500  3 Credit Hours
(Repeatable for credit) Special course in the history of Europe since 1500, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes. Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 38295  SPECIAL TOPICS IN GLOBAL HISTORY  3 Credit Hours
(Repeatable for credit) Special course in the history of one or more of the following: the ancient and medieval worlds, Africa, Asia, Latin America, or the Middle East, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 38395  SPECIAL TOPICS IN PRE-1800 HISTORY  3 Credit Hours
(Repeatable for credit) Special topics in pre-1800 history.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 college credit
Grade Mode: Standard Letter

HIST 40092  INTERNSHIP IN HISTORY (ELR)  3 Credit Hours
(Repeatable for credit) Student internship at an institution related to the history major (e.g., historical society, museum, archives, historic preservation organization).
Prerequisite: Junior standing.
Schedule Type: Practicum or Internship
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

HIST 40093  WORKSHOP IN HISTORY  1-6 Credit Hours
(Repeatable for credit) Cross-listed with HIST 50093 Special workshop in history. Topic will vary according to professor.
Prerequisite: None.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

HIST 40197  AMERICAN CULTURAL HERITAGE: THE ARTS AND SOCIETY  3 Credit Hours
Examination of music, painting and literature in their cultural contexts during four periods of American history. American studies methodology and interdisciplinary thought.
Prerequisite: Junior standing and one prior course in history.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 41000  INTRODUCTION TO PUBLIC HISTORY  3 Credit Hours
(Cross-listed with HIST 51000 and HIST 71000) A survey of public history including: archives, editing, museums and historical agency administration; historic preservation and related skill areas (e.g., artifact analysis, oral history).
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 college credit
Grade Mode: Standard Letter
HIST 41006  ROMAN HISTORY  3 Credit Hours
(Cross-listed with CLAS 41006) (Slashed with CLAS 51006, HIST 51006 and HIST 71006) A survey of Roman history from its beginnings to the fall of the Roman empire.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41010  THE EARLY MIDDLE AGES  3 Credit Hours
(Cross-listed with HIST 51010 and HIST 71010) Survey of major political, social and cultural developments of Europe from the fourth through 10th centuries.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41011  THE HIGH MIDDLE AGES  3 Credit Hours
(Cross-listed with HIST 51011 and HIST 71011) Survey of political, social and cultural developments of Europe from 11th through 13th centuries.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41020  NINETEENTH-CENTURY EUROPE  3 Credit Hours
Focus on industrialization and social transformation, political upheavals, intellectual thought, nationalism and foreign policy in Great Britain, France, Prussia and Austria.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41024  MODERN EUROPEAN HISTORY, 1914-1945  3 Credit Hours
(Cross-listed with HIST 51024 and HIST 71024) Special attention paid to the two world wars, Bolshevik Revolution, rise of fascism and fate of European Jewry.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41025  MODERN EUROPEAN HISTORY: 1945-PRESENT  3 Credit Hours
(Cross-listed with HIST 51025 and HIST 71025) Survey of European political, economic, social and cultural developments since 1945.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41032  CONSUMPTION AND MASS CULTURE IN MODERN EUROPE  3 Credit Hours
Examines shifts in consumption and the growth of mass consumer society in Europe from 1815 to the present, including the evolution of consumer societies, or those societies in which people construct their identities through commodities; the changes that ensued with the growth of mass consumption; and differing consumption regimes in Eastern and Western Europe in the twentieth century.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41033  WOMEN AND GENDER IN MODERN EUROPE  3 Credit Hours
The modern period of European history saw revolutionary change politically, economically and socially. In this course, the ways that a gendered analysis can change and deepen our understanding of these historical changes and events is examined, including the “lived experience” of women and men focusing on family, sexual lives, work and politics.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41034  IMPERIAL RUSSIA, 1689-1917  3 Credit Hours
Focuses on the impact of industrialization, the dilemma of the German left, the rise of Nazism and the emergence of two German states after 1945.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41041  HISTORY OF GERMANY, 1871-PRESENT  3 Credit Hours
Focuses on the impact of industrialization, the dilemma of the German left, the rise of Nazism and the emergence of two German states after 1945.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41044  IMPERIAL RUSSIA, 1689-1917  3 Credit Hours
(Cross-listed with HIST 51044 and HIST 71044) Study of the entire imperial period, with focus on modernization, state institutions, nationalities, social groups and estates, economy, politics and ideologies, and elite and popular culture.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41045  MODERN RUSSIA, 1917-PRESENT  3 Credit Hours
(Cross-listed with HIST 51045 and HIST 71045) Focus on 1917 revolutions; Civil War; nationalities question; NEP, collectivization; Great Terror; World War II; Cold War; Soviet Foreign policy and culture; Perestroika and post-Soviet economic, political and ideological changes.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41051  POLITICS, CULTURE AND SOCIETY OF 20TH-CENTURY EUROPE  3 Credit Hours
Political, social and cultural change in Europe during the twentieth century. Topics include violence, war, revolution, economic crises, and social and political changes.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 41056  HISTORY OF COLONIAL AMERICA:1492-1714 (DIVD)  3 Credit Hours
(Cross-listed with HIST 51056 and HIST 71056) Major patterns of thought and behavior among Spanish, French and English expansionists; English colonization to 1714.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

HIST 41057  EIGHTEENTH-CENTURY AMERICA:1714-1789 (DIVD)  3 Credit Hours
(Cross-listed with HIST 51057 and HIST 71057) Cultural development of English colonies; Great War for Empire; American Revolution and Constitution.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

HIST 41058  JEFFERSON-JACKSON ERA, 1789-1848  3 Credit Hours
(Cross-listed with HIST 51058 and HIST 71058) Study of the founding and development of the American nation, especially the periods of Jefferson and Jackson.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41060  COMPARATIVE FASCISM  3 Credit Hours
(Cross-listed with HIST 51060 and HIST 71060) Examination of the theories and practices of fascist movements and regimes in twentieth-century Europe utilizing a variety of perspectives. Organized primarily thematically instead of geographically with readings and discussions based on historiographical and critical analyses.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41062  THE UNITED STATES:THE WESTWARD MOVEMENT  3 Credit Hours
(Cross-listed with HIST 51062 and HIST 71062) The process of settlement from its beginnings; consequences for American history.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41071  AMERICAN SOCIAL AND INTELLECTUAL HISTORY, 1876-PRESENT (DIVD)  3 Credit Hours
( Slashed with HIST 51071) Development of social Darwinism, racism, pragmatism, popular arts.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

HIST 41077  THE GREAT DEPRESSION IN AMERICA  3 Credit Hours
Examines the impact and meaning of the Depression era, suggesting that the crisis helped to usher in a new way of imagining American society. Beginning with an overview of modernism, modernity and the modern age, the course explores how the New Deal fits into these theories, how specific programs operated under their ideals, and finally, how American society adapted and accepted this 'modern' vision.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41085  THE SIXTIES IN AMERICA  3 Credit Hours
The era of the 1960s outlined the debates and patterns of American history in the latter part of the twentieth century and continues to resonate in our contemporary world. This course examines the seminal events, persons and developments - including JFK's New Frontier policy; Martin Luther King Jr. and Malcolm X, the March on Washington; Johnson's Great Society; the Vietnam War; the New Left; the counterculture; country music; the rise of modern conservatism; Nixon; Watergate; and the Oil Crisis - to get a better understanding of the meaning and significance of this crucial era to the history of the United States and the world.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41112  HISTORY OF MODERN CHINA  3 Credit Hours
(Cross-listed with HIST 51112 and HIST 71112) Disintegration of the Chinese empire amid Western challenge and internal disorder and the subsequent rise of communism.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41129  THE HOLOCAUST:THE DESTRUCTION OF EUROPEAN JEWRY, 1938-1945  3 Credit Hours
Analysis of those political, economic, social and intellectual factors leading to systematic destruction of European Jewry during World War II.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41132  HISTORY OF AFRICA, 1880-PRESENT  3 Credit Hours
(Cross-listed with HIST 51132 and HIST 71132) Disintegration of the African empire amid Western challenge, the impact of Western economic and cultural policies, the rise of nationalism, and the emergence of the African states.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 41789  THE FRENCH REVOLUTION AND NAPOLEON  3 Credit Hours
(Cross-listed with HIST 51789 and HIST 71789) Analysis of the causes of Revolution in France, political, ideological and social conflict in the construction of French democracy expansion of the revolution outside of France. 
Prerequisite: Senior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 42142 AFRO-LATIN AMERICA 3 Credit Hours
(Cross-listed with HIST 52142, HIST 72142 and PAS 43300) Focuses on
the social, cultural and political life of the African population of Latin
America, from 19th century slaves to shantytown dwellers of megacities
such as Rio de Janeiro. Topics include black resistance to racism,
race mixture in multicultural societies, and how employment, political
participation and family organization empowered the lives of Afro-Latin
women.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 42297 COLLOQUIUM: CHINA AND JAPAN (WIC) 3 Credit Hours
Study of important issues in the history of China and Japan through
reading and discussing major works pertinent to the issues selected.
Prerequisite: Junior standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

HIST 42497 COLLOQUIUM: WOMEN IN MODERN EUROPE (DIVG) (WIC) 3 Credit Hours
(Cross-listed with HIST 52497 and HIST 72497) The colloquium
addresses the experiences of European women from the Enlightenment
to the present. Using primary sources and recent scholarship, students
examine the relationship between women and state formation, industry,
sexuality, empire, socialism, war, welfare, migration and feminism.
Prerequisite: Junior standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Diversity Global, Writing Intensive Course

HIST 42977 COLLOQUIUM: MEDIEVAL RUSSIA 3 Credit Hours
(Cross-listed with HIST 53097 and HIST 73097) Political, social, economic
and cultural developments from the 9th-17th centuries, particularly
the nature of political organization, the Mongol impact, the role of the church
and religious life in pre-Petrine Russia.
Prerequisite: Junior standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 43797 COLLOQUIUM ON VICTORIAN ENGLAND (WIC) 3 Credit Hours
Consideration of distinctive features of Victorian England including class
structure, ideas, manners, politics, foreign affairs, empire.
Prerequisite: None.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

HIST 48697 COLLOQUIUM: U.S. MIDDLE PERIOD, 1820-1900 (WIC) 3 Credit Hours
(Cross-listed with HIST 58697 and HIST 78697) Reading, discussion and
written reviewing of important works on the period.
Prerequisite: Junior standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

HIST 48897 COLLOQUIUM IN AFRICAN AMERICAN HISTORY SINCE 1877 3 Credit Hours
(Cross-listed with HIST 58897 and HIST 78897) This colloquium specializes in African American history after 1877, with emphasis on
historiographical literature of the period.
Prerequisite: Junior standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 49091 SENIOR SEMINAR IN HISTORY (ELR) (WIC) 3 Credit Hours
(Repeatable for credit) History majors complete a significant work of
original research based on primary sources. Topics vary by instructor.
Enrollment limited to senior history majors.
Prerequisite: History major and senior standing and HIST 32050 with C or
higher.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

HIST 49095 SPECIAL TOPICS IN UNITED STATES HISTORY 3 Credit Hours
(Repeatable for a maximum of 18 credit hours) (Cross-listed with
HIST 59095 and HIST 79095) Special course in the history of the United
States, the subject and topic of which varies by term and instructor.
Precise titles and descriptions to be inserted in the Schedule of classes.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 49195 SPECIAL TOPICS: EUROPE SINCE 1500 3 Credit Hours
(Repeatable for maximum 18 credit hours) (Cross-listed with HIST 59195
and HIST 79195) Special course in the history of Europe since 1500, the
subject and topic of which varies by term and instructor. Precise titles
and descriptions to be inserted in the Schedule of Classes.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 49196 INDIVIDUAL INVESTIGATION 2,3 Credit Hours
(Repeatable for credit)
Prerequisite: special approval.
Schedule Type: Individual Investigation
Contact Hours: 3 other
Grade Mode: Standard Letter-IP

HIST 49199 SENIOR HONORS PROJECT (ELR) 3-6 Credit Hours
(Repeatable for credit) Thesis or other independent study or creative
project. Required of students seeking to graduate with honors in history.
Prerequisite: Permission (see HONR 40099).
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 3-6 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement
HIST 49295  SPECIAL TOPICS IN GLOBAL HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 59295 and HIST 79295) Special course in the history of the ancient and medieval worlds, Africa, Asia, Latin America, and/or the Middle East, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 50093  WORKSHOP IN HISTORY  1-6 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 40093) Special workshop in history. Topic will vary according to professor.
Prerequisite: None.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

HIST 51000  PUBLIC HISTORY  3 Credit Hours
(Cross-listed with HIST 41000 and HIST 71000) A survey of public history including: archives; editing, museums and historical agency administration; historic preservation; and related skill areas (e.g. artifact analysis, oral history).
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51005  TEACHING WORLD HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 71005) To prepare graduate students to teach world history at the university level. Special focus on integrating non-Western sources and points of view into the world history curriculum, preparation of world history syllabus and justification of selected readings and topics, mastery of on-line and in-class technologies to deliver world history materials.
Prerequisite: graduate standing in history (HIST).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51006  ROMAN HISTORY  3 Credit Hours
(Cross-listed with CLAS 51006, HIST 41006 and HIST 71006) A survey of Roman history from its beginnings to the Fall of the Roman Empire.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51010  THE EARLY MIDDLE AGES  3 Credit Hours
(Cross-listed with HIST 41010 and HIST 71010) A survey of the major political, social and cultural developments of Europe from the fourth through the tenth century.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51011  THE HIGH MIDDLE AGES  3 Credit Hours
(Cross-listed with HIST 41011 and HIST 71011) A survey of political, social and cultural developments of Europe from the eleventh through the thirteenth century.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51024  MODERN EUROPEAN HISTORY, 1914-1945  3 Credit Hours
(Cross-listed with HIST 41024 and HIST 71024) Special attention paid to the two World Wars, Bolshevik Revolution, rise of Fascism and fate of European Jewry.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51025  MODERN EUROPEAN HISTORY:1945 TO PRESENT  3 Credit Hours
(Cross-listed with HIST 41025 and HIST 71025) Survey of European political, economic, social and cultural developments since 1945.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51044  RUSSIA FROM ITS ORIGINS TO 1801  3 Credit Hours
(Cross-listed with HIST 41044 and HIST 71044) Study of the entire imperial period, with focus on modernization, state institutions, nationalities, social groups and estates, economy, politics and ideologies, and elite and popular culture.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51045  MODERN RUSSIA, 1917-PRESENT  3 Credit Hours
(Cross-listed with HIST 41045 and HIST 71045) Focus on 1917 revolutions, civil war, nationalities question, NEP, collectivization, Great Terror, World War II, Cold War, Soviet foreign policy and culture, Perestroika, and post-Soviet economic, political, and ideological changes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51056  HISTORY OF COLONIAL AMERICA, 1492-1714  3 Credit Hours
(Cross-listed with HIST 41056 and HIST 71056) Major patterns of thought and behavior among Spanish, French and English expansionists; English colonization to 1714.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 51057 18TH-CENTURY AMERICA, 1714-1789 3 Credit Hours
(Cross-listed with HIST 41057 and HIST 71057) Cultural development of English Colonies; Great war for Empire; American Revolution and Constitution.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51058 THE JEFFERSON-JACKSON ERA, 1789-1848 3 Credit Hours
(Cross-listed with HIST 41058 and HIST 71058) A study of the founding and development of the American nation, especially the periods of Jefferson and Jackson.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51060 COMPARATIVE FASCISM 3 Credit Hours
(Cross-listed with HIST 41060 and HIST 71060) Examination of the theories and practices of fascist movements and regimes in twentieth-century Europe utilizing a variety of perspectives. Organized primarily thematically instead of geographically with readings and discussions based on historiographical and critical analyses.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51062 THE UNITED STATES:THE WESTWARD MOVEMENT 3 Credit Hours
(Cross-listed with HIST 41062 and HIST 71062) The process of settlement from its beginning; consequences for American history.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51071 AMERICAN SOCIAL AND INTELLECTUAL HISTORY, 1876 TO PRESENT 3 Credit Hours
(Slashed with HIST 41071) Continuation of HIST 41070, HIST 51070 and HIST 71070. Development of social Darwinism, racism, Pragmatism, popular arts.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51097 COLLOQUIUM:SAINTS, MONKS AND THE MEDIEVAL COMMUNITY 3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 41097 and HIST 71097) Investigates major religious institutions that shaped medieval European society and the impact on popular piety.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 51112 HISTORY OF MODERN CHINA 3 Credit Hours
(Cross-listed with HIST 41112 and HIST 71112) Disintegration of the Chinese empire amid Western challenge and internal disorder and the subsequent rise of Communism.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51132 HISTORY OF AFRICA, 1880-PRESENT 3 Credit Hours
(Cross-listed with HIST 41132 and HIST 71132)
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 51789 THE FRENCH REVOLUTION AND NAPOLEON 3 Credit Hours
(Cross-listed with HIST 41789 and HIST 71789) Analysis of the causes of revolution in France, political ideological and social conflict in the construction of French democracy expansion of the revolution outside of France.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 52142 AFRO-LATIN AMERICA 3 Credit Hours
(Cross-listed with HIST 42142, HIST 72142 and PAS 43300) Course focuses on the social, cultural and political life of the African population of Latin America, from 19th century slaves to shantytown dwellers of megacities such as Rio de Janiero. Topics include black resistance to racism, race mixture in multicultural societies, and how employment, political participation and family organization empowered the lives of Afro-Latin women.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 52497 COLLOQUIUM:WOMEN IN MODERN EUROPE 3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 42497 and HIST 72497) The colloquium addresses the experiences of European women from the Enlightenment to the present. Using primary sources and recent scholarship, students examine the relationship between women and state formation, industry, sexuality, empire, socialism, war, welfare, migration and feminism.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 53097 COLLOQUIUM:MEDIEVAL RUSSIA 3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 43097 and HIST 73097) Political, social, economic and cultural developments from the 9th-17th centuries, particularly the nature of political organization, the Mongol impact, the role of the church and religious life in pre-Petrine Russia.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter
HIST 58697  COLLOQUIUM: U.S. MIDDLE PERIOD 1820-1900  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 48697 and HIST 58697)
Reading, discussion and written reviewing of important works on the period.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 58897  COLLOQUIUM IN AFRICAN-AMERICAN HISTORY SINCE 1877  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 48897 and HIST 78897)
This colloquium specializes in African American history from 1877, with emphasis on historiographical literature of the period.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 59095  SPECIAL TOPICS IN UNITED STATES HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 49095 and HIST 59095)
Special course in the history of the United States, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes. Repeatable.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 59195  SPECIAL TOPICS: EUROPE SINCE 1500  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 49195 and HIST 79195)
Special course in the history of Europe since 1500, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 59295  SPECIAL TOPICS IN GLOBAL HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 49295 and HIST 79295)
Special course in the history of the ancient and medieval worlds, Africa, Asia, Latin America, and/or the Middle East, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 60092  PUBLIC HISTORY INTERNSHIP  3-6 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 70092) Students serve an internship at an institution related to their emphasis in public history (e.g., historical society, museum, archives, historical preservation organization).
Prerequisite: Graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 3-6 other
Grade Mode: Satisfactory/Unsatisfactory

HIST 61002  HISTORIOGRAPHY  3 Credit Hours
Development of historical thinking. Students will read excerpts of famous historians and prepare papers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 61070  WRITING SEMINAR IN HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 81070) Students will spend the semester conceptualizing, researching and writing an article-length piece of original historical scholarship. Basic topics to be addressed include prospectus drafting, source identification, historiography, research methods, scholarly writing and revision, oral presentation and professional critiquing. All students will be expected to supplement the guidance they receive from the seminar instructor with regular consultations with their departmental advisors.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 62070  AMERICAN HISTORY FROM PRECONTACT NATIVE AMERICA THROUGH THE CIVIL WAR  3 Credit Hours
(Slashed with HIST 82070) This reading colloquium will survey the major aspects of American history from the arrival of Europeans in North America through the colonial period of American history and up to the Civil War and Reconstruction. Students will be introduced to both historical content as well as the major historiographical currents in this segment of US history. The aim of the course is to prepare students for comprehensive exams as well as to teach the first half of the US survey course.
Prerequisite: Graduate standing.
Schedule Type: Colloquium, Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 62071  AMERICAN HISTORY FROM THE CIVIL WAR TO THE PRESENT  3 Credit Hours
(Slashed with HIST 82071) This reading colloquium will survey major aspects of American history since the Civil War within the historiographical traditions through which they have been understood. The aim of the course is to prepare students for comprehensive exams as well as to teach the second half of the US survey course.
Prerequisite: Graduate standing.
Schedule Type: Colloquium, Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 62097  PUBLIC HISTORY COLLOQUIUM  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 72097) Assigned readings, discussions and papers focus on particular emphases and skill areas in public history.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>HIST 62345</td>
<td>IMAGES AND IDENTITIES IN US FOREIGN RELATIONS</td>
<td>3 Credit Hours</td>
<td>This graduate-level reading colloquium will explore the construction of cultural images and national identities in US foreign relations. Course readings and discussions will deal not only with the ways that Americans have &quot;constructed&quot; other nations but also with how other nations have &quot;constructed&quot; the United States. Themes to be explored include the role of intangibles such as culture in the making of policy; the accuracy or inaccuracy of cultural constructs; and the permanency or malleability of cultural ideas. Prerequisites: Graduate standing. Schedule Type: Colloquium, Seminar Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>HIST 69199</td>
<td>THESIS I</td>
<td>2-6 Credit Hours</td>
<td>Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired. Prerequisite: Graduate standing. Schedule Type: Masters Thesis Contact Hours: 2-6 other Grade Mode: Satisfactory/Unsatisfactory-IP</td>
</tr>
<tr>
<td>HIST 69299</td>
<td>THESIS II</td>
<td>2 Credit Hours</td>
<td>Thesis students must continue registration each semester until all degree requirements are met. Prerequisite: HIST 69199 and graduate standing. Schedule Type: Masters Thesis Contact Hours: 2 other Grade Mode: Satisfactory/Unsatisfactory-IP</td>
</tr>
<tr>
<td>HIST 69896</td>
<td>INDIVIDUAL INVESTIGATION</td>
<td>2,3 Credit Hours</td>
<td>(Repeatable for credit) Prerequisite: Graduate standing. Schedule Type: Individual Investigation Contact Hours: 2-3 other Grade Mode: Standard Letter-IP</td>
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<tr>
<td>HIST 69898</td>
<td>RESEARCH</td>
<td>1-15 Credit Hours</td>
<td>(Repeatable for credit) Prerequisite: Graduate standing. Schedule Type: Research Contact Hours: 1-15 other Grade Mode: Satisfactory/Unsatisfactory-IP</td>
</tr>
<tr>
<td>HIST 70092</td>
<td>PUBLIC HISTORY INTERNSHIP</td>
<td>3-6 Credit Hours</td>
<td>(Repeatable for credit) (Cross-listed with HIST 60092) Students serve an internship at an institution related to their emphasis in public history (e.g., historical society, museum, archives, historical preservation organization). Prerequisite: Doctoral standing. Schedule Type: Practicum or Internship Contact Hours: 3-6 other Grade Mode: Satisfactory/Unsatisfactory</td>
</tr>
<tr>
<td>HIST 71005</td>
<td>TEACHING WORLD HISTORY</td>
<td>3 Credit Hours</td>
<td>(Repeatable for a maximum of 9 credit hours) (Cross-listed with HIST 51005) To prepare graduate students to teach world history at the university level. Special focus on integrating non-Western sources and points of view into the world history curriculum, preparation of world history syllabus and justification of selected readings and topics, mastery of on-line and in-class technologies to deliver world history materials. Prerequisite: Doctoral standing in history (HIST). Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>HIST 71006</td>
<td>ROMAN HISTORY</td>
<td>3 Credit Hours</td>
<td>(Slashed with CLAS 41006, CLAS 51006, HIST 41006 and HIST 51006) A survey of Roman history from its beginning to the fall of the Roman empire. Prerequisite: Doctoral standing. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>HIST 71010</td>
<td>THE EARLY MIDDLE AGES</td>
<td>3 Credit Hours</td>
<td>(Cross-listed with HIST 41010 and HIST 51010) Survey of major political, social and cultural developments of Europe from the fourth through 10th centuries. Prerequisite: Doctoral standing. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>HIST 71011</td>
<td>THE HIGH MIDDLE AGES</td>
<td>3 Credit Hours</td>
<td>(Cross-listed with HIST 41011 and HIST 51011) Survey of political, social and cultural developments of Europe from 11th through 13th centuries. Prerequisite: Doctoral standing. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>HIST 71024</td>
<td>MODERN EUROPEAN HISTORY, 1914-1945</td>
<td>3 Credit Hours</td>
<td>(Cross-listed with HIST 41024 and HIST 51024) Special attention paid to the two world wars, Bolshevik Revolution, rise of fascism and fate of European Jewry. Prerequisite: Doctoral standing. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>HIST 71025</td>
<td>MODERN EUROPEAN HISTORY: 1945 TO PRESENT</td>
<td>3 Credit Hours</td>
<td>(Cross-listed with HIST 41025 and HIST 51025) Survey of European political, economic social and cultural developments since 1945. Prerequisite: Doctoral standing. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
</tbody>
</table>
HIST 71044  RUSSIA FROM ITS ORIGINS TO 1801  3 Credit Hours
(Cross-listed with HIST 41044 and HIST 51044) Study of the entire
imperial period, with focus on modernization, state institutions,
nationalities, social groups and estates, economy, politics and ideologies,
and elite and popular culture.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71045  MODERN RUSSIA, 1917-PRESENT  3 Credit Hours
(Cross-listed with HIST 41045 and HIST 51045) Focus on 1917
revolutions; Civil War; nationalities question; NEP; collectivization;
great terror; World War II; Cold War; Soviet foreign policy and culture;
Perestroika and post-Soviet economic, political and ideological changes.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71056  HISTORY OF COLONIAL AMERICA, 1492-1714  3 Credit Hours
(Cross-listed with HIST 41056 and HIST 51056) Major patterns of thought
and behavior among Spanish, French and English expansionists; English
colonization to 1714.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71057  18TH-CENTURY AMERICA, 1714-1789  3 Credit Hours
(Cross-listed with HIST 41057 and HIST 51057) Cultural development
of English Colonies; Great War for Empire; American Revolution and
Constitution.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71058  THE JEFFERSON-JACKSON ERA, 1789-1848  3 Credit Hours
(Cross-listed with HIST 41058 and HIST 51058) Study of the founding
and development of the American nation, especially the perios of Jefferson
and Jackson.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71060  COMPARATIVE FACISM  3 Credit Hours
(Cross-listed with HIST 41060 and HIST 51060) Examination of the
theories and practices of fascist movements and regimes in twentieth-
century Europe utilizing a variety of perspectives. Organized primarily
thematically instead of geographically with readings and discussions
based on historiographical and critical analyses.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71062  THE UNITED STATES: THE WESTWARD MOVEMENT  3 Credit Hours
(Cross-listed with HIST 41062 and HIST 51062) The process of
settlement from its beginnings; consequences for American history.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71097  COLLOQUIUM: SAINTS, MONKS AND THE MEDIEVAL COMMUNITY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 41097 and HIST 51097)
Investigates major religious institutions that shaped medieval European
society and the impact on popular piety.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 71112  HISTORY OF MODERN CHINA  3 Credit Hours
(Cross-listed with HIST 41112 and HIST 51112) Disintegration of the
Chinese empire amid Western challenge and internal disorder and the
subsequent rise of communism.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71132  HISTORY OF AFRICA, 1880-PRESENT  3 Credit Hours
(Cross-listed with HIST 41132 and HIST 51132)
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 71178  THE FRENCH REVOLUTION AND NAPOLEON  3 Credit Hours
(Cross-listed with HIST 41789 and HIST 51789) Analysis of the causes
of revolution in France, political ideological and social conflict in the
construction of French democracy expansion of the revolution outside of
France.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 72097  PUBLIC HISTORY COLLOQUIUM  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 62097) Assigned readings,
discussions and papers focus on particular emphases and skill areas in
public history.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 72140  THE SIXTIES: A THIRD WORLD VIEW  3 Credit Hours
Examines the political, social and cultural upheaval of the 1960s in Latin
America, Africa and Asia.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 72142  AFRO-LATIN AMERICA  3 Credit Hours
(Cross-listed with HIST 42142, HIST 52142 and PAS 43300) Course focuses on the social, cultural and political life of the African population of Latin America, from 19th century slaves to shantytown dwellers of megacities such as Rio de Janiero. Topics include black resistance to racism, race mixture in multicultural societies, and how employment, political participation and family organization empowered the lives of Afro-Latin women.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 72497  COLLOQUIUM: WOMEN IN MODERN EUROPE  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 42497 and HIST 52497) The colloquium addresses the experiences of European women from the Enlightenment to the present. Using primary sources and recent scholarship, students examine the relationship between women and state formation, industry, sexuality, empire, socialism, war, welfare, migration and feminism.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 73097  COLLOQUIUM: MEDIEVAL RUSSIA  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 43097 and HIST 53097) Political, social, economic and cultural developments from the 9th to 17th centuries particularly the nature of political organization, the Mongol impact, the role of the church and religious life in pre-Petrine Russia.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 78697  COLLOQUIUM: U.S. MIDDLE PERIOD 1820-1900  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 48697 and HIST 58697) Coverage of the historical literature on Europe's major political, diplomatic, economic and social developments since 1945.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 78897  COLLOQUIUM IN AFRICAN-AMERICAN HISTORY SINCE 1877  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 48897 and HIST 58897) This colloquium specializes in African American history after 1877, with emphasis on historiographical literature of the period.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 79095  SPECIAL TOPICS IN UNITED STATES HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 49095 and HIST 59095) Special course in the history of the United States, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 79195  SPECIAL TOPICS: EUROPE SINCE 1500  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 49195 and HIST 59195) Special course in the history of Europe since 1500, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 79295  SPECIAL TOPICS IN GLOBAL HISTORY  3 Credit Hours
(Repeatable for credit) (Cross-listed with HIST 49295 and HIST 59295) Special course in the history of the ancient and medieval worlds, Africa, Asia, Latin America, and/or the Middle East, the subject and topic of which varies by term and instructor. Precise titles and descriptions to be inserted in the Schedule of Classes.

HIST 81001  METHODS OF HISTORICAL RESEARCH  3 Credit Hours
The course introduces graduate students to library reference tools, journal literature, research methodology, quantitative techniques and writing and original research paper.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 81002  HISTORIOGRAPHY  3 Credit Hours
Development of historical thinking. Students will read excerpts of famous historians and prepare papers.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 81070  WRITING SEMINAR IN HISTORY  3 Credit Hours
(Repeatable twice for credit) (Cross-listed with HIST 61070) Students will spend the semester conceptualizing, researching, and writing an article-length piece of original historical scholarship. Basic topics to be addressed include prospectus drafting, source identification, historiography, research methods, scholarly writing and revision, oral presentation, and professional critiquing. All students will be expected to supplement the guidance they receive from the seminar instructor with regular consultations with their departmental advisors.
Prerequisite: doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HIST 82070  AMERICAN HISTORY FROM PRECONTACT NATIVE AMERICA THROUGH THE CIVIL WAR  3 Credit Hours
(Slashed with HIST 62070) This reading colloquium will survey the major aspects of American history from the arrival of Europeans in North America through the colonial period of American history and up to the Civil War and Reconstruction. Students will be introduced to both historical content as well as the major historiographical currents in this segment of US history. The aim of the course is to prepare students for comprehensive exams as well as to teach the first half of the US survey course.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium, Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 82071  AMERICAN HISTORY FROM THE CIVIL WAR TO THE PRESENT  3 Credit Hours
(Slashed with HIST 62071) This reading colloquium will survey major aspects of American history since the Civil War within the historiographical traditions through which they have been understood. The aim of the course is to prepare students for comprehensive exams as well as to teach the second half of the US survey course.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium, Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

HIST 82345  IMAGES AND IDENTITIES IN US FOREIGN RELATIONS  3 Credit Hours
This graduate-level reading colloquium will explore the construction of cultural images and national identities in US foreign relations. Course readings and discussions will deal not only with the ways that Americans have "constructed" other nations but also with how other nations have "constructed" the United States. Themes to be explored include the role of intangibles such as culture in the making of policy; the accuracy or inaccuracy of cultural constructs; and the permanency or malleability of cultural ideas. Prerequisites: Doctoral Standing
Schedule Type: Colloquium, Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HIST 89199  DISSERTATION I  15 Credit Hours
(Repeatable for credit)Doctoral dissertation, for which registration in at least two semesters is required first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.
Prerequisite: Doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

HIST 89299  DISSERTATION II  15 Credit Hours
(Repeatable for credit)Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.
Prerequisite: HIST 89199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

HIST 89986  INDIVIDUAL INVESTIGATION  2,3 Credit Hours
(Repeatable for credit)
Prerequisite: Doctoral standing.
Schedule Type: Individual Investigation
Contact Hours: 2-3 other
Grade Mode: Standard Letter-IP

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Department of Mathematical Sciences
Mathematics (MATH)

MATH 00020  PRE-ALGEBRA  2 Credit Hours
Course covers properties of whole numbers, fractions, decimals, percents, signed numbers and order of operations. Mental math and elementary algebraic thinking skills are emphasized. Use of calculators is not allowed. Course does not count toward graduation.
Prerequisite: 0-9 ALEKS math score.
Schedule Type: Emporium
Contact Hours: 2 other
Grade Mode: Standard Letter

MATH 00021  BASIC ALGEBRA I  2 Credit Hours
Course includes operations on integers, fractions, decimals and percents, and properties of real numbers. Introduction to variables, first degree equations and problem-solving with formulas. Equations and inequalities in one variable, linear equations, rate of change and slope, graphing in the cartesian plane. Course does not count toward graduation.
Prerequisite: Minimum 10 ALEKS math score; or pre/corequisite minimum C grade in MATH 00020.
Schedule Type: Emporium
Contact Hours: 2 other
Grade Mode: Standard Letter

MATH 00022  BASIC ALGEBRA II  2 Credit Hours
Course includes operations on integers, fractions, decimals and percents, and properties of real numbers. Introduction to variables, first degree equations and problem-solving with formulas. Equations and inequalities in one variable, linear equations, rate of change and slope, graphing in the cartesian plane. Course does not count toward graduation.
Prerequisite: Minimum 25 ALEKS math score; or minimum C grade in MATH 00021.
Schedule Type: Emporium
Contact Hours: 2 other
Grade Mode: Standard Letter

MATH 00023  BASIC ALGEBRA III  2 Credit Hours
Prerequisite: Minimum 35 ALEKS math score; or minimum C grade in MATH 00022.
Schedule Type: Emporium
Contact Hours: 2 other
Grade Mode: Standard Letter
MATH 00024  BASIC ALGEBRA IV  2 Credit Hours
Course covers advanced factoring techniques, rational functions, radical equations, absolute value equations and inequalities. Exponential and logarithmic functions: introduction, graphing, problem-solving. Course does not count toward graduation.
Prerequisite: Minimum 45 ALEKS math score; or minimum C grade in MATH 00023.
Schedule Type: Emporium
Contact Hours: 2 other
Grade Mode: Standard Letter

MATH 00095  SPECIAL TOPICS IN MATHEMATICS  1-4 Credit Hours
(Repeatable for credit) Topics in mathematics not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled. Course does not count toward graduation.
Prerequisite: None.
Schedule Type: Emporium
Contact Hours: 1-4 other
Grade Mode: Standard Letter

MATH 10041  INTRODUCTORY STATISTICS (KMCR)  4 Credit Hours
An introduction to statistical thinking and statistical methods. Emphasis is on statistical literacy, conceptual understanding and active learning in the classroom.
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00022, MATH 00023 or MATH 00024; or any course MATH 10033 to MATH 49999.
Schedule Type: Elective
Contact Hours: 4 other
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 10051  QUANTITATIVE REASONING (KMCR)  4 Credit Hours
In the broadest sense, mathematics should provide students the needed quantitative tools, logical reasoning and problem solving skills, and a sense that quantitative modeling can be used to describe and understand developments in many areas of daily living. Since critical thinking is the primary objective and outcome for this course, in each area of concentration (numeracy, mathematical modeling and probability and statistics), students will read and glean information from the problem situation, convert the information into a usable form, perform any needed routine calculations, make or draw a conclusion, and then communicate the result via explanation using quantitative reasoning by writing coherent statements and paragraphs.
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00022; or any course MATH 00023 to MATH 49999.
Schedule Type: Lecture
Contact Hours: 4 other
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 10771  BASIC MATHEMATICAL CONCEPTS I PLUS (KMCR)  5 Credit Hours
(Equivalent to MATH 14001) Course covers the development of the real-number system and its sub-systems, open sentences, numeration systems, modular arithmetic and some number theory concepts. Additional concepts covered include place value, logic, sets, algebra concepts and problem solving.
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00022.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 10772  MODELING ALGEBRA PLUS (KMCR)  5 Credit Hours
(Equivalent to MATH 11009) Study of algebra arising in the context of real-world applications, including linear, polynomial, exponential and logarithmic models. Includes a review of factoring and functions. Course is intended for students not planning to take calculus. No credit earned for this course if student already earned credit for MATH 11010.
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00022.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 10773  ALGEBRA FOR CALCULUS STRETCH I  3 Credit Hours
Study of functions in general, factoring, negative and rational exponents; polynomial functions, including quadratic functions; and sequences and series. No credit earned for this course if a student already earned credit for MATH 12001. Students cannot earn credit toward a degree for both this course and either MATH 10775 or MATH 11010.
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00022.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 10774  ALGEBRA FOR CALCULUS STRETCH II (KMCR)  3 Credit Hours
(Equivalent to MATH 10775 or MATH 11010) Course is continuation of MATH 10773. Study of rational expressions and functions, exponential and logarithmic functions and conic sections. No credit earned for this course if student already earned credit for MATH 12001.
Prerequisite: Minimum C grade in MATH 10773.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning
MATH 10775  ALGEBRA FOR CALCULUS PLUS (KMCR)  4 Credit Hours
( Equivalent to MATH 10774 or MATH 11010) Study of elementary functions and graphs, including polynomial, exponential and logarithmic functions, complex numbers; conic sections; arithmetic and geometric sequences. In addition, factoring, negative and rational exponents, and quadratic functions are covered. No credit earned for this course if student has already earned credit for MATH 12001.
Prerequisite: minimum 45 ALEKS score; or minimum C grade in MATH 00023.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 11008  EXPLORATIONS IN MODERN MATHEMATICS (KMCR)  3 Credit Hours
Topics from various branches of mathematics will be chosen to introduce the student to the wide varieties of ways in which mathematics affects everyday life.
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum C grade in MATH 00022; or any course MATH 00023 to MATH 49999.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 11009  MODELING ALGEBRA (KMCR)  4 Credit Hours
( Equivalent to MATH 10772) Study of algebra arising in the context of real-world applications, including linear, polynomial, exponential and logarithmic models. Intended for students not planning to take calculus. No credit earned toward a degree for this course if the student already earned credit for MATH 11010.
Prerequisite: Minimum 45 ALEKS math score or minimum C grade in MATH 00023.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 11010  ALGEBRA FOR CALCULUS (KMCR)  3 Credit Hours
( Equivalent to MATH 10774 and MATH 10775) Study of elementary functions and graphs, including polynomial, exponential and logarithmic functions, complex numbers; conic sections; arithmetic and geometric sequences. No credit earned toward a degree for this course if the student already earned credit for MATH 10773 or MATH 12001.
Prerequisite: Minimum 55 ALEKS math score; or minimum C grade in MATH 00024 or MATH 10772 or MATH 11009.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 11012  INTUITIVE CALCULUS (KMCR)  3 Credit Hours
Designed to give an overview of differential and integral calculus to business and life-science majors. Does not include trigonometric functions. No credit earned toward a degree for this course if the student already earned credit for MATH 12002.
Prerequisite: Minimum 67 ALEKS math score or minimum C grade in MATH 10774 or MATH 10775 or MATH 11010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 11022  TRIGONOMETRY (KMCR)  3 Credit Hours
Solution of triangles, trigonometric equations and identities.
Prerequisite: Minimum 67 ALEKS math score or minimum C grade in MATH 10774 or MATH 10775 or MATH 11010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 12001  ALGEBRA AND TRIGONOMETRY (KMCR)  5 Credit Hours
Introduction to algebra and trigonometry including functions and graphs; polynomial and rational functions; exponential and logarithmic functions; angles and the trigonometric functions; graphs of trigonometric functions; trigonometric identities; inverse circular functions and trigonometric equations; and applications of trigonometry. No credit earned toward a degree for this course if the student already earned credit for MATH 10774 or MATH 10775 or MATH 11010 or MATH 11022.
Prerequisite: Minimum 67 ALEKS math score; or minimum B grade in MATH 00024.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 12002  ANALYTIC GEOMETRY AND CALCULUS I (KMCR)  5 Credit Hours
Concepts of limit, continuity and derivative, and the indefinite and definite integral for functions of one real variable. Maximization, related rates, fundamental theorem of calculus. No credit earned toward a degree for this course if the student already earned credit for MATH 12011 and MATH 12012.
Prerequisite: Minimum 78 ALEKS math score; or minimum C grade in MATH 11022 or MATH 12001.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 12003  ANALYTIC GEOMETRY AND CALCULUS II  5 Credit Hours
Continued study of techniques and applications of integration; trigonometric, logarithmic and exponential functions; polar coordinates; vectors; parametric equations; sequences and series.
Prerequisite: Minimum C grade in MATH 12002 or MATH 12012.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
Attributes: Transfer Module Mathematics
MATH 12011  CALCULUS WITH PRECALCULUS I (KMCR)  3 Credit Hours
Introduction to differential calculus with a review of algebra and trigonometry. Includes exponents, factoring, functions, graphs, tangent lines, limits, continuity, derivatives and related rates. No credit earned toward a degree for this course if the student already earned credit for MATH 12002.
Prerequisite: Minimum 67 ALEKS math score.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 12012  CALCULUS WITH PRECALCULUS II (KMCR)  3 Credit Hours
Development of integral calculus and continued study of differential calculus. Includes curve sketching optimization fundamental theorem of calculus areas between curves, exponential and logarithmic functions. No credit earned toward a degree for this course if student already earned credit for MATH 12002.
Prerequisite: Minimum C grade in MATH 12011.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

MATH 12021  CALCULUS FOR LIFE SCIENCES  4 Credit Hours
Differential and integral calculus using examples and problems in life sciences.
Prerequisite: Minimum 78 ALEKS math score; or minimum C grade in MATH 11022 or MATH 12011.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 12022  PROBABILITY AND STATISTICS FOR LIFE SCIENCES  3 Credit Hours
Probability and statistics with applications in medical and biological sciences.
Prerequisite: Minimum C grade in MATH 12002 or MATH 12012 or MATH 12021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 14001  BASIC MATHEMATICAL CONCEPTS I (KMCR)  4 Credit Hours
(Equivalent to MATH 10771) Development of the real number system and its sub-systems, open sentences, numeration systems, modular arithmetic and some number theory concepts.
Prerequisite: Minimum 45 ALEKS math score; or minimum C grade in MATH 00023 or any higher MATH course (except MATH 10041, MATH 10051 or MATH 11008).
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 14002  BASIC MATHEMATICAL CONCEPTS II (KMCR)  4 Credit Hours
Basic concepts of probability, statistics and geometry.
Prerequisite: Minimum C grade in MATH 10771 or MATH 14001.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning

MATH 19002  TECHNICAL MATHEMATICS II  4 Credit Hours
Continuation of MATH 19001. Emphasizes advanced topics in algebra and trigonometry, analytic geometry, derivatives and integrals.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 19099  FIELD EXPERIENCE IN MATHEMATICS INSTRUCTION (ELR)  1 Credit Hour
(Repeatable for credit) Learning through tutoring. A supervised lab experience in providing explanations of mathematical concepts.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

MATH 20011  DECISION MAKING UNDER UNCERTAINTY  3 Credit Hours
This is an introductory course on applied statistics. The course provides a hands-on approach to understanding, quantification and decision making under various forms of uncertainty. The main topics include visualization of uncertainty, probabilistic quantification of uncertainty, Bayesian and non-Bayesian ways of decision making under uncertainty. Class activities will incorporate active learning elements, including in-classroom computation with professional-grade software for statistical analysis and simulation.
Prerequisite: Minimum Grade of C in MATH 12002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 20095  SPECIAL TOPICS IN MATHEMATICS  1-5 Credit Hours
(Repeatable for credit) Various special courses will be announced in the schedule of classes under this course number with different section numbers.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter

MATH 21001  LINEAR ALGEBRA WITH APPLICATIONS  3 Credit Hours
Systems of linear equations and the associated matrix operations, linear transformations, vector spaces, bases, eigenvectors.
Prerequisite: Minimum C grade in MATH 11012 or MATH 12002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Mathematics
MATH 21092 COMPUTER PRACTICUM (ELR) 2 Credit Hours
(Repeatable for credit) Supervised work experience in a computer installation.
Prerequisite: None.
Schedule Type: Practicum or Internship
Contact Hours: 2 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

MATH 22005 ANALYTIC GEOMETRY AND CALCULUS III 4 Credit Hours
Study of functions of several variables, including partial derivatives and multiple integrals.
Prerequisite: Minimum C grade in MATH 12003.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 23022 DISCRETE STRUCTURES FOR COMPUTER SCIENCE 3 Credit Hours
(Cross-listed with CS 23022) Discrete structures for computer scientists with a focus on: mathematical reasoning, combinatorial analysis, discrete structures, algorithmic thinking, applications and modeling. Specific topics include logic, sets, functions, relations, algorithms, proof techniques, counting, graphs, trees, Boolean algebra, grammars and languages.
Prerequisite: Minimum 55 Compass Algebra score and either minimum 540 SAT math score or minimum 23 ACT math score; or CS 10051 and minimum C grade in MATH 11010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 30011 BASIC PROBABILITY AND STATISTICS 3 Credit Hours
Analysis and representation of data. Controlled experiments and observations. Measurement errors. Correlation and regression. Sampling. Probability models and tests of models. Inference. This course CANNOT be used to meet the mathematics requirements for a BA in Mathematics or a BS in Applied Mathematics or Mathematics.
Prerequisite: Minimum 67 ALEKS math score or minimum 23 ACT math score; or CS 10051 and minimum C grade in MATH 11010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 31011 PROOFS IN DISCRETE MATHEMATICS 3 Credit Hours
The study of discrete mathematical structures including sets, functions, and relations. The course includes an introduction to logical thinking with an emphasis on proof techniques. The course also emphasizes combinatorics topics such as recursion and counting.
Prerequisite: Minimum C grade in MATH 12002.
Pre/corequisite: Minimum C grade in MATH 21001 or MATH 32051.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 32044 ORDINARY DIFFERENTIAL EQUATIONS 3 Credit Hours
An introduction to ordinary differential equations and applications. Topics include solution methods, series solutions and singular points. Laplace transforms and linear systems. Applications include population dynamics, forced oscillations and resonance.
Prerequisite: Minimum C grade in MATH 21001 and MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 32051 MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES I 4 Credit Hours
Mathematics background beyond calculus I and II for upper-division courses in the physical sciences. Topics include complex numbers and arithmetic, linear algebra, partial differentiation and multiple integrals.
Prerequisite: Minimum C grade in MATH 12003.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 32052 MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES II 4 Credit Hours
Additional mathematics background for upper-division courses in the physical sciences. Topics include vector analysis, Fourier series and transforms ordinary differential equations and partial differential equations.
Prerequisite: Minimum C grade in MATH 32051; or minimum C grade in MATH 21001 and MATH 22005.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 34001 FUNDAMENTAL CONCEPTS OF ALGEBRA 3 Credit Hours
Professionalized course in algebra for prospective secondary teachers. Postulational development of number system of algebra; other systems, related topics, applications. This course cannot be used to meet the mathematical requirements for a BA in Mathematics or a BS in either Applied Mathematics or Mathematics. Cannot earn credit for this class if credit has already been earned for Math 41001.
Prerequisite: Minimum C grade in MATH 12002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MATH 34002  FUNDAMENTAL CONCEPTS OF GEOMETRY  3 Credit Hours
Professionalized course in geometry for secondary school teachers. Origin and development of the geometry of Euclid with modern refinements, topics, approaches. Other geometries, applications. This cannot be used to meet the mathematics requirement for a BA in Mathematics or a BS in either Applied Mathematics or Mathematics. Prerequisite: Minimum C grade in MATH 12002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 38001  HANDS-ON MATHEMATICS  3 Credit Hours
Students take turns learning a topic and then teach that topic to the class. No text is required; the students use web resources and materials supplied by the instructor. Many of the topics have a hands-on component. Some examples are two- and three-dimensional tiling problems, the Towers of Hanoi and other problems with an inductive solution, and ‘magic tricks’ with a basis in algebra, parity or modular arithmetic. Prerequisite: Minimum C grade in MATH 12003.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 40011  PROBABILITY THEORY AND APPLICATIONS  3 Credit Hours
(Slashed with MATH 50011) Permutations and combinations, discrete and continuous distributions, random variables, conditional probabilities, Baye’s formula, mathematical expectation, law of large numbers, normal approximations, basic limit theorems. Prerequisites: Minimum C grade in MATH 22005 or MATH 32051.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 40012  THEORY OF STATISTICS  3 Credit Hours
(Slashed with MATH 50012) Sample spaces, continuous distributions, sampling distributions, point and interval estimation, hypothesis testing, types of error, level and power of tests, sequential and nonparametric methods. Prerequisite: Minimum C grade in MATH 40011.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 40015  APPLIED STATISTICS  3 Credit Hours
(Slashed with MATH 50015) This course is based on classical linear regression techniques with an emphasis on real data using the principles of sound data analysis. Close attention will be given to issues of interpretation, diagnostics, outliers and influential points, goodness of fit, and model selection. Topics include simple and multiple linear regression, transformation and modifications of covariates and responses, design matrices, variable selection, and logistic regression. Prerequisite: Minimum grade of C in both MATH 20011 and MATH 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 40024  COMPUTATIONAL STATISTICS  3 Credit Hours
(Slashed with MATH 50024) This course is about the use of computational tools to manage, explore, summarize, and visualize data, as well as the computational underpinnings of fitting statistical models. It uses mostly the statistical computation language R, but also other languages like Python and Matlab. It also covers: simulation and random number generation, computationally intensive methods like the bootstrap and permutation tests, Expectation-Maximization and related algorithms, and dimensionality reduction via matrix decomposition. Prerequisites: Minimum grade of C in both MATH 20011 and MATH 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 40028  STATISTICAL LEARNING  3 Credit Hours
(Slashed with MATH 50028) This course is about the statistical foundations of modern machine learning techniques. The main focus is classification and prediction, using regression-based, tree-based, and kernel-based methods. Specific methods include logistic regression, classification and regression trees, random forests, and support vector machines. The course also includes an introduction to unsupervised and semi-supervised learning. Prerequisites: Minimum grade of C in both MATH 40015 and MATH 40024.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 40055  ACTUARIAL MATHEMATICS I (ELR) (WIC)  4 Credit Hours
(Slashed with MATH 50055) Topics from survival models, stochastic processes, Brownian motion and Martingales and their applications to stochastic calculus. Prerequisite: Minimum C grade in MATH 40011.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

MATH 40056  ACTUARIAL MATHEMATICS II  4 Credit Hours
(Slashed with MATH 50056) Benefit premiums, benefit reserves and their analysis, decrement models, joint survivorship, risk models. Prerequisite: Minimum C grade in MATH 40055.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 40059  STOCHASTIC ACTUARIAL MODELS  3 Credit Hours
(Slashed with MATH 50059) Designed to prepare students for the Society of Actuaries examination on actuarial mathematics. Prerequisite: Minimum C grade in MATH 40011.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MATH 40093 VARIABLE TITLE WORKSHOP IN MATHEMATICS 1-6
Credit Hours
(Repeatable for credit) Studies special topics in mathematics. Not acceptable for credit toward a major or minor in math without approval of student's adviser.
Prerequisite: Special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

MATH 41001 MODERN ALGEBRA I (ELR) (WIC) 3 Credit Hours
(Slashed with MATH 51001) Basic properties of groups, subgroups, factor groups. Basic properties of rings, integral domains and homomorphisms. Prerequisites: Minimum C grade in MATH 22005 or MATH 32051; and minimum C grade in MATH 31011
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

MATH 41002 MODERN ALGEBRA II (ELR) (WIC) 3 Credit Hours
(Slashed with MATH 51002) A continuation of MATH 41001, emphasizing properties of rings, their ideals, polynomial ring extensions, fields, finite degree extensions, roots of polynomials, constructability. Prerequisite: Minimum C grade in MATH 41001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

MATH 41021 THEORY OF MATRICES 3 Credit Hours
(Slashed with MATH 51021) A rigorous study of the topics introduced in matrix algebra. Topics included are vector space preliminaries, canonical forms of matrices, diagonalizability criteria. Prerequisite: Minimum C grade in MATH 21001 and MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 41038 INTERMEDIATE LOGIC 3 Credit Hours
(Slashed with MATH 51038; Cross-listed with CS 41038 and PHIL 41038 and PHIL 51038) A detailed, systematic study of metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. Topics include the soundness and completeness of the propositional and predicate calculi, the decidability of propositional calculus, the undecidability of predicate calculus, Gödel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionality of the set of general recursive functions, abacus computable functions, and Turing computable functions, and the philosophical motivations for the Church-Turing Thesis that all computable functions are Turing computable.
Prerequisite: PHIL 41038.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 41045 METALOGIC 3 Credit Hours
(Slashed with MATH 51045; Cross-listed with CS 41045 and CS 51045 and PHIL 41045 and PHIL 51045) A detailed, systematic study of metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. Topics include the soundness and completeness of the propositional and predicate calculi, the decidability of propositional calculus, the undecidability of predicate calculus, Gödel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionality of the set of general recursive functions, abacus computable functions, and Turing computable functions, and the philosophical motivations for the Church-Turing Thesis that all computable functions are Turing computable.
Prerequisite: PHIL 41038.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42001 ANALYSIS I (ELR) (WIC) 3 Credit Hours
(Slashed with MATH 52001) Topics include basic structure of the real numbers, Cauchy sequences, convergence, completeness of the real numbers, continuity, differentiation and Riemann integration. Prerequisites: Minimum C grade in MATH 22005 or MATH 32051 and Minimum C grade in MATH 31011
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

MATH 42002 ANALYSIS II (ELR) (WIC) 3 Credit Hours
(Slashed with MATH 52002) Topics include further development of integration theory, infinite series, uniform convergence, several variable calculus and metric spaces. Prerequisite: Minimum C grade in MATH 42001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

MATH 42011 MATHEMATICAL OPTIMIZATION 3 Credit Hours
(Slashed with MATH 52011) Analytic and numerical techniques for location of extreme points of functions and calculus of variations. Both constrained and unconstrained problems are considered.
Prerequisite: Minimum C grade in MATH 21001 and MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42021 GRAPH THEORY AND COMBINATORICS 3 Credit Hours
(Slashed with MATH 52021) Fundamentals and applications of combinatorial mathematics. Topics include traversability, colorability, networks, inclusion and exclusion, matching and designs.
Prerequisite: Minimum C grade in MATH 12003 and MATH 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42024 NUMBERS AND GAMES 3 Credit Hours
(Slashed with MATH 52024) The study of partisan and impartial combinatorial games; games as numbers; Grundy-Sprague theory.
Prerequisite: Minimum C grade in MATH 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MATH 42031 MATHEMATICAL MODELS AND DYNAMICAL SYSTEMS 3 Credit Hours
(Slashed with MATH 52031) Formulation and analysis of mathematical models for a variety of phenomena. Mathematical methods from optimization dynamical systems and probability are developed and applied. Modern software tools are utilized.
Prerequisite: Minimum C grade in MATH 32044 or MATH 32052.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42039 MODELING PROJECTS (ELR) (WIC) 3 Credit Hours
(Slashed with MATH 52039) Individual and small-group projects concerned with the formulation and analysis of mathematical models in a variety of areas. Written and oral reports are required.
Prerequisite: Minimum C grade in MATH 42031.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement, Writing Intensive Course

MATH 42041 ADVANCED CALCULUS 3 Credit Hours
(Slashed with MATH 52041) The calculus and applications of scalar and vector functions of several variables. Vector differential and integral calculus. Applications to field theories, electricity and magnetism and fluid flow.
Prerequisite: Minimum C grade in MATH 21001 and MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42045 PARTIAL DIFFERENTIAL EQUATIONS 3 Credit Hours
Prerequisite: Minimum C grade in MATH 32044.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42048 COMPLEX VARIABLES 3 Credit Hours
(Slashed with MATH 52048) Algebra of complex numbers, analytic functions, mappings, Cauchy integral theory, residue theory and applications.
Prerequisite: Minimum C grade in MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42201 NUMERICAL COMPUTING I 3 Credit Hours
(Cross-listed with CS 42201 and CS 52201; slashed with MATH 52201). An introduction to numerical methods and software for solving many common scientific computing problems. Linear systems, least-squares data fitting, nonlinear equations and systems, and optimization problems.
Prerequisite: Minimum C grade in all the following: MATH 12003; and MATH 21001 or MATH 32051; and CS 10061 or CS 13001 or (CS 13011 and CS 13012).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 42202 NUMERICAL COMPUTING II 3 Credit Hours
(Cross-listed with CS 42202; slashed with CS 52202 and MATH 52202) A continuation of MATH 42201. Topics include interpolation, numerical differentiation and integration, and numerical solution of ordinary differential equations.
Prerequisite: Minimum C grade in MATH 42201; and minimum C grade in MATH 32044 or MATH 32052.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 45011 DIFFERENTIAL GEOMETRY 3 Credit Hours
(Slashed with MATH 55011) Analytic and metric differential geometry of curves and surfaces.
Prerequisite: Minimum C grade in MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 45021 EUCLIDEAN GEOMETRY 3 Credit Hours
(Slashed with MATH 55021) Geometry of Euclid extended to advanced topics of the triangle, quadrilaterals and circles: cross-ratio, groups, constructions, geometric generalizations; inversion.
Prerequisite: Minimum C grade in MATH 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 45022 LINEAR GEOMETRY 3 Credit Hours
(Slashed with MATH 55022) Using transformations as a tool to study geometry and to differentiate between different kinds of geometry. Linear algebra methods applied to geometry.
Prerequisite: Minimum C grade in MATH 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 45031 ALGEBRAIC GEOMETRY 3 Credit Hours
(Slashed with MATH 55031) Algebraic geometry, including projective spaces, affine varieties, differential geometry of algebraic varieties, and complex manifolds.
Prerequisite: Minimum C grade in MATH 21001.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

MATH 46001 ELEMENTARY TOPOLOGY 3 Credit Hours
(Slashed with MATH 56001) Metric spaces, introduction to topological spaces, separation axioms.
Prerequisite: Minimum C grade in MATH 22005.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 47011 DIFFERENTIAL GEOMETRY 3 Credit Hours
(Slashed with MATH 57011) Survey of differential geometry, including the geometry of curves and surfaces.
Prerequisite: Minimum C grade in MATH 12003.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 47021 HISTORY OF MATHEMATICS 3 Credit Hours
(Slashed with MATH 57021) Survey of the development of algebra, geometry, calculus, number theory and other branches of mathematics from ancient times to the present.
Prerequisite: Minimum C grade in any course MATH 22006 to 49999.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MATH 50011 PROBABILITY THEORY AND APPLICATIONS 3 Credit Hours
(Repeatable with approval) Sample spaces, continuous distributions, sampling distributions, point and interval estimation, hypothesis testing, types of error, level and power of tests, sequential and nonparametric methods.
Prerequisite: MATH 40011 or MATH 50011; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 50012 THEORY OF STATISTICS 3 Credit Hours
(Repeatable with approval) Permutations and combinations, discrete and continuous distributions, random variables, conditional probabilities, Bayes’ formula, mathematical expectation, law of large numbers, normal approximations, basic limit theorems.
Prerequisite: MATH 40011 or MATH 50011; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 50015 APPLIED STATISTICS 3 Credit Hours
(Repeatable with approval) This course is based on classical linear regression techniques with an emphasis on real data using the principles of sound data analysis. Close attention will be given to issues of interpretation, diagnostics, outliers and influential points, goodness of fit, and model selection. Topics include simple and multiple linear regression, transformation and modifications of covariates and responses, design matrices, variable selection, and logistic regression. Prerequisites: Graduate Standing in Mathematics
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 50024 COMPUTATIONAL STATISTICS 3 Credit Hours
(Repeatable with approval) This course is about the use of computational tools to manage, explore, summarize, and visualize data, as well as the computational underpinnings of fitting statistical models. It uses mostly the statistical computation language R, but also other languages like Python and Matlab. It also covers: simulation and random number generation, computationally intensive methods like the bootstrap and permutation tests, Expectation-Maximization and related algorithms, and dimensionality reduction via matrix decomposition. Prerequisites: Graduate standing in Mathematics
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 50028 STATISTICAL LEARNING 3 Credit Hours
(Repeatable with approval) This course is about the statistical foundations of modern machine learning techniques. The main focus is classification and prediction, using regression-based, tree-based, and kernel-based methods. Specific methods include logistic regression, classification and regression trees, random forests, and support vector machines. The course also includes an introduction to unsupervised and semi-supervised learning.
Prerequisite: MATH 40015 or MATH 50015 and MATH 40024 or MATH 50024 and Graduate standing in Mathematics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 50051 TOPICS IN PROBABILITY THEORY AND STOCHASTIC PROCESSES 3 Credit Hours
(Repeatable with approval) Topics from conditional expectations, Markov chains, Markov processes, Brownian Motion and Martingales and their applications to stochastic calculus.
Prerequisite: MATH 50011 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 50055 ACTUARIAL MATHEMATICS I 4 Credit Hours
(Repeatable with approval) Topics from survival models, stochastic analysis of annuities and life insurance and casualty models.
Prerequisite: MATH 30055 and MATH 50011; and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 50056 ACTUARIAL MATHEMATICS II 4 Credit Hours
(Repeatable with approval) Topics from survival models, stochastic analysis of annuities and life insurance and casualty models.
Prerequisite: MATH 50055 and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 50059 STOCHASTIC ACTUARIAL MODELS 3 Credit Hours
(Repeatable with approval) Designed to prepare students for the Society of Actuaries examination on actuarial mathematics.
Prerequisite: Minimum C grade in MATH 50011 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Grade Mode</th>
<th>Prerequisite</th>
<th>Schedule Type</th>
<th>Contact Hours</th>
<th>Notes</th>
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<tbody>
<tr>
<td>MATH 51001</td>
<td>MODERN ALGEBRA I</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td>(Slashed with MATH 41001) Basic properties of groups, subgroups, factor groups. Basic properties of rings, integral domains and homomorphisms.</td>
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<td>Mar 2019</td>
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<td>Prerequisite: MATH 21001 and MATH 22005 and graduate standing.</td>
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<td>Mar 2019</td>
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<td>MATH 51002</td>
<td>MODERN ALGEBRA II</td>
<td>3</td>
<td>Credit Hours</td>
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<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td>(Slashed with MATH 41002) A continuation of MATH 51001, emphasizing properties of rings, their ideals, polynomial ring extensions, fields, finite degree extensions, roots of polynomials, constructibility.</td>
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<td>Mar 2019</td>
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<td>Prerequisite: MATH 41001 or MATH 51001; and Graduate standing in Mathematics.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 51021</td>
<td>THEORY OF MATRICES</td>
<td>3</td>
<td>Credit Hours</td>
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<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td>(Slashed with MATH 41021) A rigorous study of the topics introduced in matrix algebra. Topics included are: canonical forms of matrices, diagonalizability criteria.</td>
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<td></td>
<td>Prerequisite: MATH 21001 and MATH 22005 and graduate standing.</td>
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<tr>
<td>MATH 51038</td>
<td>INTERMEDIATE LOGIC</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Cross-listed with CS 41038 and PHIL 51038; slashed with MATH 41038; ) A detailed, systematic study of symbolic logic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. The aim of the course is twofold: first, to develop a facility in understanding and using symbolic logic for various purposes, and second, to understand and appreciate symbolic logic as an area of study in itself. Topics include the distinction between syntactic, object-level proofs and semantic, meta-level proofs, the distinction between axiomatic systems and natural deduction systems of object-level proofs, various systems of modal logic and some non-classical logics.</td>
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<td>Mar 2019</td>
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<td></td>
<td>Prerequisite: Graduate standing.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 51045</td>
<td>METALOGIC</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Cross-listed with CS 41045 and CS 51045 and PHIL 41045 and PHIL 51045; slashed with MATH 41045) A detailed, systematic study of metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. Topics include the soundness and completeness of the propositional and predicate calculi, the decidability of propositional calculus, the undecidability of predicate calculus, Gōdel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionality of the set of general recursive functions, abacus computable functions, and Turing computable functions, and the philosophical motivations for the Church-Turing Thesis that all computable functions are Turing computable</td>
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<td>Mar 2019</td>
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<td></td>
<td>Prerequisite: Graduate standing.</td>
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<td>Mar 2019</td>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Grade Mode</th>
<th>Prerequisite</th>
<th>Schedule Type</th>
<th>Contact Hours</th>
<th>Notes</th>
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<tr>
<td>MATH 52001</td>
<td>ANALYSIS I</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Slashed with MATH 42001) Topics include basic structure of the real numbers, Cauchy sequences, convergence, completeness of the real numbers, continuity, differentiation and Riemann integration.</td>
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<td>Mar 2019</td>
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<td></td>
<td>Prerequisite: Graduate standing in Mathematics.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 52002</td>
<td>ANALYSIS II</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Slashed with MATH 42002) Topics include further development of integration theory infinite series, uniform convergence, several variable calculus and metric spaces.</td>
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<td></td>
<td>Prerequisite: MATH 42001 or MATH 52001; and Graduate standing in Mathematics.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 52011</td>
<td>MATHEMATICAL OPTIMIZATION</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Slashed with MATH 42011) Analytical and numerical techniques for location of extreme points of functions and calculus of variations. Both constrained and unconstrained problems are considered.</td>
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<td></td>
<td>Prerequisite: MATH 21001 and MATH 22005; graduate standing.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 52021</td>
<td>GRAPH THEORY AND COMBINATORICS</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(MATH 42021) Fundamentals and applications of combinatorial mathematics. Topics include transversability, colorability, networks, inclusion and exclusion, matching and designs.</td>
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<td>Mar 2019</td>
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<td></td>
<td>Prerequisite: MATH 12003 and MATH 21001 and graduate standing.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 52024</td>
<td>NUMBERS AND GAMES</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Slashed with AMTH 42024) The study of partisan and impartial combinatorial games; games as numbers; Grundy-Sprague theory.</td>
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<td>Mar 2019</td>
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<td></td>
<td>Prerequisite: Special approval and graduate standing.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 52031</td>
<td>MATHEMATICAL MODELS AND DYNAMICAL SYSTEMS</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td></td>
<td>(Slashed with MATH 42031) Formulation and analysis of mathematical models for a variety of phenomena. Mathematical methods from optimization, dynamical systems and probability are developed and applied. Modern software tools are utilized.</td>
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<td></td>
<td>Prerequisite: MATH 32044 and graduate standing.</td>
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<td>Mar 2019</td>
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<tr>
<td>MATH 52039</td>
<td>MODELING PROJECTS</td>
<td>3</td>
<td>Credit Hours</td>
<td></td>
<td>Seminar</td>
<td>3 other</td>
<td>Standard Letter-S/U-IP</td>
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<tr>
<td></td>
<td>(Slashed with MATH 42039) Individual and small-group projects concerned with the formulation and analysis of mathematical models in a variety of areas. Written and oral reports required.</td>
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<td></td>
<td>Prerequisite: Minimum C grade in MATH 52031; and graduate standing.</td>
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<td>Mar 2019</td>
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</table>
MATH 52041 ADVANCED CALCULUS 3 Credit Hours
(Slashed with MATH 42041) The calculus and applications of scalar and vector functions of several variables. Vector differential and integral calculus. Applications to field theories, electricity and magnetism and fluid flow.
Prerequisite: MATH 21001 and MATH 22205.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 52045 PARTIAL DIFFERENTIAL EQUATIONS 3 Credit Hours
(Slashed with MATH 42045) Introduction to Fourier series, Fourier transforms and partial differential equations. Wave, heat and potential equations of mathematical physics. Additional topics include Green's functions and the Method of Characteristics for wave equations.
Prerequisite: Graduate standing in Mathematics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 52048 COMPLEX VARIABLES 3 Credit Hours
(Slashed with MATH 42048) Algebra of complex numbers, analytic functions, mappings, Cauchy integral theory, residue theory and applications.
Prerequisite: Graduate standing in Mathematics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 52201 NUMERICAL COMPUTING I 3 Credit Hours
(Cross-listed with CS 42201 and CS 52201; slashed with MATH 42201) An introduction to numerical methods and software for solving many common scientific computing problems. Linear systems, least-square data fitting, nonlinear equations and systems and optimization problems.
Prerequisite: Graduate standing in Mathematics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 52202 NUMERICAL COMPUTING II 3 Credit Hours
(Cross-listed with CS 42202 and CS 52202; slashed with MATH 42202) A continuation of MATH 52201. Topics include interpolation, numerical differentiation and integration, and numerical solution of ordinary differential equations.
Prerequisite: MATH 42201 or 52201 and Graduate standing in Mathematics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 55011 DIFFERENTIAL GEOMETRY 3 Credit Hours
(Slashed with MATH 45011) Analytic and metric differential geometry of curves and surfaces.
Prerequisite: MATH 22005 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 55021 EUCLIDEAN GEOMETRY 3 Credit Hours
(Slashed with MATH 45021) Geometry of Euclid extended to advanced topics of the triangle, quadrilaterals and circles: crossratio, groups, constructions, geometric generalizations; inversion.
Prerequisite: MATH 21001 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 55022 LINEAR GEOMETRY 3 Credit Hours
(Slashed with MATH 45022) Use of transformations as a tool to study geometry and to differentiate between different kinds of geometry. Linear algebra methods applied to geometry.
Prerequisite: MATH 21001 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 55023 APPLICATIONS 1-3 Credit Hours
(Slashed with MATH 45023) Various special courses will be announced in the schedule of classes under this course number with different section numbers.
Prerequisite: MATH 21001 and graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

MATH 56001 ELEMENTARY TOPOLOGY 3 Credit Hours
(Slashed with MATH 45001) Metric spaces, introduction to topological spaces, separation axioms.
Prerequisite: MATH 22005 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 57011 THEORY OF NUMBERS 3 Credit Hours
(Slashed with MATH 47011) Divisibility properties of the integers, prime numbers, congruences, quadratic reciprocity, Diophantine equations, number theoretic functions, simple continued fractions, rational approximations.
Prerequisite: MATH 12003 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 57021 HISTORY OF MATHEMATICS 3 Credit Hours
(Slashed with MATH 47021) Survey from Babylonian and Egyptian mathematics to 20th-century mathematics with emphasis on the development of algebra, geometry, calculus, number theory.
Prerequisite: one course MATH 22006 to 59999 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 57091 SELECTED TOPICS IN MATHEMATICS AND ITS
APPLICATIONS 1-3 Credit Hours
(Repeatable for credit) Various special courses will be announced in the schedule of classes under this course number with different section numbers.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

MATH 59893 VARIABLE TITLE WORKSHOP IN MATHEMATICS 1-6 Credit Hours
(Repeatable for credit) Studies in special topics in pure and applied mathematics.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory
MATH 60051  PROBABILITY I  4 Credit Hours
(Repeatable with MATH 70051) Distribution functions, measure theory, random variables, expectation, independence, convergence, concepts, law of large numbers.
Prerequisite: MATH 40011 or MATH 42002 or MATH 50011 or MATH 52002; and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 60052  PROBABILITY II  3 Credit Hours
Characteristic functions, the central limit problem, conditional expectations, Martingale theory, Brownian motion.
Prerequisite: MATH 6/70051 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 60061  MATHEMATICAL STATISTICS I  4 Credit Hours
Prerequisite: MATH 4/52002.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 60062  MATHEMATICAL STATISTICS II  3 Credit Hours
Prerequisite: MATH 6/70061.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 60070  FINANCIAL MATHEMATICS  3 Credit Hours
Topics from replication of trading strategies, arbitrage, completeness, Martingale representation theorem, fundamental theorem of finance, stochastic differential equations, Black and Scholes formula of option pricing.
Prerequisite: MATH 50051 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 60091  SEMINAR IN STATISTICS PROBABILITY  1-3 Credit Hours
(Repeatable for credit) Seminar on current research in statistics and probability.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 60093  VARIABLE TITLE WORKSHOP IN MATHEMATICS  1-3 Credit Hours
(Repeatable for credit) Studies of special topics in mathematics. Not acceptable for credit toward a graduate degree in mathematics without approval of the student's adviser.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

MATH 60094  COLLEGE TEACHING OF MATHEMATICS  1 Credit Hour
(Repeatable for credit) Techniques and problems in the teaching of college-level mathematics. Student presentations of mathematical papers and colloquia will be included.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

MATH 61051  ABSTRACT ALGEBRA I  4 Credit Hours
Advanced topics in group theory including Sylow Theorems, finite Abelian groups, divisible groups and related concepts. Includes one hour problem session each week.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 61052  ABSTRACT ALGEBRA II  3 Credit Hours
Advanced topics, commutative ring theory, and field theory including polynomial rings, unique factorization domains, matrix rings, Galois theory.
Prerequisite: MATH 6/71051 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 61091  SEMINAR IN ALGEBRA  1-3 Credit Hours
(Repeatable for credit) Seminar on current research in algebra.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 62041  METHODS OF APPLIED MATHEMATICS I  3 Credit Hours
Prerequisite: MATH 51021 and MATH 52041 and MATH 52045 and MATH 52048 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 62042  METHODS OF APPLIED MATHEMATICS II  3 Credit Hours
Prerequisite: MATH 6/72041 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisite</th>
<th>Schedule Type</th>
<th>Contact Hours</th>
<th>Grade Mode</th>
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<tr>
<td>MATH 62052</td>
<td>FUNCTIONS OF A REAL VARIABLE II</td>
<td>3</td>
<td>A continuation of MATH 62051/72051. Included are basic topics in functional analysis and Hilbert space theory.</td>
<td>MATH 6/72051 and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td>MATH 62091</td>
<td>SEMINAR IN REAL ANALYSIS</td>
<td>1-3</td>
<td>(Repeatable for credit) Seminar on current research in real analysis.</td>
<td>Special approval and graduate standing.</td>
<td>Seminar</td>
<td>1-3 other</td>
<td>Standard Letter-S/U</td>
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<tr>
<td>MATH 62151</td>
<td>FUNCTIONS OF A COMPLEX VARIABLE I</td>
<td>4</td>
<td>Topological properties of the complex plane; analytic, entire, meromorphic functions; analytic continuation; conformal mappings; Picard's Theorem; Riemann surfaces.</td>
<td>MATH 52002 and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>MATH 62152</td>
<td>FUNCTIONS OF A COMPLEX VARIABLE II</td>
<td>3</td>
<td>Topological properties of the complex plane; analytic, entire, meromorphic functions; analytic continuation; conformal mappings; Picard's Theorem; Riemann surfaces.</td>
<td>MATH 62151 and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>MATH 62191</td>
<td>SEMINAR IN COMPLEX ANALYSIS</td>
<td>1-3</td>
<td>(Repeatable for credit) Seminar on current research in complex analysis.</td>
<td>Special approval and graduate standing.</td>
<td>Seminar</td>
<td>1-3 other</td>
<td>Standard Letter-S/U</td>
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<tr>
<td>MATH 62203</td>
<td>COMPUTATIONAL FINANCE</td>
<td>3</td>
<td>Basic numerical methods, (numerical linear algebra, nonlinear equations, curve fitting, ODEs, integration, Monte-Carlo methods), numerical solution of PDEs (stability, convergence, Black-Scholes, American options, SDEs) probabilistic methods.</td>
<td>MATH 22005 and MATH 21001 and MATH 32044 and Graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>MATH 62251</td>
<td>NUMERICAL ANALYSIS I</td>
<td>4</td>
<td>Floating point computation, rounding error analysis, conditioning, interpolation (polynomial, trigonometric, spline), Numerical quadrature (Newton-Cotes, Gauss), extrapolation, Romberg integration.</td>
<td>MATH 4/52002 and graduate standing.</td>
<td>Lecture</td>
<td>4 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>MATH 62252</td>
<td>NUMERICAL ANALYSIS II</td>
<td>3</td>
<td>(Cross-listed with CS 62252 and CS 72252 and MATH 72252) Numerical solution of linear systems of equations (LU factorization, error analysis). Least squares, orthogonalization methods. Algebraic eigenvalue problems, QR algorithm, singular value decomposition.</td>
<td>MATH 4/51021 and 6/72251 and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td>MATH 62261</td>
<td>NUMERICAL SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS</td>
<td>3</td>
<td>(Cross-listed with CS 62261 and CS 72261 and MATH 72261) Derivation and analysis of discrete methods (finite differences, finite elements) for the numerical solution of elliptic, hyperbolic and parabolic partial differential equations.</td>
<td>MATH 32044 and MATH 4/52202 and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>MATH 62262</td>
<td>NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATIONS</td>
<td>3</td>
<td>(Cross-listed with CS 62262 and CS 72262 and MATH 72262) Derivation and analysis of discrete methods (finite differences, finite elements) for the numerical solution of elliptic, hyperbolic and parabolic partial differential equations.</td>
<td>MATH 42045 or 52045; and MATH 42202 or 52202; and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>MATH 62264</td>
<td>NUMERICAL SOLUTION OF NONLINEAR SYSTEMS</td>
<td>3</td>
<td>(Cross-listed with CS 62264 and CS 72264 and MATH 72264) Construction and analysis of numerical methods for systems of nonlinear algebraic equations and optimization problems. Numerical implementation and software.</td>
<td>MATH 42041 or MATH 52041; and MATH 42202 or MATH 52202; and graduate standing.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<td>MATH 62291</td>
<td>SEMINAR IN NUMERICAL ANALYSIS</td>
<td>1-3</td>
<td>(Repeatable for credit) Seminar on current research in numerical analysis.</td>
<td>Special approval and graduate standing.</td>
<td>Seminar</td>
<td>3 lecture</td>
<td>Standard Letter-S/U</td>
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<td>Contact Hours</td>
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<td>MATH 62391</td>
<td>SEMINAR IN MEASURE THEORY</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Special approval and graduate standing.</td>
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<tr>
<td>MATH 62491</td>
<td>SEMINAR IN NONLINEAR ANALYSIS</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Special approval and graduate standing.</td>
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<tr>
<td>MATH 62591</td>
<td>SEMINAR IN OPERATOR THEORY</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Special approval and graduate standing.</td>
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<tr>
<td>MATH 62691</td>
<td>SEMINAR IN HARMONIC ANALYSIS</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Special approval and graduate standing.</td>
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<tr>
<td>MATH 63291</td>
<td>SEMINAR IN APPLIED MATHEMATICS</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Special approval and graduate standing.</td>
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<tr>
<td>MATH 64091</td>
<td>SEMINAR IN MATHEMATICS EDUCATION</td>
<td>3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Studies in geometry, algebra, mathematics for junior and senior high school.</td>
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<tr>
<td>MATH 65091</td>
<td>SEMINAR IN TOPOLOGY</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Seminar on current research in topology.</td>
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<tr>
<td>MATH 66091</td>
<td>SEMINAR IN NUMBER THEORY</td>
<td>1-3</td>
<td>Standard Letter-S/U</td>
<td>1-3 other</td>
<td>Lecture</td>
<td>Seminar on current research in number theory.</td>
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<tr>
<td>MATH 67091</td>
<td>RESEARCH</td>
<td>1-15</td>
<td>Satisfactory/Unsatisfactory-IP</td>
<td>1-6 other</td>
<td>Seminar</td>
<td>Research or individual investigation. Credits are applied toward degree requirements with approval if letter grade of &quot;S&quot; is given.</td>
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<tr>
<td>MATH 67199</td>
<td>THESIS</td>
<td>2-6</td>
<td>Satisfactory/Unsatisfactory-IP</td>
<td>2-6 other</td>
<td>Masters Thesis</td>
<td>Thesis student must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.</td>
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<td>MATH 70051</td>
<td>PROBABILITY I</td>
<td>4</td>
<td>Standard Letter</td>
<td>4 lecture</td>
<td>Lecture</td>
<td>Distribution functions, measure theory, random variables, expectation, independence, convergence, concepts, laws of large numbers.</td>
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<tr>
<td>MATH 70052</td>
<td>PROBABILITY II</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
<td>Characteristic functions, the central limit problem, conditional expectations, Martingale theory, Brownian motion.</td>
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</table>
MATH 70062  MATHEMATICAL STATISTICS II  3 Credit Hours
Prerequisite: MATH 6/70061 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 70070  FINANCIAL MATHEMATICS  3 Credit Hours
Topics from replication of trading strategies, arbitrage completeness, Martingale representation theorem, fundamental theorem of finance, stochastic differential equations, Black and Scholes formula of option pricing.
Prerequisite: MATH 50051 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 70991  SEMINAR IN STATISTICS PROBABILITY  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in statistics and probability.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U

MATH 70994  COLLEGE TEACHING OF MATHEMATICS  1 Credit Hour
(Repeatable for credit)Techniques and problems in the teaching of college-level mathematics. Student presentations of mathematical papers and colloquia will be included.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

MATH 70995  SELECTED TOPICS IN STATISTICS AND PROBABILITY  1-3 Credit Hours
(Repeatable for credit)Contents will vary with each offering and will complement topics covered in MATH 6/70051, 6/70052 and MATH 6/70061, 6/70062.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

MATH 71001  STRUCTURE OF RINGS AND ALGEBRAS I  3 Credit Hours
Advanced topics in ring theory, including Artinian rings, Noetherian rings, advanced commutative ring theory.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 71002  STRUCTURE OF RINGS AND ALGEBRAS II  3 Credit Hours
Advanced topics in ring theory including an introduction to homological algebra. Includes Dedekind domains, regular rings, torsion theory.
Prerequisite: MATH 71001 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 71011  ADVANCED GROUP THEORY  3 Credit Hours
Advanced topics in group theory. Topics include permutation arguments, coprime actions, transfer theorems, nonsimplicity criteria. Properties of families of groups: solvable, p solvable, nilpotent, p groups.
Prerequisite: MATH 6/71051 and MATH 6/71052 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 71012  CHARACTERS OF FINITE GROUPS  3 Credit Hours
Development of characters of finite groups, their properties, orthogonality relations, integrality conditions. Applications include Burnside's paqb theorem and existence of Frobenius kernels in Frobenius groups.
Prerequisite: MATH 6/71051 and MATH 6/71052 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 71051  ABSTRACT ALGEBRA I  4 Credit Hours
Advanced topics in group theory including Sylow theorems, finite Abelian groups, divisible groups and related concepts. Includes one-hour problem session each week.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 71052  ABSTRACT ALGEBRA II  3 Credit Hours
Advanced topics, commutative ring theory, and field theory including polynomial rings, unique factorization, domains, matrix rings, Galois theory.
Prerequisite: MATH 6/71051 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 71091  SEMINAR IN ALGEBRA  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in algebra.
Prerequisite: Permission and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 71095  SELECTED TOPICS IN ALGEBRA  1-3 Credit Hours
(Repeatable for credit)Contents will vary with each offering and will complement topics covered in MATH 6/71051,6 71052 71001 and 71002.
Prerequisite: Permission and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter-S/U

MATH 72001  FUNCTIONAL ANALYSIS I  3 Credit Hours
A study of principles of linear analysis in the setting of normed linear spaces and topological vector spaces.
Prerequisite: MATH 72002 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72002  FUNCTIONAL ANALYSIS II  3 Credit Hours
A study of principles of linear analysis in the setting of normed linear spaces and topological vector spaces.
Prerequisite: MATH 72001 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MATH 72041 METHODS OF APPLIED MATHEMATICS I  3 Credit Hours
Prerequisite: MATH 51021 and MATH 52041 and MATH 52045 and MATH 52048 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72042 METHODS OF APPLIED MATHEMATICS II  3 Credit Hours
Prerequisite: MATH 6/72041 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72051 FUNCTIONS OF A REAL VARIABLE I  4 Credit Hours
Introduction to modern concepts of real analysis including metric spaces, measure and integration theory.
Prerequisite: MATH 4/52002 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 72052 FUNCTIONS OF A REAL VARIABLE II  3 Credit Hours
A continuation of MATH 62051/72051. Included are basic topics in functional analysis and Hilbert space theory.
Prerequisite: MATH 6/72051 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72091 SEMINAR IN REAL ANALYSIS  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in real analysis.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 72095 SELECTED TOPICS IN REAL ANALYSIS  1-3 Credit Hours
(Repeatable for credit)Contents will vary with each offering and will complement topics covered in MATH 6/72151, 6/72152 and 72021.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 72151 FUNCTIONS OF A COMPLEX VARIABLE I  4 Credit Hours
(Slashed with MATH 62151) Topological properties of the complex plane; analytic, entire, meromorphic functions; analytic continuation; conformal mappings; Picard's theorem; Riemann surfaces.
Prerequisite: MATH 52002; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 72152 FUNCTIONS OF A COMPLEX VARIABLE II  3 Credit Hours
(Slashed with MATH 62152) Topological properties of the complex plane; analytic, entire, meromorphic functions; analytic continuation; conformal mappings; Picard's theorem; Riemann surfaces.
Prerequisite: MATH 72151; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72191 SEMINAR IN COMPLEX ANALYSIS  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in complex analysis.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

MATH 72195 SELECTED TOPICS IN COMPLEX ANALYSIS  1-3 Credit Hours
(Repeatable for credit)Contents will vary with each offering and will complement topics covered in MATH 6/72151, 6/72152 and 72021.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 72203 COMPUTATIONAL FINANCE  3 Credit Hours
(Slashed with MATH 62203) Basic numerical methods, (numerical linear algebra, nonlinear equations, curve fitting, ODEs, integration, Monte-Carlo methods) numerical solution of PDEs (stability, convergence, Black-Scholes, American options, SDEs) probabilistic methods.
Prerequisite: MATH 22005 and MATH 21001 and MATH 32044 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72251 NUMERICAL ANALYSIS I  4 Credit Hours
(Cross-listed with CS 62251 and CS 72251 and MATH 62251) Floating point computation, rounding error analysis, conditioning, interpolation (polynomial, trigonometric spline). Numerical quadrature (Newton-Cotes, Gauss), extrapolation, Romberg integration.
Prerequisite: MATH 4/52002 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

MATH 72252 NUMERICAL ANALYSIS II  3 Credit Hours
Prerequisite: MATH 4/51021 and MATH 6/72251 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MATH 72261  NUMERICAL SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS  3 Credit Hours
(Cross-listed with CS 62261 and CS 72261 and MATH 62261)
Prerequisite: MATH 32044 and MATH 4/52202 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72262  NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATIONS  3 Credit Hours
(Cross-listed with CS 62262 and CS 72262 and MATH 62262) Derivation and analysis of discrete methods (finite differences, finite elements) for the numerical solution of elliptic, hyperbolic and parabolic partial differential equations.
Prerequisite: MATH 42045 or 52045; and MATH 42202 or 52202; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72263  NUMERICAL SOLUTION OF LARGE SPARSE LINEAR SYSTEMS  3 Credit Hours
Prerequisite: MATH 4/51021 and MATH 4/52202 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72264  NUMERICAL SOLUTION OF NONLINEAR SYSTEMS  3 Credit Hours
(Cross-listed with CS 62264 and CS 72264 and MATH 72264) Construction and analysis of numerical methods for systems of nonlinear algebraic equations and optimization problems. Numerical implementation and software.
Prerequisite: MATH 4/52041 and MATH 4/52202 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 72391  SEMINAR IN MEASURE THEORY  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in measure theory.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 72491  SEMINAR IN NONLINEAR ANALYSIS  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in nonlinear analysis.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 72591  SEMINAR IN OPERATOR THEORY  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in operator theory.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 72691  SEMINAR IN HARMONIC ANALYSIS  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in harmonic analysis.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 73291  SEMINAR IN APPLIED MATHEMATICS  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in applied mathematics.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 76051  INTRODUCTION TO TOPOLOGY I  4 Credit Hours
Set theory, topological spaces, continuity, product spaces, quotient spaces separation axioms, compactness and metrizability.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter-S/U

MATH 76052  INTRODUCTION TO TOPOLOGY II  3 Credit Hours
Geometric topology, including connectedness, continua, homotopy, the plane and 2 manifolds.
Prerequisite: MATH 6/76051 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 76091  SEMINAR IN TOPOLOGY  1-3 Credit Hours
(Repeatable for credit)Seminar on current research in topology.
Prerequisite: Permission and doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U
MATH 76095  SELECTED TOPICS IN TOPOLOGY  1-3 Credit Hours
(Repeatable for credit) Contents will vary with each offering and will complement topics covered in MATH 6/76051, 6/76052, 76001 and 76002.
Prerequisite: Permission and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

MATH 77111  ALGEBRAIC NUMBER THEORY  3 Credit Hours
Number fields and Dedekind domains; conjugates, norm and trace, discriminant, integral bases; arithmetic or quadratic and cyclotomic number fields; theory of ideals and class group; Dirichlet's theorem on units.
Prerequisite: MATH 57011 and MATH 6/72151 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 77011  ALGEBRAIC NUMBER THEORY  3 Credit Hours
Number fields and Dedekind domains; conjugates, norm and trace, discriminant, integral bases; arithmetic or quadratic and cyclotomic number fields; theory of ideals and class group; Dirichlet's theorem on units.
Prerequisite: MATH 57011 and MATH 6/72151.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MATH 77091  SEMINAR IN NUMBER THEORY  1-3 Credit Hours
(Repeatable for credit) Seminar on current research in number theory.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U

MATH 77095  SELECTED TOPICS IN MATHEMATICS  1-3 Credit Hours
(Repeatable for credit) Contents will vary with each offering.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

MATH 77098  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation. Credits are applied toward degree requirements with approval if letter grade of "S" is given.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory/IP

MATH 87199  DISSERTATION I  15 Credit Hours
(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.
Prerequisite: Admission to doctoral candidacy and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory/IP

Department of Modern and Classical Language Studies

American Sign Language (ASL)

ASL 19201  ELEMENTARY AMERICAN SIGN LANGUAGE I  4 Credit Hours
Introduction to American Sign Language and the culture of the American signing community, in an immersion setting.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

ASL 19202  ELEMENTARY AMERICAN SIGN LANGUAGE II  4 Credit Hours
A continuation of the introduction to American Sign Language and the culture of the American signing community, in an immersion setting.
Prerequisite: ASL 19201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

ASL 19401  EXPLORATION OF DEAF CULTURE  3 Credit Hours
Introduction to the American Deaf Community and its culture. Topics include myths and facts about deafness, cultural norms, basic history of American Sign Language, issues of language and cultural oppression, history of education of deaf and hard-of-hearing individuals, legal rights and advocacy.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Grade Mode</th>
<th>Contact Hours</th>
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<tr>
<td>ASL 29201</td>
<td>INTERMEDIATE AMERICAN SIGN LANGUAGE I</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
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<td>Continued development of receptive and expressive</td>
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<td>skills in American Sign Language and an</td>
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<td>introduction to ASL grammar, using a</td>
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<td>bilingual-bicultural approach and interaction</td>
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<td>with deaf organizations.</td>
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<td>Prerequisite:</td>
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<td>Contact Hours:</td>
<td>3 lecture</td>
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<td>ASL 29202</td>
<td>INTERMEDIATE AMERICAN SIGN LANGUAGE II</td>
<td>3</td>
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<td>3 lecture</td>
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<td>Continuation of ASL 29201 with an emphasis on</td>
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<td>greater exploration of American Sign Language</td>
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<td>sentence structure using a bilingual-bicultural</td>
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<td>approach. Students are involved in a community</td>
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<td>service project, providing a hands-on</td>
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<td>experience with using ASL within a community</td>
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<td>Prerequisite:</td>
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<td>Schedule Type:</td>
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<td>Contact Hours:</td>
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<td>ASL 29212</td>
<td>APPLIED AMERICAN SIGN LANGUAGE GRAMMAR</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
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<td>Provides students with intensive instruction and</td>
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<td>practice in grammar to help intermediate students</td>
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<td>express complex ideas using American Sign Language</td>
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<td>Contact Hours:</td>
<td>3 lecture</td>
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<td>ASL 29213</td>
<td>FINGERSPELLING, NUMBERS AND DEPICTION</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
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<td>Provides intermediate students with intensive</td>
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<td>instruction and practice in technical aspects of</td>
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<td>American Sign Language, including fingerspelling,</td>
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<td>numbers, and depiction, and provides</td>
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<td>opportunities for students to incorporate these</td>
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<td>skills in spontaneous conversations.</td>
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<td>Grade Mode:</td>
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<tr>
<td>ASL 39095</td>
<td>SPECIAL TOPICS IN AMERICAN SIGN LANGUAGE</td>
<td>1-3</td>
<td>Writing Intensive Course</td>
<td>1-3 lecture</td>
<td>Seminar</td>
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<td>(Repeatable for credit for maximum 9 hours)</td>
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<td>Special topics course in American Sign Language,</td>
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<td>the topic of which varies. Precise titles and</td>
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<td>descriptions appear in the schedule of classes.</td>
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<td>Prerequisite:</td>
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<td>Contact Hours:</td>
<td>1-3 lecture</td>
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<td>ASL 39201</td>
<td>ADVANCED AMERICAN SIGN LANGUAGE I</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
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<td>Students enhance receptive and expressive</td>
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<td>proficiency in an immersion setting through the</td>
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<td>use of both planned and impromptu in-class</td>
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<td>discussion of current and historic events and</td>
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<td>involvement in a community service project.</td>
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<td>Prerequisite:</td>
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<tr>
<td>Contact Hours:</td>
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<td>3</td>
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<td></td>
<td>Students continue to increase their receptive and</td>
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<td></td>
<td>expressive proficiency in American Sign Language</td>
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<td>in an immersion setting, through in-class formal</td>
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<td>and informal presentations, discussions of</td>
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<td>current and historical events, and working in</td>
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<td>groups to complete a semester project and a</td>
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<td></td>
<td>community service project.</td>
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<td>ASL 39223</td>
<td>SOCIOLINGUISTICS OF THE DEAF COMMUNITY (WIC)</td>
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<td>3 lecture</td>
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<td>Provides an introduction to the sociolinguistics</td>
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<td></td>
<td>of American Sign Language (ASL) and the Deaf</td>
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<td></td>
<td>Community: A study of ASL within a social context</td>
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<td>Topics include: multilingualism, variation</td>
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<td></td>
<td>(related to region, ethnicity, class and age),</td>
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<td>bilingualism and language contact, language</td>
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<td>policy and planning and language attitudes. This</td>
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<td>course is taught in English. Knowledge of ASL is</td>
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<td></td>
<td>helpful but not necessary.</td>
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<td>Prerequisite:</td>
<td>Junior standing; and special approval.</td>
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<td>3 lecture</td>
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<td>Grade Mode:</td>
<td>Standard Letter</td>
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<tr>
<td>Attributes:</td>
<td>Writing Intensive Course</td>
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<tr>
<td>ASL 49091</td>
<td>SEMINAR IN AMERICAN SIGN LANGUAGE LINGUISTICS</td>
<td>3</td>
<td>Experiential Learning Requirement</td>
<td>3 lecture</td>
<td>Seminar</td>
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<td>(Repeatable twice for credit) Provides an in-depth</td>
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<td>treatment of an American Sign Language</td>
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<td>linguistics-related topic.</td>
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<td>Prerequisite:</td>
<td>ASL 49108 with minimum C grade and special</td>
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<td>Standard Letter</td>
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<tr>
<td>ASL 49092</td>
<td>PRACTICUM IN AMERICAN SIGN LANGUAGE (ELR)</td>
<td>1-3</td>
<td>Experiential Learning Requirement</td>
<td>1-3 lecture</td>
<td>Practicum or Internship</td>
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<tr>
<td></td>
<td>In consultation with the ASL program</td>
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<td>coordinator, ASL students design a practicum</td>
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<td>experience related to signed languages and their</td>
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<td>communities. Successful presentation of</td>
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<td>cumulative portfolio required prior to</td>
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<td>ASL 49096</td>
<td>INDIVIDUAL INVESTIGATION</td>
<td>2-3</td>
<td>Experiential Learning Requirement</td>
<td>2-3 lecture</td>
<td>Individual Investigation</td>
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<td>(Repeatable for credit) (Cross-listed with</td>
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<td></td>
<td>SPED 43996) Individual investigation of problems</td>
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<td>in American Sign Language, ASL pedagogy and</td>
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<td></td>
<td>deaf culture.</td>
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<td>Prerequisite:</td>
<td>Departmental permission.</td>
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<td>Schedule Type:</td>
<td>Individual Investigation</td>
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<td>Contact Hours:</td>
<td>2-3 other</td>
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<td>Grade Mode:</td>
<td>Standard Letter-IP</td>
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</table>
ASL 49108  AMERICAN SIGN LANGUAGE LINGUISTICS I  3 Credit Hours
(Cross-listed with SPED 43108/53108) Lecture, discussion and application course designed to introduce students to basic linguistic terminology and concepts, as applied to American Sign Language (ASL) and taught using a bilingual-bicultural approach. Both ASL and English are used in the instruction of this class. Successful presentation of cumulative portfolio is required prior to registration in this course.
Prerequisite: ASL 29202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ASL 49109  AMERICAN SIGN LANGUAGE LINGUISTICS II  3 Credit Hours
Through lecture, in-class and out-of-class activities, and in-class presentations, students discuss, use, and respond to varied sentence structures and types of discourse in ASL, and compare these to English. Class is predominantly taught in ASL, but may at times use a bilingual approach.
Prerequisite: ASL 49108 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ASL 49201  ADVANCED PROFICIENCY  3 Credit Hours
Students improve knowledge and use of American Sign Language and experiential knowledge of ASL culture through development, production, critique, revision and evaluation of an extended ASL presentation. This is an immersion class; voicing will not be used.
Prerequisite: ASL 39202 and score of intermediate level on the Signing Competency Proficiency Interview.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ASL 49309  INTRODUCTION TO DEAF STUDIES (ELR) (WIC)  3 Credit Hours
Survey course designed to provide informational base and understanding of the unique experiences of Deaf people as a cultural minority. Course includes a discussion of: the history of deaf education, etiology and prevalence data, service delivery systems, the process of diagnosis and discovery of hearing loss, issues associated with assessment, and the various communication systems used by deaf individuals. Specifically, topics discussed will include historical, medical, and cultural perspectives regarding the interactions between Deaf and hearing cultural groups and the resulting impact on social, academic-educational, and vocational experiences of deaf children, adults, and their families.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

ASL 49350  AMERICAN SIGN LANGUAGE LITERATURE  3 Credit Hours
Through the use of multimedia resources, student explore the evolution of deaf literature, its historical context and multiple perspectives, and the techniques specific to ASL which make it unique. Conducted primarily in ASL, with some voicing and printed English.
Prerequisite: ASL 39201 and 49309 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ASL 49401  DEAF CULTURE AND COMMUNITY  3 Credit Hours
(Slashed with SPED 53101) Students explore the different voices and perspectives which have been, and are, present within the deaf community, issues of controversy, myths and data, using a mix of ASL and English materials and discussion. Successful presentation of cumulative portfolio required prior to registration.
Prerequisite: ASL 29202 and 49309 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ASL 49601  ACTIVITY DESIGN, IMPLEMENTATION AND EVALUATION  3 Credit Hours
Student improve receptive and expressive skills and develop ability to analyze and break down specific ASL skills into more basic components; voicing is not used. In addition to classroom time, a minimum of 90 minutes per week working in the KSU ASL lab and/or (with permission) off-campus site.
Prerequisite: ASL 39202 and passage of the Signing Competency Proficiency Interview at an intermediate level.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Arabic (ARAB)

ARAB 11101  ELEMENTARY ARABIC I  4 Credit Hours
Students develop ability to communicate on familiar topics in culturally appropriate ways using Modern Standard Arabic and colloquialisms of at least one dialect. They learn grammatical structures and vocabulary to enable them to function in the Novice range and develop a few abilities in the Intermediate range.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

ARAB 11102  ELEMENTARY ARABIC II  4 Credit Hours
Students develop ability to communicate on familiar topics in culturally appropriate ways using Modern Standard Arabic and colloquialisms of at least one dialect. They learn grammatical structures and vocabulary to enable them to function near the Intermediate range level.
Prerequisite: ARAB 11101.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

ARAB 21201  INTERMEDIATE ARABIC I  3 Credit Hours
Development of speaking, listening, reading and writing skills. Students accomplish real-world communicative tasks in culturally appropriate ways using Modern Standard Arabic and colloquialisms of at least one dialect. Students gain increased familiarity with products, practices, and perspectives of target culture(s). They learn grammatical structures and vocabulary to enable them to function near the Intermediate range level in a number of areas.
Prerequisite: ARAB 11102.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<td>ARAB 21201</td>
<td>INTERMEDIATE ARABIC I</td>
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<td>ARAB 30095</td>
<td>SPECIAL TOPICS IN ARABIC CULTURE AND LANGUAGE</td>
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<td>ARAB 31301</td>
<td>ADVANCED INTERMEDIATE ARABIC I</td>
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<td>ARAB 31302</td>
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<td>ARAB 37231</td>
<td>TRANSLATION PRACTICE: ARABIC</td>
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<td>ARAB 37240</td>
<td>CONVERSATION FOR BUSINESS AND SPECIAL PURPOSES:</td>
<td>3</td>
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<td>ARAB 41096</td>
<td>INDIVIDUAL INVESTIGATION</td>
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<td>ARAB 41201</td>
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<td>ARAB 41301</td>
<td>ARABIC CULTURE</td>
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<td>ARAB 41302</td>
<td>BUSINESS ARABIC</td>
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<td>Standard Letter</td>
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<td>ARAB 47230</td>
<td>ADVANCED TRANSLATION PRACTICE: ARABIC</td>
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<td>Standard Letter</td>
<td>Lecture</td>
<td>3 lecture</td>
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ARAB 37231: Translation practice with Arabic texts using principles and techniques learned in the lecture class. Corequisites: TRST 30230.

ARAB 31301: Continuation of the study of Modern Standard Arabic and colloquial Arabic in the context of Arab cultures. Further development of listening, speaking, reading and writing skills, using a variety of cultural materials.

ARAB 31302: Developing skills of reading, writing, speaking and understanding, this course enhances students' ability to express simple and compound sentences related to everyday activities; examine differences between present, past and future tenses; write assignments using a variety of writing techniques, i.e., describing geographical places, narrating an event, arguing against or for something, and reflecting on news reports; improve students understanding of the world around them using authentic materials on a variety of topics in Modern Standard Arabic; practice the use of grammatical structures and build new vocabulary related to Arab culture and social life in an attempt to improve students' ability to understand texts and express their ideas at an advanced level.

ARAB 41096: Individual study supervised by a faculty member on an approved topic dealing with Arabic language and/or culture. (Repeatable for a total of 6 credit hours)

ARAB 41201: Emphasis is on building active vocabulary for comprehension, reading authentic texts, writing of connected discourse and the development of higher levels of conversational proficiency.

ARAB 41202: Enhancing students' ability to speak, understand and write analytically; refining students' ability to use conjunctives and logical connectives at a higher level; understanding stylistic features such as tone, register, figures of speech (i.e., irony, metaphor, simile, alliteration, etc), phrase, clause, sentence and idiomatic structures; enhancing students' ability to use appropriate techniques in descriptive, argumentative, expository writing.

ARAB 41301: Survey of the Arab world covering its geographical, ethnic, religious, and linguistic diversity and the roots of its current socio-cultural context.

ARAB 41302: Study of the business protocol, language functions, texts and vocabulary associate with travel and business in the Arabic-speaking world.

ARAB 47230: Theory and practice course that discusses translation theory and emphasizes Arabic-English translation of selected texts in business, technology, medicine and law. Prerequisites: ARAB 37231
ARAB 47240 BUSINESS AND SPECIAL TEXTS: ARABIC 3 Credit Hours
Introduction to the special vocabulary of business and other special subject areas. Introduces the concept of language for special purposes and emphasizes the use of special vocabulary in business and other settings.
Prerequisite: ARAB 37240.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARAB 67010 PRACTICE OF ARABIC TRANSLATION 2 Credit Hours
Introductory course in which students translate a variety of non-specialized, non-fiction short texts in different domains, identify the most common semantic, syntactic, stylistic, cultural, and discourse-level problems encountered in translation, and apply appropriate cognitive strategies.
Prerequisite: graduate standing.
Pre/corequisite: TRST 60010 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

ARAB 67098 RESEARCH 1-15 Credit Hours
Research or individual investigation for Master's level graduate students. Credit earned may be applied towards degree requirements if department approves. Prerequisites: Graduate Standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter

ARAB 67240 LITERARY AND CULTURAL TRANSLATION 3 Credit Hours
Translation of documents from a variety of literary and cultural sources, including literature, expository and journalistic prose, speeches and essays in and from Arabic.
Prerequisite: ARAB 67010 and TRST 60010 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARAB 67250 COMMERCIAL, LEGAL AND DIPLOMATIC TRANSLATION 3 Credit Hours
Translating a variety of commercial, financial and legal texts, with special emphasis on text-types most generally translated by professional translators; examining diplomatic texts to understand the language of diplomacy and find the best way to translate it into the target language. Texts subjected for translation from Arabic into English and English into Arabic include: employment contracts, articles of incorporation, annual financial statements, diplomatic or official notes, presidential speeches, and international business articles. Prerequisites: TRST 60010 and ARAB 67010 and graduate standing.
Prerequisite: TRST 60010 and ARAB 67010 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARAB 67251 SCIENTIFIC, TECHNICAL AND MEDICAL TRANSLATION 3 Credit Hours
Introducing methods and resources for the translation of scientific, technical, industrial and medical documents; translating a variety of scientific and medical texts, with special emphasis on text-types most generally translated by professional translators. Prerequisites: ARAB 67010 and TRST 60001 and TRST 60010 and Graduate standing.
Prerequisite: TRST 60010 and TRST 60001 and 60010 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ARAB 67979 TRANSLATION CASE STUDY 3 Credit Hours
Students are responsible for a major translation and a terminology glossary as well as a critical analysis of the source text, the problems encountered during the translation process and the strategies used to solve them.
Prerequisite: graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U-IP

Chinese (CHIN)

CHIN 15101 ELEMENTARY CHINESE I 4 Credit Hours
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

CHIN 15102 ELEMENTARY CHINESE II 4 Credit Hours
A continuation of the introduction to Mandarin Chinese in the context of modern Chinese-speaking cultures.
Prerequisite: CHIN 15101.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CHIN 25201 INTERMEDIATE CHINESE I 4 Credit Hours
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials.
Prerequisite: CHIN 15102.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

CHIN 25202 INTERMEDIATE CHINESE II 4 Credit Hours
Continuation of CHIN 25201.
Prerequisite: CHIN 25201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

CHIN 30095 SPECIAL TOPICS 3 Credit Hours
(Repeatable for credit) Topic to be announced in schedule of classes.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CHIN 35201 ADVANCED INTERMEDIATE CHINESE I 5 Credit Hours
Continuation of Intermediate Chinese II. Emphasis is on building active vocabulary for comprehension, reading authentic texts, writing of connected discourse and the development of conversational proficiency.

Prerequisite: CHIN 25202.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

CHIN 35202 ADVANCED INTERMEDIATE CHINESE II 5 Credit Hours
Continuation of Advanced Intermediate Chinese I. Emphasis is on building active vocabulary for comprehension, reading authentic texts, writing of connected discourse and the development of conversational proficiency. Prerequisite: CHIN 35201

Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

CHIN 35211 INTENSIVE CHINESE CONVERSATION 3 Credit Hours
This course increases students' knowledge of Chinese vocabulary and sentence structure; emphasis will be on developing fluency and oral proficiency in Chinese.

Prerequisite: CHIN 25202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHIN 35221 CHINESE IN THE REAL WORLD 3 Credit Hours
This course focuses on how the Chinese language varies by social and cultural contexts. The instructor will utilize different socially and culturally relevant topics to help students master the structures, vocabulary, and idiomatic expressions commonly used in formal and informal situations. Students will be systematically exposed to the distinguishing features of written and spoken Chinese in terms of language form, function, and communication.

Prerequisite: CHIN 25202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHIN 45201 ADVANCED CHINESE I 5 Credit Hours
Continuation of Intermediate Chinese II. Emphasis is on building active vocabulary for comprehension, reading authentic texts, writing of connected discourse and the development of higher levels of conversational proficiency.

Prerequisite: CHIN 35202.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

CHIN 45202 ADVANCED CHINESE II 5 Credit Hours
Continuation of Advanced Chinese I.

Prerequisite: CHIN 45201.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

CHIN 45301 CHINESE CULTURE 3 Credit Hours
Survey of Chinese culture including ethnic, religious, and linguistic diversity and the roots of China's current socio-cultural context.

Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHIN 45302 BUSINESS CHINESE 3 Credit Hours
Study of the business protocol, language functions, texts and vocabulary associated with travel and business in the Chinese-speaking world.

Prerequisite: CHIN 35202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHIN 45322 CHINESE FICTION 3 Credit Hours
This course emphasizes speaking and reading skills in Chinese through selected stories and anecdotes including sayings from classical philosophers, folk tales, legends, and great works of literature.

Prerequisites: CHIN 25202
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CHIN 45323 CHINESE COMPOSITION 3 Credit Hours
This course focuses on studying modern and classical forms of Chinese literature written by acknowledged masters. Through studying these works, students improve their understanding of Chinese literature, open avenues of thought, broaden their vocabulary, master basic rules and techniques of writing, and develop the ability to write with eloquence and skill.

Prerequisite: CHIN 25202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Classics (CLAS)

CLAS 21201 ENGLISH WORDS FROM CLASSICAL ELEMENTS 3 Credit Hours
Building of English vocabulary through study of basic roots from Latin and Greek; prefixes, suffixes, rules for accent and pronunciation; specialized scientific and legal terminology.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 21404 THE GREEK ACHIEVEMENT (DIVG) (KHUM) 3 Credit Hours
A survey of the cultural achievements of the ancient Greeks as manifested in their poetry, philosophy, history and art from the Homeric period through the New Testament.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, Transfer Module Humanities
CLAS 21405  THE ROMAN ACHIEVEMENT (DIVG) (KHUM)  3 Credit Hours
A survey of the cultural achievements of the ancient Romans as manifested in their literature and art from the Etruscans through the Christians.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, Transfer Module Humanities

CLAS 21406  SPORT AND ANCIENT DAILY LIFE  3 Credit Hours
Investigation of the development of combat sports in the ancient world and the culture in which they evolved. Also emphasized is the development from amateur athletics in the Greek world to the Roman professional gladiators and charioteers.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 40793  VARIABLE TITLE WORKSHOP IN CLASSICS  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in specific areas of classical studies.
Prerequisite: Departmental permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

CLAS 41005  HISTORY OF ANCIENT GREECE  3 Credit Hours
(Slashed with CLAS 51005) Survey of Greek history from the Bronze Age to the rise of Macedonia and Alexander the Great.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41006  ROMAN HISTORY  3 Credit Hours
(Cross-listed with HIST 41006) A survey of Roman history from its beginnings to the fall of the Roman Empire.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41092  FIELD EXPERIENCE IN CLASSICS (ELR)  1-4 Credit Hours
(Repeatable for a maximum of 7 credit hours if the destination differs) Travel-based study/field experience in Classics at a site or sites away from Kent State University under the supervision of members of the Classics faculty. The primary purpose is the observation and study of artifacts, monuments and sites which pertain to Classical antiquity. Examples of travel/study include field trips to museums, study trips to Rome or other cites and participation in an archaeological field school.
Prerequisite: none.
Schedule Type: Field Experience
Contact Hours: 1-4 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

CLAS 41095  SPECIAL TOPICS IN CLASSICS  3 Credit Hours
(Repeatable for a maximum of 6 credit hours) (Cross-listed with CLAS 51095) Topic announced in the schedule of classes.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(repeatable for a total of 9 hours) investigation of problems in archaeology, mythology and ancient comparative literature.
Prerequisite: Departmental permission.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

CLAS 41097  COLLOQUIUM IN CLASSICS  3 Credit Hours
(Repeatable for credit) (Cross-listed with CLAS 51097) Detailed study of an aspect of antiquity that engages issues of current interest, for example women in antiquity, ancient Christianity, multiculturalism in antiquity.
Prerequisite: None.
Schedule Type: Colloquium
Contact Hours: 3 other

CLAS 41301  CLASSICAL MYTHOLOGY  3 Credit Hours
(Cross-listed with CLAS 51301) Assessment of major streams of ancient mythology stressing broad humanistic concepts of religion, philosophy and literature.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41304  LATIN LITERATURE IN TRANSLATION (ELR) (WIC)  3 Credit Hours
(Cross-listed with CLAS 51304) Major works of Latin literature, studied in their historical context by genre; knowledge of Latin not required. Authors read include Plautus, Terence, Lucretius, Cicero, Catullus, Vergil, Horace, Petronius, Seneca, Suetonius, Tacitus and Juvenal.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

CLAS 41305  CLASSICAL LITERARY STUDIES  3 Credit Hours
(Repeatable for a maximum of 12 credit hours) (Cross-listed with CLAS 51035) Study of a particular literary genre. Topics are individually designed to provide instruction and training of a specific genre of Greek or Roman literature.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CLAS 41401  GREEK ARCHAEOLOGY AND ART  3 Credit Hours
(Slashed with CLAS 51401, Cross-listed with ARTH 42031 and ARTH 52031) Introduction to archaeology of the Greek world with emphasis on recent discoveries and their impact on the study of Greek art, architecture and sculpture through the Hellenistic period.
Prerequisite: Junior or Senior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41402  ROMAN ARCHAEOLOGY AND ART  3 Credit Hours
(Slashed with CLAS 51402, Cross-listed with ARTH 42032 and ARTH 52032) Introduction to archaeology of the Roman world with emphasis on recent discoveries and their impact on the study of Etruscan and Roman art, architecture and sculpture through the Imperial period.
Prerequisite: Junior or Senior Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41404  ANCIENT CHRISTIANITIES  3 Credit Hours
In-depth examination of the formative period of Christianity and the diverse “Christiainities” during the first 100 years after the death of Jesus of Nazareth, including the Judaic context for the birth of Christianity, diversity among the earliest Christian communities, and the process by which the New Testament canon was formed. Study of a variety of texts produced by the early church.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 41503  GREEK LITERATURE IN TRANSLATION (ELR) (WIC)  3 Credit Hours
(Cross-listed with CLAS 51503) Major works of Greek literature, studied in their historical context and by genre knowledge of Greek is not required.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

CLAS 50793  VARIABLE TITLE WORKSHOP IN CLASSICS  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in specific areas of classical studies.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

CLAS 51005  HISTORY OF ANCIENT GREECE  3 Credit Hours
(Slashed with CLAS 41005) Survey of Greek history from the Bronze Age to the rise of Macedonia and Alexander the Great.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51006  ROMAN HISTORY  3 Credit Hours
(Cross-listed with HIST 51006) (Slashed with CLAS 41006, HIST 41006 and HIST 71006) A survey of Roman history from its beginnings to the fall of the Roman Empire.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51092  FIELD EXPERIENCE IN CLASSICS  1-4 Credit Hours
(Repeatable for a maximum of 7 credit hours if destination differs) (Cross-listed with CLAS 41092) Travel-based study/field experience in Classics at a site or sites away from Kent State University under the supervision of members of the Classics faculty. The primary purpose is the observation and study of artifacts, monuments and sites which pertain to Classical antiquity. Examples of travel/study include field trips to museums, study trips to Rome or other cites and participation in an archaeological field school.
Prerequisite: graduate standing.
Schedule Type: Field Experience
Contact Hours: 1-4 other
Grade Mode: Standard Letter

CLAS 51095  SPECIAL TOPICS IN CLASSICS  3 Credit Hours
(Repeatable for a maximum of 6 credit hours) (Cross-listed with CLAS 41095) Topic announced in the schedule of classes.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51097  COLLOQUIUM IN CLASSICS  3 Credit Hours
(Repeatable for credit) (Cross-listed with CLAS 41097) Detailed study of an aspect of antiquity that engages issues of current interest, for example women in antiquity, ancient Christianity, multiculturalism in antiquity.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

CLAS 51301  CLASSICAL MYTHOLOGY  3 Credit Hours
(Cross-listed with CLAS 41301) Assessment of major streams of ancient mythology stressing broad humanistic concepts of religion, philosophy and literature.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51304  LATIN LITERATURE IN TRANSLATION  3 Credit Hours
(Cross-listed with CLAS 41304) Major works of Latin literature, studied in their historical context by genre; knowledge of Latin not required. Authors read include Plautus, Terence, Lucretius, Cicero, Catullus, Vergil, Horace, Petronius, Seneca and Juvenal.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CLAS 51305  CLASSICAL LITERARY STUDIES  3 Credit Hours
(Repeatable for a maximum of 12 credit hours) (Cross-listed with CLAS 41305) Study of a particular literary genre. Topics are individually designed to provide instruction and training of a specific genre of Greek or Roman literature.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51401  GREEK ARCHAEOLOGY AND ART  3 Credit Hours
(Slashed with CLAS 41401, Cross-listed with ARTH 42031 and ARTH 52031) Introduction to archaeology of the Greek world with emphasis on recent discoveries and their impact on the study of Greek art, architecture and sculpture through the Hellenistic period.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51402  ROMAN ARCHAEOLOGY AND ART  3 Credit Hours
(Slashed with CLAS 41402, Cross-listed with ARTH 42032 and ARTH 52032) Introduction to archaeology of the Roman world with emphasis on recent discoveries and their impact on the study of Etruscan and Roman art, architecture and sculpture through the Imperial period.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 51503  GREEK LITERATURE IN TRANSLATION  3 Credit Hours
(Cross-listed with CLAS 41503) Major works of Greek literature studied in their historical context and by genre; knowledge of Greek not required.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 61404  ANCIENT CHRISTIANITIES  3 Credit Hours
In-depth examination of the formative period of Christianity and the diverse "Christinities" during the first 100 years after the death of Jesus of Nazareth, including the Judaic context for the birth of Christianity, diversity among the earliest Christian communities, and the process by which the New Testament canon was formed. Study of a variety of texts produced by the early church.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CLAS 66398  RESEARCH  1-6 Credit Hours
(Repeatable for maximum 15 credit hours) Research, final project or individual investigation for Master's level students. Credits earned apply toward degree requirements if department approves.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Research
Contact Hours: 3-18 other
Grade Mode: Standard Letter-IP

French (FR)
FR 13201  ELEMENTARY FRENCH I  4 Credit Hours
An introduction to the French language in the context of Francophone cultures.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

FR 13202  ELEMENTARY FRENCH II  4 Credit Hours
A continuation of the introduction to the French language in the context of Francophone cultures.
Prerequisite: FR 13201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

FR 23201  INTERMEDIATE FRENCH I  3 Credit Hours
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials.
Prerequisite: FR 13202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 23202  INTERMEDIATE FRENCH II  3 Credit Hours
Continuation of FR 23201.
Prerequisite: FR 23201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33095  SELECTED TOPICS IN FRENCH  3 Credit Hours
(Repeatable for a maximum of 9 credit hours) Topic to be announced in the schedule of classes.
Prerequisite: FR 33211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33211  FRENCH CONVERSATION  3 Credit Hours
A course designed to enhance students' oral proficiency through instruction in facilitating conversation and the discussion of culture-based texts.
Prerequisite: FR 23202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33212  FRENCH COMPOSITION  3 Credit Hours
A course designed to develop writing and reading skills, and in particular to prepare students to read and write about French literature. Corequisite: FR 33214
Prerequisite: FR 23202; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
FR 33214  FRENCH COMPOSITION EXTENDED  2 Credit Hours
Designed to develop writing and reading skills, and in particular to prepare students to read and write about French literature. Corequisite: FR 33212.
Prerequisite: FR 23202 and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

FR 33215  FRENCH PHONETICS AND DICTION  3 Credit Hours
Study of sounds of French language and their relation to spelling; application of international phonetic alphabet to French. Study augmented by recordings.
Prerequisite: FR 33211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33337  INTRODUCTION TO FRENCH LITERARY PROSE (ELR) (WIC)  3 Credit Hours
Masterpieces of French literary prose from the seventeenth century to the present. Readings of representative major works, lectures, analyses. In French. This course may be used to satisfy the WIC graduation requirement with approval of major department. Prerequisite: FR 33212 and FR 33214 or permission.
Prerequisite: FR 33212 and FR 33214.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

FR 33335  INTRODUCTION TO FRENCH THEATRE (ELR) (WIC)  3 Credit Hours
Evolution of French dramatic literature from the middle ages to the present. Readings of representative major works, lectures, analyses. In French. This course may be used to satisfy the WIC graduation requirement with approval of major department. Prerequisite: FR 33212 and FR 33214 or permission.
Prerequisite: FR 33212 and FR 33214.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

FR 33212  FRENCH CIVILIZATION  3 Credit Hours
A survey of French history and culture from its beginnings to World War II. Taught in French.
Prerequisite: FR 33212.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33216  CONTEMPORARY FRENCH CULTURE  3 Credit Hours
A study of selected sociological, political, cultural or economic issues in the contemporary Francophone world. Prerequisite: FR 33212 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33211  FRENCH PHONETICS AND DICTION  3 Credit Hours
Study of sounds of French language and their relation to spelling; application of international phonetic alphabet to French. Study augmented by recordings.
Prerequisite: FR 33211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 33336  INTRODUCTION TO FRENCH POETRY (ELR) (WIC)  3 Credit Hours
Evolution of French poetry from the middle ages to the present. Readings of representative works with lectures analyses. In French.
Prerequisite: FR 33212.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course
FR 43230  ADVANCED TRANSLATION PRACTICE: FRENCH (WIC)  3 Credit Hours
Theory and practice course that discusses translation theory and emphasizes French-to-English translation of selected texts in business, technology, medicine and law.
Prerequisite: FR 33231.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

FR 43240  BUSINESS AND SPECIAL TEXTS: FRENCH (ELR)  3 Credit Hours
Survey of the typical text types of business in the French culture and language. Practice sessions focus on reading and understanding specialized texts and on the translation and composition of selected special texts in French.
Prerequisite: FR 33212.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

FR 43368  THE TWENTIETH-CENTURY FRENCH NOVEL  3 Credit Hours
Studies of selected 20th century French novels, with detailed study of the novel of one or several major writers or movements.
Prerequisite: 6 semester hours from the 33330-level.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 43369  TWENTIETH-CENTURY FRENCH POETRY  3 Credit Hours
(Cross-listed with FR 53369) A study of selected poetry of Apollinaire, Breton, Mansour, Eluard, Michaux, Char, Reverdy, Ponge, Guillevic, Jabes, Bonnefoy, Dupin, Albiach and others. Emphasis is placed on the relationship between poetry and the visual arts in the 20th century.
Prerequisite: 6 semester hours from FR 33330-level.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 43370  THE TWENTIETH-CENTURY FRENCH THEATRE  3 Credit Hours
(Cross-listed with FR 53370) Studies in French drama since 1900.
Prerequisite: 6 hours from 33330-level and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 53216  CONTEMPORARY FRENCH CULTURE  3 Credit Hours
(Cross-listed with FR 43216) A study of selected sociological, political, cultural or economic issues in the contemporary Francophone world.
Prerequisite: Graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 53368  20TH-CENTURY FRENCH NOVEL  3 Credit Hours
Study of selected 20th century French novels, with emphasis on one or several major writers or movements.
Prerequisite: 6 hours from 33330-level and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 53369  20TH-CENTURY FRENCH POETRY  3 Credit Hours
(Cross-listed with FR 43369) A study of selected poetry of Apollinaire, Breton, Mansour, Eluard, Michaux, Char, Reverdy, Ponge, Guillevic, Jabes, Bonnefoy, Dupin, Albiach and others. Emphasis is placed on the relationship between poetry and the visual arts in the 20th century.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture

FR 53370  20TH-CENTURY FRENCH THEATRE  3 Credit Hours
(Cross-listed with FR 43370) Studies in French drama since 1900.
Prerequisite: 6 hours from 33330-level and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

FR 63010  THE PRACTICE OF FRENCH TRANSLATION  2 Credit Hours
Students apply linguistic and communication science concepts to case studies of language mediation.
Prerequisite: Graduate standing.
Corequisite: TRST 60010.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

FR 63093  VARIABLE TITLE WORKSHOP IN FRENCH  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in specific areas of French studies.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

FR 63098  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits earned applied toward degree requirements if department approves.
Prerequisite: Special approval and graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP

FR 63199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Grade Mode</th>
<th>Contact Hours</th>
<th>Prerequisite</th>
<th>Schedule Type</th>
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<tbody>
<tr>
<td>FR 63201</td>
<td>READING FRENCH FOR GRADUATE STUDENTS</td>
<td>4</td>
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<td>4 lecture</td>
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<td>Lecture</td>
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<td></td>
<td>Introduction to the fundamentals of French grammar for graduate students. Practice in reading and translation.</td>
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<td>Grade Mode: Lecture</td>
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<td>Prerequisite: Graduate standing.</td>
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<td>Schedule Type: Lecture</td>
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<td></td>
<td>Contact Hours: 4 lecture</td>
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<td>Contact Type: Masters Thesis</td>
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<td></td>
<td>Grade Mode: Standard Letter</td>
<td></td>
<td>Prerequisite: TRST 60010 and graduate standing.</td>
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<tr>
<td>FR 63240</td>
<td>LITERARY AND CULTURAL TRANSLATION</td>
<td>3</td>
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<td>3 lecture</td>
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<td>Lecture</td>
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<td>Translation of documents from a variety of literary and cultural sources, including literature, expository and journalistic prose, scholarly treatises and essays. Translation into French will also be emphasized.</td>
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<td>Schedule Type: Lecture</td>
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<td>Prerequisite: Graduate standing.</td>
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<td>Contact Type: 3 lecture</td>
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<td>Grade Mode: Standard Letter</td>
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<td>Prerequisite: TRST 60010 and graduate standing.</td>
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<tr>
<td>FR 63250</td>
<td>COMMERCIAL, LEGAL AND DIPLOMATIC TRANSLATION</td>
<td>3</td>
<td></td>
<td>3 lecture</td>
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<td>Lecture</td>
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<td></td>
<td>An introduction to methods and resources for the translation of commercial, economic, financial, legal, diplomatic and governmental documents.</td>
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<td>Schedule Type: Lecture</td>
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<td>Prerequisite: TRST 60010 and graduate standing.</td>
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<td>Contact Type: 3 lecture</td>
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<td>Grade Mode: Standard Letter</td>
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<td>Prerequisite: TRST 60010 and graduate standing.</td>
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<tr>
<td>FR 63251</td>
<td>SCIENTIFIC, TECHNICAL AND MEDICAL TRANSLATION</td>
<td>3</td>
<td></td>
<td>3 lecture</td>
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<td>Lecture</td>
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<td></td>
<td>An introduction to methods and resources for the translation of scientific, technical, industrial and medical documents.</td>
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<td>Schedule Type: Masters Thesis</td>
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<td>Prerequisite: TRST 60010 and graduate standing.</td>
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<td>Grade Mode: Standard Letter</td>
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<td>Prerequisite: TRST 60010 and graduate standing.</td>
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<tr>
<td>FR 63299</td>
<td>THESIS II</td>
<td>2</td>
<td></td>
<td>3 lecture</td>
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<td>Lecture</td>
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<td>Thesis students must continue registration each semester until all degree requirements are met.</td>
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<td>Schedule Type: Masters Thesis</td>
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<td>Prerequisite: FR 63199 and graduate standing.</td>
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<td>Contact Type: 3 lecture</td>
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<td></td>
<td>Grade Mode: Satisfactory/Unsatisfactory-IP</td>
<td></td>
<td>Prerequisite: FR 63199 and graduate standing.</td>
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<tr>
<td>FR 63979</td>
<td>CASE STUDY IN TRANSLATION</td>
<td>3</td>
<td></td>
<td>3 lecture</td>
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<td>Lecture</td>
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<tr>
<td></td>
<td>Students will be responsible for a major translation and a terminology glossary as well as a critical analysis of the source text, the problems encountered during the translation process and the strategies used to solve them.</td>
<td></td>
<td>Schedule Type: Lecture</td>
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<tr>
<td></td>
<td>Prerequisite: Special approval and graduate standing.</td>
<td></td>
<td>Contact Type: 3 lecture</td>
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<td></td>
<td>Grade Mode: Satisfactory/Unsatisfactory</td>
<td></td>
<td>Prerequisite: Special approval and graduate standing.</td>
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**German (GER)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Grade Mode</th>
<th>Contact Hours</th>
<th>Prerequisite</th>
<th>Schedule Type</th>
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<tbody>
<tr>
<td>GER 11201</td>
<td>ELEMENTARY GERMAN I</td>
<td>4</td>
<td></td>
<td>4 lecture</td>
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<td>Lecture</td>
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<tr>
<td></td>
<td>An introduction to the German language in the context of the cultures of German-speaking lands.</td>
<td></td>
<td>Schedule Type: Lecture</td>
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<tr>
<td></td>
<td>Prerequisite: None.</td>
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<td>Contact Type: 4 lecture</td>
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<td>Grade Mode: Standard Letter</td>
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<td>Prerequisite: None.</td>
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<td>GER 11202</td>
<td>ELEMENTARY GERMAN II</td>
<td>4</td>
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<td></td>
<td>A continuation of the introduction to the German language in the context of the cultures of German-speaking lands.</td>
<td></td>
<td>Schedule Type: Lecture</td>
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<td>Prerequisite: GER 11201.</td>
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<td></td>
<td>Grade Mode: Standard Letter</td>
<td></td>
<td>Prerequisite: GER 11201.</td>
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</tbody>
</table>

**College of Arts and Sciences**

183
GER 31240  CONVERSATION FOR BUSINESS AND SPECIAL PURPOSES: GERMAN  3 Credit Hours
Introduction to the special vocabulary of business and other special subject areas; introduces the concept of language for special purposes and emphasizes the use of special vocabulary in conversations in business and other settings.
Prerequisite: GER 31211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 31303  INTRODUCTION TO GERMAN LITERATURE  3 Credit Hours
Introduction to German literature and textual analysis.
Prerequisite: GER 21202 and GER 31201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 31421  GERMAN CIVILIZATION  3 Credit Hours
A survey of German history and intellectual life to 1918; taught in German.
Prerequisite: Six hours upper division German courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41095  SPECIAL TOPICS  1-4 Credit Hours
(Repeatable for credit) (Cross-listed with GER 51095) Topic announced in schedule of classes.
Prerequisite: Senior standing.
Schedule Type: Lecture
Contact Hours: 1-4 lecture
Grade Mode: Standard Letter

GER 41096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with GER 51096) Independent investigation of problems in German language or literature.
Prerequisite: 6 hours of upper division German and special approval of the department chairperson.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GER 41211  ADVANCED GERMAN COMPOSITION AND CONVERSATION  3 Credit Hours
Advanced practice in speaking and writing German.
Prerequisite: GER 31211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41216  CONTEMPORARY GERMAN CULTURE (ELR) (WIC)  3 Credit Hours
(Cross-listed with GER 51216) A study of selected sociological, political, cultural and economic issues in contemporary German-speaking countries using readings, films and legal documents as the basis for discussions. Taught in German.
Prerequisite: Six hours of upper division German courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

GER 41230  ADVANCED TRANSLATION PRACTICE: GERMAN (ELR) (WIC)  3 Credit Hours
Theory and practice course that discusses translation theory and emphasizes German-to-English translation of selected texts in business, technology, medicine and law.
Prerequisite: GER 31231.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

GER 41240  BUSINESS AND SPECIAL TEXTS: GERMAN  3 Credit Hours
Survey of the typical text types of business in the German culture and language. Practice sessions focus on reading and understanding specialized texts, and on the translation and composition of selected special texts in German.
Prerequisite: GER 31211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41323  GERMAN FAIRY TALES  3 Credit Hours
(Slashed with GER 51323) An investigation in German fairy tales, from the Brothers Grimm to the literary fairy tales of later German authors.
Prerequisite: GER 31201; and GER 31211; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41324  GERMAN LITERATURE FOR CHILDREN AND ADOLESCENTS  3 Credit Hours
(Repeatable with GER 51324) An investigation into German literature for children and adolescents from the Middle Ages to modernity.
Prerequisite: GER 31201; and GER 31211; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41330  TWENTIETH-CENTURY GERMAN AUTHORS (ELR) (WIC)  3 Credit Hours
(Cross-listed with GER 51330) A survey of the major movements and authors of the twentieth century.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

GER 41332  GERMAN LITERATURE BY WOMEN  3 Credit Hours
(Cross-listed with GER 51332) Readings of works by female German authors. Taught in German.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41334  THE GERMAN NOVELLA  3 Credit Hours
(Cross-listed with GER 51334) Development of the German novella from the eighteenth century to the present. Readings of major works lectures analyses taught in German.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GER 41338 GERMAN POETRY  3 Credit Hours
An examination of the nature of poetry with particular attention to its
development in Germany, Austria and Switzerland. Taught in German.
Prerequisite: Six hours of upper division German courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41340 HISTORY OF GERMAN LITERATURE TO 1750  3 Credit Hours
A history of the development of German literature from the Germanic
tribes through the Age of Enlightenment (the first half of the eighteenth
century).
Prerequisite: GER 31303 and 31421.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41341 HISTORY OF GERMAN LITERATURE 1750 TO THE PRESENT  
3 Credit Hours
A history of the development of German literature from the Age of
Sensibility (the second half of the eighteenth century) to the present.
Prerequisite: GER 31303 and 31421.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 41356 CLASSICAL GERMAN LITERATURE (ELR) (WIC)  3 Credit Hours
(Cross-listed with GER 51365) Reading and critical analysis of major
works of the classical age with emphasis on Goethe.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

GER 41399 RESEARCH PROJECT IN GERMAN LITERATURE (ELR)  3 Credit Hours
(Repeatable for credit) Thesis or other independent study.
Prerequisite: 6 hours at the 40000-level.
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 3 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

GER 41731 SURVEY OF GERMAN CINEMA  3 Credit Hours
(Cross-listed with GER 51731) A survey of major contributions to the
German cinema from the beginnings to the present; taught in German.
Prerequisite: Six hours of upper division German courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 51096 INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with GER 41096) Independent
investigation of problems in German language or literature. Permission of
the department chair required.
Prerequisite: Graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

GER 51212 STYLISTICS  3 Credit Hours
Development of written German style through selected readings, textual
analysis and stylistic exercises.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 51216 CONTEMPORARY GERMAN CULTURE  3 Credit Hours
(Cross-listed with GER 41216) A study of selected sociological, political,
cultural and economic issues in contemporary German-speaking
countries, using readings, films and legal documents as the basis for
discussion. Taught in German.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 51323 GERMAN FAIRY TALES  3 Credit Hours
(Slashed with GER 41323) An investigation into German fairy tales, from
the Brothers Grimm to the literary fairy tales of later German authors.
Prerequisite: Graduate standing and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 51324 GERMAN LITERATURE FOR CHILDREN AND ADOLESCENTS  
3 Credit Hours
(Slashed with GER 41324) An investigation into German literature for
children and adolescents from the Middle Ages to modernity.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 51330 20TH-CENTURY GERMAN AUTHORS  3 Credit Hours
(Cross-listed with GER 41330) A survey of the major movements and
authors of the twentieth century.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 51332 GERMAN LITERATURE BY WOMEN  3 Credit Hours
(Cross-listed with GER 41332) Readings of works by female German
authors. Taught in German.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
GER 51334  THE GERMAN NOVELLA  3 Credit Hours  
(Cross-listed with GER 41334) Development of the German novella from the 18th century to the present. Readings of major works, lectures, analyses; taught in German.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 51340  HISTORY OF GERMAN LITERATURE TO 1750  3 Credit Hours  
A history of the development of German literature from the Germanic tribes through the Age of Enlightenment (the first half of the eighteenth century).  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 51380  SCIENCE OF COMMUNICATION  3 Credit Hours  
A study of meaning and communication. Scientific and cognitive perspectives.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61001  GRADUATE RESEARCH AND WRITING IN GERMAN  3 Credit Hours  
Individual instruction and assistance with problems encountered in academic research and writing in German. Required of all graduate students in their first semester of graduate work.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61091  VARIABLE TOPIC SEMINAR  3 Credit Hours  
(Repeatable for credit) Topic announced in schedule of classes.  
Prerequisite: Graduate standing.  
Schedule Type: Seminar  
Contact Hours: 3 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61199  THESIS I  2-6 Credit Hours  
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.  
Prerequisite: Graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2-6 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61240  LITERARY AND CULTURAL TRANSLATION  3 Credit Hours  
Translating documents from a variety of literary and cultural sources, including literature, expository and journalistic prose, scholarly treatises and essays. Translation into German will also be emphasized.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61199  THESIS II  2-6 Credit Hours  
Thesis students must continue registration each semester until all degree requirements are met.  
Prerequisite: GER 61199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2-6 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61199  THESIS III  2-6 Credit Hours  
Thesis students must continue registration each semester until all degree requirements are met.  
Prerequisite: GER 61199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2-6 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61299  THESIS III  3 Credit Hours  
Thesis students must continue registration each semester until all degree requirements are met.  
Prerequisite: GER 61199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 3 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61240  LITERARY AND CULTURAL TRANSLATION  3 Credit Hours  
An introduction to methods and resources for the translation of commercial, economic, financial, legal, diplomatic and governmental documents.  
Prerequisite: TRST 60010 and graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61250  COMMERCIAL, LEGAL AND DIPLOMATIC TRANSLATION  3 Credit Hours  
An introduction to methods and resources for the translation of commercial, economic, financial, legal, diplomatic and governmental documents, including literature, expository and journalistic prose, scholarly treatises and essays. Translation into German will also be emphasized.  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61299  THESIS III  2-6 Credit Hours  
Thesis students must continue registration each semester until all degree requirements are met.  
Prerequisite: GER 61199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2-6 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61299  THESIS III  3 Credit Hours  
Thesis students must continue registration each semester until all degree requirements are met.  
Prerequisite: GER 61199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 3 lecture  
Grade Mode: Satisfactory/Unsatisfactory-IP  

GER 61350  SEMINAR ON THE LYRIC  3 Credit Hours  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61350  SEMINAR ON THE LYRIC  3 Credit Hours  
Prerequisite: Graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

GER 61398  RESEARCH  1-15 Credit Hours  
(Repeatable for credit) Research for master's level graduate students. Credit toward degree requirements may be given with department approval.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Research  
Contact Hours: 1-15 lecture  
Grade Mode: Standard Letter-S/U-IP  

GER 61398  RESEARCH  1-15 Credit Hours  
(Repeatable for credit) Research for master's level graduate students. Credit toward degree requirements may be given with department approval.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Research  
Contact Hours: 1-15 lecture  
Grade Mode: Standard Letter-S/U-IP
GER 61901 READING GERMAN FOR GRADUATE STUDENTS 4 Credit Hours
Introduction to the fundamentals of German grammar for graduate students. Practice in reading and translation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

GER 61902 READING GERMAN FOR GRADUATE STUDENTS 3 Credit Hours
Continued practice in reading and translation. Independent study of scholarly texts in the student's own discipline.
Prerequisite: GER 61901 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GER 61979 CASE STUDY IN TRANSLATION 3 Credit Hours
Students will be responsible for a major translation and a terminology glossary as well as a critical analysis of the source text, the problems encountered during the translation process and the strategies used to solve them.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Satisfactory/Unsatisfactory

Greek (GRE)

GRE 14201 ELEMENTARY CLASSICAL GREEK I 4 Credit Hours
An introduction to the classical Greek language in the context of ancient Greek culture.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

GRE 14202 ELEMENTARY CLASSICAL GREEK II 4 Credit Hours
A continuation of the introduction to the classical Greek language in the context of ancient Greek culture.
Prerequisite: GRE 14201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

GRE 24201 INTERMEDIATE CLASSICAL GREEK I:READINGS 3 Credit Hours
Excerpts from classical Greek literature with emphasis on translation into English.
Prerequisite: GRE 14202.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

GRE 24202 INTERMEDIATE CLASSICAL GREEK II:READINGS 3 Credit Hours
Excerpts from classical Greek literature with emphasis on both prose (e.g. Plato) and poetry (e.g. Euripides).
Prerequisite: GRE 24201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GRE 34370 PLATO: APOLOGY AND PHAEDO 3 Credit Hours
Readings in the original Greek of Plato's dialogues centering on the trial, conviction and death of Socrates.
Prerequisite: GRE 24202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GRE 34371 HOMER 3 Credit Hours
Selections from the Iliad or Odyssey studied from a literary and grammatical standpoint.
Prerequisite: GRE 24202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

GRE 40393 VARIABLE TITLE WORKSHOP 1-6 Credit Hours
(Repeatable for credit) (Cross-listed with GRE 50393) Workshops individually designed to provide instruction and training in specific areas of Greek studies. S/U graded.
Prerequisite: Department permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

GRE 44096 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for credit) Investigation of problems in Greek literature or linguistics.
Prerequisite: special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

Gre 50393 VARIABLE TITLE WORKSHOP IN GREEK 2-4 Credit Hours
(Repeatable for credit) (Cross-listed with GRE 40393) Variable topic offered as need arises to train in specific area of field.
Prerequisite: Graduate standing and special approval.
Schedule Type: Workshop
Contact Hours: 2-4 other
Grade Mode: Satisfactory/Unsatisfactory

Hebrew (HEBR)

HEBR 12101 ELEMENTARY HEBREW I 4 Credit Hours
An introduction to the modern Hebrew language in the context of Israeli culture.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

HEBR 12102 ELEMENTARY HEBREW II 4 Credit Hours
A continuation of the introduction to the modern Hebrew language in the context of Israeli culture.
Prerequisite: HEBR 12101.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

HEBR 22104 INTERMEDIATE HEBREW I 3 Credit Hours
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials.
Prerequisite: HEBR 12102.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HEBR 22105 INTRODUCTION TO HEBREW II 3 Credit Hours
Continuation of HEBR 22104.
Prerequisite: HEBR 22104.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Heritage Languages (HRTG)

HRTG 10101 ELEMENTARY I (VARIABLE LANGUAGE) 4 Credit Hours
An introduction to a heritage language in the context of the culture of its speakers.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

HRTG 10102 ELEMENTARY II (VARIABLE LANGUAGE) 4 Credit Hours
A continuation of the introduction to a heritage language in the context of the culture of its speakers.
Prerequisite: HRTG 10101 and special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

HRTG 20201 INTERMEDIATE I (VARIABLE LANGUAGE) 3 Credit Hours
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials.
Prerequisite: HRTG 20201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HRTG 20202 INTERMEDIATE II (VARIABLE LANGUAGE) 3 Credit Hours
Continuation of HRTG 20201.
Prerequisite: HRTG 20201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HRTG 30095 SPECIAL TOPICS 1-3 Credit Hours
(Repeatable for credit) Topic announced in schedule of classes.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

Italian (ITAL)

ITAL 15201 ELEMENTARY ITALIAN I 4 Credit Hours
An introduction to the Italian language in the context of Italian culture.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

ITAL 15202 ELEMENTARY ITALIAN II 4 Credit Hours
A continuation of the introduction to the Italian language in the context of Italian culture.
Prerequisite: ITAL 15201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

ITAL 15204 BASIC CONVERSATIONAL ITALIAN I 2 Credit Hours
Exposure to basic grammar and to current Italian useful to travelers. Not applicable to fulfillment of foreign language requirement.
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

ITAL 15205 BASIC CONVERSATIONAL ITALIAN II 2 Credit Hours
Continuation of ITAL 15204.
Prerequisite: ITAL 15204.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

ITAL 25201 INTERMEDIATE ITALIAN I 3 Credit Hours
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials.
Prerequisite: ITAL 15202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

ITAL 25202 INTERMEDIATE ITALIAN II 3 Credit Hours
Continuation of ITAL 25201.
Prerequisite: ITAL 25201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

ITAL 35211 ITALIAN COMPOSITION AND CONVERSATION I 3 Credit Hours
Study and practice of written and oral Italian with emphasis on acquisition of written and oral proficiency in the language.
Prerequisite: ITAL 25202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ITAL 35213 ITALIAN COMPOSITION AND CONVERSATION II 3 Credit Hours
Advanced practice in speaking and writing the Italian language.
Prerequisite: ITAL 35211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ITAL 35311 EARLY ITALIAN LITERATURE (WIC) 3 Credit Hours
A survey of Italian literature from its medieval origins to the Baroque period.
Prerequisite: ITAL 35211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course
ITAL 35332 RECENT ITALIAN LITERATURE (ELR) (WIC) 3 Credit Hours
This course surveys the major movements and authors from the Baroque period through the 20th century.
Prerequisite: ITAL 35212.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

ITAL 35421 ITALIAN CIVILIZATION 3 Credit Hours
Lectures, readings, oral and written reports on outstanding features of the culture and civilization of Italy.
Prerequisite: ITAL 25202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ITAL 35597 COLLOQUIUM 3 Credit Hours
(Repeatable for credit)Variable topic course deals with single literary theme in Italian literature or a single author. May be offered in Italian or in English translation.
Prerequisite: Permission.
Schedule Type: Colloquium
Contact Hours: 3 other
Grade Mode: Standard Letter

ITAL 45093 VARIABLE TITLE WORKSHOP IN ITALIAN 1-6 Credit Hours
(Repeatable for credit)Workshops individually designed to provide instruction and training in specific areas of Italian studies. S u graded.
Prerequisite: Departmental permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

ITAL 45095 SPECIAL TOPICS IN ITALIAN 3 Credit Hours
Designed to instruct students on a specific topic in the area of Italian studies.
Prerequisite: ITAL 35212.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

ITAL 45096 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for a total of 6 credit hours)Allows the advanced, serious student to carry out research study project on Italian literature, language or culture. Prior approval of supervising faculty member department required.
Prerequisite: ITAL 25202 and junior standing and special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

ITAL 45212 ADVANCED ITALIAN CONVERSATION 3 Credit Hours
Designed to develop students’ ability to employ acquired grammar and vocabulary in conversation in Italian. Students will elaborate on cultural and social aspects of Italy presented in class and actively participate in class discussions.
Prerequisite: ITAL 35212.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Japanese (JAPN)

JAPN 15101 ELEMENTARY JAPANESE I 4 Credit Hours
Introduction to modern standard Japanese in the context of Japanese culture.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

JAPN 15102 ELEMENTARY JAPANESE II 4 Credit Hours
A continuation of the introduction to modern standard Japanese in the context of Japanese culture.
Prerequisite: JAPN 15101.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

JAPN 25201 INTERMEDIATE JAPANESE I 4 Credit Hours
Continuation of JAPN 25201.
Prerequisite: JAPN 25201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

JAPN 25202 INTERMEDIATE JAPANESE II 4 Credit Hours
Continuation of JAPN 25201.
Prerequisite: JAPN 25201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

JAPN 30095 SPECIAL TOPICS 3 Credit Hours
(Repeatable for credit)Topic to be announced in schedule of classes.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 35101 INTENSIVE JAPANESE GRAMMAR 3 Credit Hours
A continuation of the study of modern standard Japanese grammar. Focus on passive, causative, passive-causative forms.
Prerequisite: Minimum C grade in JAPN 25202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 35102 ADVANCED INTERMEDIATE JAPANESE II 5 Credit Hours
Continuation of JAPN 35101.
Prerequisite: Minimum C grade in JAPN 35101.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

JAPN 35325 READINGS IN MODERN JAPANESE 3 Credit Hours
Close readings of contemporary Japanese topics such as technology, pop culture, food, geography, etc. Emphasizes reading skills, vocabulary, and kanji. Pre/corequisites: JAPN 35101
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
JAPN 35326  READINGS IN TRADITIONAL JAPANESE  3 Credit Hours
Close readings of traditional Japanese topics such as folk tales, arts, history, haiku, etc. Emphasizes reading skills, vocabulary and Kanji. Pre/corequisites: JAPN 35101
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 45096  INDIVIDUAL INVESTIGATION IN JAPANESE  1-3 Credit Hours
(Repeatable for credit)Individual study supervised by a faculty member on an approved topic dealing with Japanese language and/or culture. Pre/corequisite: JAPN 25201.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

JAPN 45201  ADVANCED JAPANESE I  5 Credit Hours
Advanced study of the four language skills, with particular emphasis on general conversational proficiency and reading of authentic texts to enhance linguistic and cultural competence. Pre/requisite: minimum grade of C (2.000) in JAPN 35102.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

JAPN 45202  ADVANCED JAPANESE II  5 Credit Hours
A continuation of Advanced Japanese I, teaches the four skills equally—listening, speaking, reading and writing. The class is conducted in Japanese. Students learn how to use Japanese to solve problems in authentic situations. Pre/requisite: minimum grade of C (2.000) in JAPN 45201.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

JAPN 45211  WRITING IN JAPANESE  3 Credit Hours
Advanced study of Japanese with emphasis on writing in different styles (essays, questionnaires, charts, emails, etc). Pre/corequisite: JAPN 35101
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 45212  ORAL COMMUNICATION IN JAPANESE  3 Credit Hours
The class focuses on oral communication. Students practice expressing their opinions on familiar subjects and various topics related to Japanese culture through group discussion, interviews, role plays, and presentations. They learn different communication strategies and conversation styles from casual to formal. Pre/corequisite: JAPN 35101
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 45301  BUSINESS JAPANESE  3 Credit Hours
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 45411  VOICES FROM JAPAN  3 Credit Hours
Designed to further develop students' proficiency in speaking, listening, writing and reading comprehension. The textbook includes interviews of the Japanese from various backgrounds. Pre/corequisite: JAPN 35101
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 45421  JAPANESE CULTURE  3 Credit Hours
Explores key aspects of traditional and contemporary Japanese culture. Taught in English; no knowledge of Japanese necessary. Pre/requisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 45591  VARIABLE TOPIC SEMINAR IN JAPANESE  3 Credit Hours
(Repeatable for credit)Seminar in Japanese literature or culture; course may be repeated when content varies. Student should have completed at least 9 hours of upper division work in Japanese. Pre/requisite: special approval.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

JAPN 55301  BUSINESS JAPANESE  3 Credit Hours
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 65010  THE PRACTICE OF JAPANESE TRANSLATION  2 Credit Hours
Provides an introduction to the translation of non-specialized, non-fiction Japanese texts, focusing on common problem areas, general translation strategies, and specific techniques for resolving problems. Pre/requisite: Graduate standing.
Corequisite: TRST 60010.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

JAPN 65091  VARIABLE TOPIC SEMINAR  3 Credit Hours
(Repeatable for credit)Topic announced in schedule of classes; may be repeated when content varies. Pre/requisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

JAPN 65098  RESEARCH  1-15 Credit Hours
(Repeatable for credit)Research or individual investigation for master's level graduate students. Credits earned applied toward degree requirements if department approves. Pre/requisite: Graduate standing and departmental approval.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP
JAPN 65240  LITERARY AND CULTURAL TRANSLATION  3 Credit Hours
Translation of documents from a variety of literary and cultural sources,
including literature, expository and journalistic prose, scholarly treatises
and essays.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 65250  COMMERCIAL, LEGAL AND DIPLOMATIC TRANSLATION  3 Credit Hours
An introduction to methods and resources for the translation of
commercial, economic, financial, legal, diplomatic and governmental
documents.
Prerequisite: TRST 60010 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

JAPN 65979  CASE STUDY IN TRANSLATION  3 Credit Hours
Students will be responsible for a major translation and a terminology
glossary as well as a critical analysis of the source text, the problems
encountered during the translation process and the strategies used to
solve them.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Satisfactory/Unsatisfactory

Latin (LAT)

LAT 16201  ELEMENTARY LATIN I  4 Credit Hours
An introduction to the classical Latin language in the context of ancient
Roman culture.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

LAT 16202  ELEMENTARY LATIN II  4 Credit Hours
A continuation of the introduction to the classical Latin language in the
context of ancient Roman culture.
Prerequisite: LAT 16201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

LAT 26201  INTERMEDIATE LATIN I:READINGS  3 Credit Hours
Excerpts from Latin literature with emphasis on translation into English.
Prerequisite: LAT 16202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 26202  INTERMEDIATE LATIN II:READINGS  3 Credit Hours
Excerpts from Latin literature with emphasis on both prose (e.g., Caesar,
Ciceron and poetry (Vergil, Catullus).
Prerequisite: LAT 26201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 36170  CICERON  3 Credit Hours
Readings in Cicero's orations and philosophical works, stressing
rhetorical techniques. Consideration of Cicero's role in Roman history and
his place in Latin literature.
Prerequisite: LAT 26202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 36171  VERGIL  3 Credit Hours
A study of the Latin text of Vergil's Aeneid stressing the poetry of the
Prerequisite: LAT 26202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 40393  VARIABLE TITLE WORKSHOP  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide
instruction and training in Latin studies. S u graded.
Prerequisite: Departmental permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

LAT 41214  LATIN EPIGRAPHY  3 Credit Hours
Study of ancient inscriptions (funerary, career, documentary, graffiti,
etc.) preserved on any kind of durable material, with focus on cultural
information necessary to understand the content and significance of the
inscriptions under investigation.
Prerequisite: LAT 36170 or LAT 36171; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 41304  ROMAN HISTORIANS  3 Credit Hours
(Slashed with LAT 51304) Stylistics and cultural context of Roman
historians. Readings from any of the following: Caesar, Livy, Suetonius,
Tacitus.
Prerequisite: LAT 36170 or LAT 36171; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 41305  ROMAN COMEDY AND SATIRE  3 Credit Hours
Stylistics, history and cultural context of Roman comedy and satire.
Readings from any of the following: Plautus, Terence, Horace, Juvenal,
Persius, Martial.
Prerequisite: LAT 36170 or LAT 36171; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 41306  ROMAN COMEDY AND SATIRE (Slashed with LAT 51305) 3 Credit Hours
Stylistics, history and cultural context of Roman comedy and satire.
Readings from any of the following: Plautus, Terence, Horace, Juvenal,
Persius, Martial.
Prerequisite: LAT 36170 or LAT 36171; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
LAT 41306 LATIN EPIC 3 Credit Hours
(Slashed with LAT 51306) Stylistics, history and cultural context of Latin epic poetry. Readings from any of the following: Vergil, Lucretius, Ovid, Lucan, Statius.
Prerequisite: LAT 36170 or LAT 36171; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 41307 LYRIC AND ELEGIAC POETRY 3 Credit Hours
(Stage with LAT 51307) Stylistics, history and cultural context of Latin lyric and elegiac poetry. Readings from any of the following: Catullus, Horace, Propertius, Tibullus, Ovid.
Prerequisite: LAT 36170 or LAT 36171; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 46095 SELECTED TOPICS IN LATIN 3 Credit Hours
(Repeatable for credit) Topic announced in the schedule of classes.
Prerequisite: LAT 36170 or LAT 37171.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 46096 INDIVIDUAL INVESTIGATION 1-3 Credit Hours
(Repeatable for credit) Investigation of problems in Latin literature or linguistics.
Prerequisite: minimum 3 hours of coursework at the 40000-level and departmental special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

LAT 46211 LATIN PROSE COMPOSITION 3 Credit Hours
Analysis of prose models; writing of connected Latin prose with attention to the Latin idiom.
Prerequisite: LAT 36170 or LAT 36171.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 46373 ADVANCED PROSE AUTHORS 3 Credit Hours
(Repeatable for credit) Consideration of a major prose author such as Pliny the Younger, Livy, Tacitus or Suetonius.
Prerequisite: LAT 36170 or LAT 36171.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 50393 VARIABLE TITLE WORKSHOP IN LATIN 1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in Latin studies.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

LAT 51304 ROMAN HISTORIANS 3 Credit Hours
(Stage with LAT 41304) Stylistics and cultural context of Roman historians. Readings from any of the following: Caesar, Livy, Suetonius, Tacitus.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 51306 LATIN EPIC 3 Credit Hours
(Stage with LAT 41306) Stylistics, history and cultural context of Latin epic. Readings from any of the following: Vergil, Ovid, Lucan, Lucretius, Statius.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 51307 LYRIC AND ELEGIAC POETRY 3 Credit Hours
(Stage with LAT 41307) Stylistics, history and cultural context of Latin lyric and elegiac poetry. Readings from any of the following: Catullus, Horace, Propertius, Tibullus, Ovid.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 56095 SELECTED TOPICS IN LATIN 3 Credit Hours
(Repeatable for a maximum of 15 credit hours) Topic to be announced in semester schedule of classes.
Prerequisite: LAT 37171 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 61001 RESEARCH AND WRITING 3 Credit Hours
Use of lexical tools, bibliographies and corpora specific to research in Classics and Latin. Conventions of scholarship in the discipline of Classics. To be taken in conjunction with a 50000 or 60000-level course in Latin literature.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 61214 LATIN EPigraphY 3 Credit Hours
Study of ancient inscriptions (funerary, career, documentary, graffiti, etc.) preserved on any kind of durable material, with focus on cultural information necessary to understand the content and significance of the inscriptions under investigation.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 61305 ROMAN COMEDY AND SATIRE 3 Credit Hours
Stylistics, history and cultural context of Roman comedy and satire. Readings from any of the following: Plautus, Terence, Horace, Juvenal, Persius, Martial.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
LAT 61308 ORATORY AND LETTERS 3 Credit Hours
Stylistics, history and cultural context of Latin oratory and the Latin epistle. Readings from any of the following: Cicero, Seneca, Pliny.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 66199 THERAPY I 2-6 Credit Hours
Therapy students must register for a total of 6 hours, 2 to 6 hours in single semester distributed over several semesters if desired.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

LAT 66211 ADVANCED PROSE COMPOSITION 3 Credit Hours
More thorough training in composition where need is established.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

LAT 66299 THERAPY II 2 Credit Hours
Therapy students must continue registration each semester until all degree requirements are met.
Prerequisite: LAT 66199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

LAT 66391 SEMINAR IN CLASSICAL LITERATURE 2,3 Credit Hours
(Repeatable for credit)Topics to be announced.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 2-3 other
Grade Mode: Standard Letter-IP

LAT 66398 RESEARCH 1-15 Credit Hours
(Repeatable for credit)Research or individual investigation for master’s level graduate students. Credits earned applied toward degree requirements if department approves.
Prerequisite: Special approval and graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-IP

Modern and Classical Language Studies (MCLS)

MCLS 10001 INTRODUCTION TO STRUCTURAL CONCEPTS FOR LANGUAGE STUDENTS 3 Credit Hours
Prepares students for successful study of a foreign language; includes introduction to basic grammatical concepts such as use of verb tenses, personal pronouns, etc., as well as strategies for learning a foreign language efficiently.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 10095 SPECIAL TOPICS IN ELEMENTARY FOREIGN LANGUAGE STUDY 1-3 Credit Hours
(Repeatable for credit) Study of a foreign language at the elementary level (Elementary I or II) or intermediate level (Intermediate I or II) as determined appropriate by the department. No proficiency needed for work at the Elementary I level; proficiency equivalent of Elementary I for work at the Elementary II level, at Elementary II for the Intermediate I level, and at Intermediate I for the Intermediate II level.
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 1-3 other
Grade Mode: Standard Letter

MCLS 20000 GLOBAL LITERACY AND CULTURAL AWARENESS 3 Credit Hours
Introduction to dimensions of cultural identity and parameters of cultural expression, with a focus on fostering cultural awareness skills. By exploring the ways in which culture shapes us, students gain a better understanding of the dynamics shaping their world, the world of others, and their respective places in it. Discussion of real-world critical incidents, authentic cultural ethnographies, and case studies provide students with concrete examples and contexts to solve problems linked to encounters with persons of different linguistic and cultural backgrounds.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 20091 VARIABLE CONTENT SEMINAR IN GLOBAL LITERACY: CASE STUDIES 3 Credit Hours
(Repeatable for credit) In-depth study of the interaction between two or more cultures of the world, focusing on the impact of linguistic and other cultural differences. Topics will vary.
Prerequisite: none.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 21417 MULTICULTURALISM IN TODAY'S GERMANY (DIVG) 3 Credit Hours
This course examines how issues of diversity have shaped German culture and traces the country’s transformation into a postnational, multicultural society. Taught in English; knowledge of German not necessary.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

MCLS 21418 DIVERSITY IN TODAY'S RUSSIA (DIVG) 3 Credit Hours
This course examines how issues of diversity have shaped Russian culture and traces Russia's attempts at transition to a postnational, multicultural society. Taught in English; knowledge of Russian not necessary.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global
MCLS 23217  THE FRANCOPHONE EXPERIENCE (DIVG)  3 Credit Hours
An introduction to various aspects of contemporary society and culture in countries where French is spoken. Taught in English; knowledge of French not necessary.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

MCLS 28403  HISPANICS IN THE UNITED STATES  3 Credit Hours
An introduction to historic and cultural aspects of Latino experiences in the United States using a comparative approach focusing on Mexicans, Puerto Ricans, Cubans, Central Americans and other immigrants from other Latin American countries, living in the United States. The course is taught in English.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 28404  THE LATIN AMERICAN EXPERIENCE (DIVG)  3 Credit Hours
An introduction to various aspects of contemporary Latin American societies and cultures. Taught in English; knowledge of a foreign language is not necessary.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

MCLS 28405  THE SPANISH EXPERIENCE (DIVG)  3 Credit Hours
An introduction to aspects of contemporary Spanish culture that examines how issues of diversity have shaped today's multicultural, multilingual society. Taught in English; knowledge of Spanish not necessary.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

MCLS 30420  FOREIGN LANGUAGES AND CULTURE STUDIES  3 Credit Hours
Examines the anthropological, linguistic and cultural dimensions involved in language interactions. Students acquire the skills necessary to analyze language and culture “in action” from verbal and non-verbal perspectives, and to identify and reflect on the distinctive viewpoints of other cultures and speakers of other languages. Interactive lectures, discussions and application activities build on students' current linguistic and cultural competence.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 30660  ORIENTATION TO SECOND LANGUAGE PEDAGOGY  3 Credit Hours
Theories of human development and learning, second language acquisition research and second language methodology form the basis for classroom practices. Peer-teaching and 30 hours of field experience required.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 39597  INTRADEPARTMENTAL COLLOQUIUM  1-4 Credit Hours
(Repeatable for credit)Permits students to explore areas of special interest not usually covered in standard departmental courses, e.g. movies and literature, women in literature.
Prerequisite: None.
Schedule Type: Colloquium
Contact Hours: 1-4 other
Grade Mode: Satisfactory/Unsatisfactory

MCLS 40093  VARIABLE TITLE WORKSHOP IN MODERN AND CLASSICAL LANGUAGE STUDIES  1-6 Credit Hours
(Repeatable for credit)Workshops individually designed to provide instruction and training in specific areas of modern and classical language studies.
Prerequisite: Departmental special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Standard Letter

MCLS 40525  INQUIRY INTO PROFESSIONAL PRACTICE  3 Credit Hours
Foreign language teaching as a profession and the teacher as disciplined investigator. The final seminar of four it is conducted during the student teaching semester with emphasis on collaborative and individual classroom problem solving.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 40654  COMPUTERS IN SECOND LANGUAGE TEACHING  3 Credit Hours
(Cross-listed with ENG 41002) (Slashed with ENG 51002 and MCLS 50654) Designed for future teachers of language and culture, this course explores the availability of technology, its implementation in the classroom and its integration with second language skills.
Prerequisite: MCLS 30660.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MCLS 40567  STUDENT TEACHING OF A SECOND LANGUAGE (ELR)  3-9 Credit Hours
Supervised practicum in the teaching of a second language, grades K-12. L.I.C.E. Training must be presented to the campus office of clinical experience or designated faculty/staff at Regional campuses as prerequisite for student teaching.
Prerequisite: Special approval; and Official valid certification of Child Safety Training, approved Basic Life Support and A.
Schedule Type: Practicum or Internship
Contact Hours: 3-9 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

MCLS 40660  METHODS OF TEACHING FOREIGN LANGUAGE  3 Credit Hours
Theoretical bases, approaches, methods, materials and techniques of foreign language instruction at the elementary and secondary levels. Peer-teaching and 30 hours of field experience required.
Prerequisite: MCLS 30660 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 50093  VARIABLE TITLE WORKSHOP IN MODERN AND CLASSICAL LANGUAGE STUDIES  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in specific areas of modern and classical language studies.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

MCLS 50095  SELECTED TOPICS  1-3 Credit Hours
(Repeatable for credit when topic varies) Topic to be announced in the schedule of classes. 
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

MCLS 50654  COMPUTERS IN SECOND LANGUAGE TEACHING  3 Credit Hours
(Cross-listed with ENG 51002) (Slashed with ENG 41002 and MCLS 40654) Designed for teachers of language and culture, this course explores the availability of technology, its implementation in the classroom and its integration with foreign language skills.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 50660  METHODS OF TEACHING FOREIGN LANGUAGES  3 Credit Hours
Theoretical bases, approaches, methods, materials and techniques of foreign language instruction at the elementary and secondary levels. Peer teaching 30 hours of field experience and curriculum guide required.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60020  SEMEIOTICS  3 Credit Hours
(Cross-listed PHIL 61055) An introduction to contemporary theories of semiotics and to the application of those theories to linguistics, literature, translation and technology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60094  COLLEGE TEACHING OF FOREIGN LANGUAGES  1 Credit Hour
(Repeatable for credit) An introduction to current principles and issues in the teaching of foreign languages at the college elementary and intermediate levels. Required of departmental teaching assistants.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

MCLS 60601  LINGUISTICS FOR THE LANGUAGE PROFESSIONS  3 Credit Hours
(Cross-listed with ENG 63040) Students will be introduced to basic linguistic issues and how these relate to the language professions. Course focuses on functional principles, especially on options to express textual, interpersonal and ideational/experiential meaning.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60621  THE PRAGMATICS OF CONVERSATION  3 Credit Hours
(Cross-listed with ENG 63037) Theories of pragmatics, conversational structure and strategies with practical applications for teaching conversation strategies to foreign/second language learners.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60622  TEACHING LITERATURE AND CULTURE  3 Credit Hours
(Cross-listed with ENG 63038) Students will explore theories of literature and culture teaching as well as strategies for teaching literature and culture.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60623  SOCIOCULTURAL THEORY AND FOREIGN AND SECOND LANGUAGE ACQUISITION  3 Credit Hours
The foundations of sociocultural theory and its applications to the second and foreign language classroom.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
MCLS 60624 HERITAGE LANGUAGES AND SECOND LANGUAGE LEARNING 3 Credit Hours
(Cross-listed with ENG 63047) Theory and practice in language education of heritage language speakers. Ethnic, minority, ancestral, and community languages and language practices will be explored with implications for second and additional language learning in English, foreign language, bilingual education.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60661 THEORIES IN SECOND LANGUAGE ACQUISITION 3 Credit Hours
(Cross-listed with ENG 63033) (Slashed with ENG 73033) This course surveys the major theoretical approaches to language acquisition, concentrating on second language acquisition and the relationship between acquisition/learning research and second language teaching approaches.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60663 SECOND LANGUAGE CURRICULUM AND TESTING 3 Credit Hours
(Cross-listed with ENG 63039) Students will study second language curriculum and testing design and current issues, including oral proficiency testing.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60664 SECOND LANGUAGE READING 3 Credit Hours
(Cross-listed with ENG 63044) This course addresses a wide variety of topics related to second language reading, including theoretical perspectives, the process of learning to read, models of how reading happens, comprehension, fluency, discourse structures, strategy use, and vocabulary acquisition. Teaching issues related to second language reading will also be addressed directly, namely assessment and curriculum building.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60665 SECOND LANGUAGE WRITING 3 Credit Hours
(Cross-listed with ENG 63043) Theory and practice in teaching second language writing. Topics will include current and historic approaches to second language writing, approaches to tutoring international students in writing centers, teacher and peer response, error correction and technology in second language writing instruction.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

MCLS 60698 SECOND LANGUAGE RESEARCH METHODS 3 Credit Hours
(Cross-listed with ENG 63098) Students learn how second language research influences their teaching practices by studying research texts and recent journal articles and conducting a research project.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 3 other
Grade Mode: Standard Letter

Russian (RUSS)
RUSS 12201 ELEMENTARY RUSSIAN I 4 Credit Hours
An introduction to the Russian language in the context of Russian cultures.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

RUSS 12202 ELEMENTARY RUSSIAN II 4 Credit Hours
A continuation of the introduction to the Russian language in the context of Russian cultures.
Prerequisite: RUSS 12201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

RUSS 22201 INTERMEDIATE RUSSIAN I 4 Credit Hours
Continuation of RUSS 12202.
Prerequisite: RUSS 12202.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

RUSS 22202 INTERMEDIATE RUSSIAN II 4 Credit Hours
Continuation of RUSS 22201.
Prerequisite: RUSS 22201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

RUSS 22203 INTENSIVE RUSSIAN GRAMMAR 3 Credit Hours
A systematic approach to Russian grammar and syntax.
Prerequisite: RUSS 22202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 22211 COMPOSITION AND CONVERSATION 3 Credit Hours
Introduction to advanced oral and written discourse strategies in Russian.
Prerequisite: RUSS 22202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 32215 RUSSIAN PHONETICS AND DICTION 3 Credit Hours
Study of the Russian sound system with special emphasis on pronunciation and intonation. Application of the international phonetic alphabet to Russian.
Prerequisite: RUSS 22202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
RUSS 32231  TRANSLATION PRACTICE: RUSSIAN  1 Credit Hour  
Translation practice with Russian texts using principles and techniques learned in the lecture class. To be taken concurrently with TRST 30230.  
Corequisite: TRST 30230.  
Schedule Type: Lecture  
Contact Hours: 1 lecture  
Grade Mode: Standard Letter  

RUSS 32240  CONVERSATION FOR BUSINESS AND SPECIAL PURPOSES: RUSSIAN  3 Credit Hours  
Introduction to the special vocabulary of business and other special subject areas; introduces the concept of language for special purposes and emphasizes the use of special vocabulary in conversations in business and other settings.  
Prerequisite: RUSS 32211.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

RUSS 32303  MODERN WRITERS (ELR) (WIC)  3 Credit Hours  
Reading and analysis of modern Russian plays and stories.  
Prerequisite: RUSS 22202.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement, Writing Intensive Course  

RUSS 32421  RUSSIAN CIVILIZATION (ELR) (WIC)  3 Credit Hours  
A survey of Russian history and intellectual life.  
Prerequisite: RUSS 32303.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement, Writing Intensive Course  

RUSS 32501  RUSSIAN LITERATURE IN ENGLISH  3 Credit Hours  
This course is designed as a survey of major authors, movements and works of nineteenth and twentieth century Russian literature in English translation. No knowledge of Russian required.  
Prerequisite: Sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

RUSS 42096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours  
(Repeatable for credit) Independent investigation of problems in Russian language or literature.  
Prerequisite: 6 hours of upper-division Russian (RUSS) courses and special approval of the department chairperson.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Standard Letter/IP  

RUSS 42211  ADVANCED COMPOSITION AND CONVERSATION  3 Credit Hours  
(Slashed with RUSS 52211) Advanced practice in written and oral expression in Russian.  
Prerequisite: RUSS 32211.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

RUSS 42230  ADVANCED TRANSLATION PRACTICE: RUSSIAN (ELR) (WIC)  3 Credit Hours  
Theory and practice course that discusses translation theory and emphasizes Russian-to-English translation of selected texts in business, technology, medicine and law.  
Prerequisite: RUSS 32231.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement, Writing Intensive Course  

RUSS 42240  BUSINESS AND SPECIAL TEXTS: RUSSIAN  3 Credit Hours  
(Slashed with RUSS 52240) Survey of the typical text types of business in the Russian culture and language. Practice sessions focus on reading and understanding specialized texts and on the translation and composition of selected special texts in Russian.  
Prerequisite: RUSS 32211.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

RUSS 42351  SURVEY OF RUSSIAN AND SOVIET LITERATURE  4 Credit Hours  
(Slashed with RUSS 52351) Introduces students to the major movements and authors of Russian, Soviet and post-Soviet literature beginning with Karamzin and ending with Boris Akunin.  
Prerequisite: 6 credits of upper-division Russian (RUSS) courses.  
Schedule Type: Lecture  
Contact Hours: 4 lecture  
Grade Mode: Standard Letter  

RUSS 42399  RESEARCH PROJECT IN RUSSIAN LANGUAGE AND LITERATURE (ELR)  3 Credit Hours  
(Repeatable for credit) Thesis or other independent study.  
Prerequisite: 6 hours of 40000-level Russian (RUSS) courses and special approval.  
Schedule Type: Senior Project/Honors Thesis  
Contact Hours: 3 other  
Grade Mode: Standard Letter/IP  
Attributes: Experiential Learning Requirement
RUSS 52211  ADVANCED COMPOSITION AND CONVERSATION  3 Credit Hours
(Slashed with RUSS 42211) Advanced practice in written and oral expression in Russian.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 52240  BUSINESS AND SPECIAL TEXTS: RUSSIAN  3 Credit Hours
(Slashed with RUSS 42240) Survey of the typical text of business in the Russian culture and language. Practice sessions focus on reading and understanding specialized texts and on the translation and composition of selected special texts in Russian.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 52351  SURVEY OF RUSSIAN AND SOVIET LITERATURE  4 Credit Hours
(Slashed with RUSS 42351) This course introduces students to the major movements and authors of Russian, Soviet and post-Soviet literature beginning with Karamzin and ending with Boris Akunin.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

RUSS 62010  THE PRACTICE OF RUSSIAN TRANSLATION  2 Credit Hours
Students apply linguistic and communication science concepts to case studies of language mediation.
Prerequisite: graduate standing.
Corequisite: TRST 60010.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

RUSS 62091  SEMINAR  3 Credit Hours
(Repeatable for credit when topic varies) Topic announced in schedule of classes.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

RUSS 62098  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits earned applied toward degree requirements if department approves repeat registration permitted.
Prerequisite: Graduate standing and departmental special approval.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP

RUSS 62240  LITERARY AND CULTURAL TRANSLATION  3 Credit Hours
Translation of documents from a variety of literary and cultural sources, including literature, expository and journalistic prose, scholarly treaties and essays. Translation into Russian will also be emphasized.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 62250  COMMERCIAL, LEGAL AND DIPLOMATIC TRANSLATION  3 Credit Hours
An introduction to methods and resources for the translation of commercial, economic, financial, legal, diplomatic and governmental documents.
Prerequisite: TRST 60010 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 62251  SCIENTIFIC, TECHNICAL AND MEDICAL TRANSLATION  3 Credit Hours
An introduction to methods and resource for the translation of scientific, technical, industrial and medical documents.
Prerequisite: TRST 60010 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

RUSS 62979  CASE STUDY IN TRANSLATION  3 Credit Hours
Students will be responsible for a major translation and a terminology glossary as well as a critical analysis of the source text, the problems encountered during the translation process and the strategies used to solve them.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Satisfactory/Unsatisfactory

Spanish (SPAN)

SPAN 18201  ELEMENTARY SPANISH I  4 Credit Hours
An introduction to the Spanish language in the context of Hispanic cultures.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SPAN 18202  ELEMENTARY SPANISH II  4 Credit Hours
A continuation of the introduction to the Spanish language in the context of Hispanic cultures.
Prerequisite: SPAN 18201.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SPAN 18301  SPANISH FOR HEALTH CARE I  4 Credit Hours
Introduction to the Spanish language in the context of health care situations, tasks and terminology and Hispanic cultures.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
SPAN 18302  SPANISH FOR HEALTH CARE II  4 Credit Hours
A continuation of the introduction to the Spanish language in the context of health care situations, tasks and terminology and Hispanic cultures.
Prerequisite: SPAN 18301.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SPAN 28201  INTERMEDIATE SPANISH I  3 Credit Hours
A continuation of the development of listening, speaking, reading and writing skills using a variety of material on the Spanish language in the context of Hispanic cultures.
Prerequisite: SPAN 18202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

SPAN 28202  INTERMEDIATE SPANISH II  3 Credit Hours
A continuation of the development of listening, speaking, reading and writing skills using a variety of material on the Spanish language in the context of Hispanic cultures and specific areas of study like culture, business, justice, etc. Credit may be given for SPAN 28202 or SPAN 28206 but not for both.
Prerequisite: SPAN 28201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

SPAN 28206  SPANISH READING FOR COMPREHENSION  3 Credit Hours
Further develops skills and techniques for understanding written Spanish; conducted in English. Credit not applicable toward Spanish major or minor. Students may obtain credit in SPAN 28202 or SPAN 28206 but not both.
Prerequisite: SPAN 28201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Foreign Language

SPAN 38211  SPANISH GRAMMAR AND COMPOSITION  3 Credit Hours
This course provides an intensive grammar study and further written practice to help advanced intermediate students express complex ideas in Spanish.
Prerequisite: SPAN 28202.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 38213  SPANISH READING AND CONVERSATION  3 Credit Hours
This course provides reading techniques and develops oral skills to help advanced intermediate students express complex ideas in Spanish.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 38215  SPANISH PHONETICS AND DICTION  3 Credit Hours
Study of the modern Spanish sound system with special emphasis on pronunciation and intonation.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 38231  TRANSLATION PRACTICE: SPANISH  1 Credit Hour
Translation practice with Spanish texts using principles and techniques learned in the lecture class. To be taken concurrently with TRST 30230.
Corequisite: TRST 30230.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

SPAN 38240  CONVERSATION FOR BUSINESS AND SPECIAL PURPOSES: SPANISH  3 Credit Hours
Introduction to the special vocabulary of business and other special subject areas; introduces the concept of language for special purposes and emphasizes the use of special vocabularies in conversations in business and other settings.
Prerequisite: SPAN 38213.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 38330  EARLY SPANISH LITERATURE (ELR) (WIC)  3 Credit Hours
Outline of development, reading of representative works to 1700.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

SPAN 38331  RECENT SPANISH LITERATURE (ELR) (WIC)  3 Credit Hours
Outline of development, reading of representative works to 1700 present.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

SPAN 38334  EARLY SPANISH-AMERICAN LITERATURE (ELR) (WIC)  3 Credit Hours
Outline of development, reading of representative works including indigenous literature, 1492-1882.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

SPAN 38335  RECENT SPANISH-AMERICAN LITERATURE (ELR) (WIC)  3 Credit Hours
Outline of the development of modern Spanish-American literature (1882 to the present). Reading of representative works.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course
SPAN 38421   CIVILIZATION OF SPAIN  3 Credit Hours
General survey of evolution of Spanish civilization from antiquity to present day.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 38424   CULTURE AND CIVILIZATION OF LATIN AMERICA  3 Credit Hours
A thematic approach to the study of four or five representative Latin American countries focusing on 19th- and 20th-century Latin American culture and society.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48093   VARIABLE TITLE WORKSHOP IN SPANISH  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in specific areas of Hispanic studies. S u g r a d e d.
Prerequisite: Departmental permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

SPAN 48095   SELECTED TOPICS IN SPANISH  3 Credit Hours
(Repeatable for a maximum of 9 credit hours) Topic announced in Schedule of Classes.
Prerequisite: 9 hours above 20000-level of Spanish (SPAN) courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48096   INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Allows the advanced, serious student to carry out research study project on Spanish literature language or culture. Prior approval of supervising faculty member department required.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

SPAN 48215   ADVANCED SPANISH COMPOSITION AND CONVERSATION  3 Credit Hours
Focuses on description, summary, narration, exposition and argumentation on topics dealing with diverse areas of Hispanic culture as presented through literary and non-fiction texts.
Prerequisite: SPAN 38211 and SPAN 38213; and one of SPAN 38330 or SPAN 38331 or SPAN 38334 or SPAN 38335; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48216   CONTEMPORARY HISPANIC CULTURE  3 Credit Hours
A study of selected sociological, political, cultural or economic issues in the contemporary Hispanic world.
Prerequisite: 6 hours from 30000-level Spanish courses.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48230   ADVANCED TRANSLATION PRACTICE: SPANISH (ELR) (WIC)  3 Credit Hours
Theory and practice course that discusses translation theory and emphasizes Spanish-to-English translation of selected texts in business, technology, medicine and law.
Prerequisite: SPAN 38231.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

SPAN 48240   BUSINESS AND SPECIAL TEXTS: SPANISH  3 Credit Hours
Survey of the typical text types of business in the Spanish culture and language. Practice sessions focus on reading and understanding specialized texts and on the translation and composition of selected special texts in Spanish.
Prerequisite: SPAN 38211.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48376   CONTEMPORARY SPANISH-AMERICAN SHORT STORY  3 Credit Hours
The development of the Spanish-American short story from 1917 to the present.
Prerequisite: 6 hours from SPAN 38330 and SPAN 38331 and SPAN 38334 and SPAN 38335.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48378   U.S. LATINA/O WRITERS  3 Credit Hours
The course focuses on a representative selection of literary pieces in Spanish by recent U.S. Latino writers developing oral and listening skills in Spanish and strengthening critical thinking on various cultural and literary matters.
Prerequisite: SPAN 38211 and SPAN 38213; and one of the following: SPAN 38330 or SPAN 38331 or SPAN 38334 or SPAN 38335.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 48422   EARLY SPANISH-AMERICAN DISCOURSE  3 Credit Hours
This course provides a critical analysis of cultural and literary issues on texts dealing with early colonial Spanish-American expression.
Prerequisite: SPAN 38213 and SPAN 38334.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 58095   SELECTED TOPICS IN SPANISH  3 Credit Hours
(Repeatable for a maximum of 15 credit hours) Topic to be announced in semester schedule of classes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SPAN 58216 CONTEMPORARY HISPANIC CULTURE 3 Credit Hours
A study of selected sociological, political, cultural or economic issues in the contemporary Hispanic world.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 58216 CONTEMPORARY SPANISH-AMERICAN SHORT STORY 3 Credit Hours
The development of the Spanish-American short story from 1917 to the present.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 58378 U.S. LATINA/O WRITERS 3 Credit Hours
The course focuses on a representative selection of literary pieces in Spanish by recent U.S. Latino writers developing oral and listening skills in Spanish and strengthening critical thinking on various cultural and literary matters.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 58422 EARLY SPANISH-AMERICAN DISCOURSE 3 Credit Hours
This course provides a critical analysis of cultural and literary issues on texts dealing with early colonial Spanish-American expression.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 68010 THE PRACTICE OF SPANISH TRANSLATION 2 Credit Hours
Students apply linguistic and communication science concepts to case studies of language mediation.
Prerequisite: Graduate standing.
Corequisite: TRST 60010.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

SPAN 68010 THE PRACTICE OF SPANISH TRANSLATION 2 Credit Hours
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

SPAN 68021 ADVANCED SPANISH COMPOSITION AND CONVERSATION 3 Credit Hours
Focuses on description, summary, narration, exposition and argumentation on topics dealing with diverse areas of Hispanic culture as presented through literary and non-fiction texts.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 68021 ADVANCED SPANISH COMPOSITION AND CONVERSATION 3 Credit Hours
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SPAN 68035 LITERARY AND CULTURAL TRANSLATION 3 Credit Hours
Provides advanced intensive practice in the translation of a variety of texts into Spanish. Translation issues and appropriate strategies are identified. Also provides practice in the evaluation of translations, the identification of professional issues, and an advanced review of linguistic and grammatical aspects of Spanish as they apply to translation.
Class meetings are conducted in a workshop format based on weekly assignments of readings and translation exercises.
Prerequisite: TRST 60010 and SPAN 68010; and graduate standing.
Schedule Type: Lecture
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

SPAN 68098 RESEARCH 1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits earned applied toward degree requirements if department approves.
Prerequisite: special approval.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP

SPAN 68191 SEMINAR IN FICTION 3 Credit Hours
(Repeatable for credit) Intensive study of one or two major writers or of a movement in the history of Spanish and Spanish-American fiction.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
**Translation Studies (TRST)**

**TRST 20009** **MULTILINGUAL INFORMATION LIFECYCLE**  3 Credit Hours
Introduction to the multilingual information cycle, including general technological issues, text preparation, translation in markup languages, computer-assisted translation tools and multilingual information flow for multilingual and multicultural work. Course is taught in English.

**Prerequisite:** none.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**TRST 30230** **APPROACHES TO TRANSLATION**  3 Credit Hours
Introduction to foreign language translation. Introduces concepts, resources, principles and techniques of text analysis and translation strategies applicable to various types of texts.

**Prerequisite:** junior standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**TRST 30303** **MEDICAL SPANISH TRANSLATION AND INTERPRETING**  3 Credit Hours
Translation, cross-cultural health literacy, text analysis, familiarization with common medical text types and terminology; text production in English of Spanish medical documents, focusing on strategies of research, documentation and transfer. The rudiments of interpreting in health care environments, including protocol. Course is taught primarily in English.

**Prerequisite:** SPAN 28202.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**TRST 50031** **PROFESSIONAL EDITING FOR TRANSLATORS**  3 Credit Hours
Provides practical instruction in the editing of translated texts representing a variety of text types. Using the best practices of professional translation, the skills and techniques required for all stages of the editing process are covered. Topics include the stages of editing from rough translation to finished draft, electronic tools for multilingual translation editing, translation style guides, pre- and post-editing of machine translation. Interactive lecture and workshop formats.

**Prerequisite:** graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**TRST 60001** **GRADUATE RESEARCH AND WRITING IN TRANSLATION STUDIES**  3 Credit Hours
Individual instruction and assistance with problems encountered in academic research and writing in translation.

**Prerequisite:** Graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**TRST 60009** **DOCUMENTS IN MULTILINGUAL CONTEXTS**  2 Credit Hours
An in-depth study of the role of documents in the multilingual information cycle as manifested in word-processing, desktop publishing and web based environment.

**Prerequisite:** Graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 2 lecture
**Grade Mode:** Standard Letter

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**SPAN 68250** **COMMERCIAL, LEGAL AND DIPLOMATIC TRANSLATION**  3 Credit Hours
An introduction to methods and resources for the translation of commercial, economic, financial legal diplomatic and governmental documents.

**Prerequisite:** TRST 60010 and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**SPAN 68251** **SCIENTIFIC, TECHNICAL AND MEDICAL TRANSLATION**  3 Credit Hours
An introduction to methods and resources for the translation of scientific, technical, industrial and medical documents.

**Prerequisite:** TRST 60010 and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**SPAN 68299** **THESIS II**  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.

**Prerequisite:** SPAN 68199 and graduate standing.
**Schedule Type:** Masters Thesis
**Contact Hours:** 2 other
**Grade Mode:** Satisfactory/Unsatisfactory-IP

**SPAN 68391** **SEMINAR IN THEATRE**  3 Credit Hours
(Repeatable for credit) Intensive study of one or two major dramatists or movements in the history of Spanish and Spanish-American theatre.

**Prerequisite:** Graduate standing.
**Schedule Type:** Seminar
**Contact Hours:** 3 other
**Grade Mode:** Standard Letter

**SPAN 68591** **SEMINAR IN POETRY**  3 Credit Hours
(Repeatable for credit) Intensive study of one or two major poets or of a movement in the history of Spanish and Spanish-American poetry.

**Prerequisite:** Graduate standing.
**Schedule Type:** Seminar
**Contact Hours:** 3 other
**Grade Mode:** Standard Letter

**SPAN 68199** **CASE STUDY IN TRANSLATION**  3 Credit Hours
Students will be responsible for a major translation and a terminology glossary as well as a critical analysis of the source text, the problems encountered during the translation process and the strategies used to solve them.

**Prerequisite:** Special approval and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Satisfactory/Unsatisfactory
TRST 60010  THEORY OF TRANSLATION AND INTERPRETING  2 Credit Hours
Introduction to the theoretical bases and methods of language mediation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

TRST 60011  TERMINOLOGY AND COMPUTER APPLICATIONS IN TRANSLATION  3 Credit Hours
Practice-oriented introduction to terminology management and translation tools, such as term extraction, translation memory and machine translation.
Prerequisite: TRST 60009 and graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

TRST 60012  SOFTWARE LOCALIZATION  3 Credit Hours
Introduction to localization, the translation and adaptation of products including software and Web pages for sale or dissemination in specific target-language markets. Course introduces the basic concepts and techniques of localization and provides a hands-on introduction to relevant computer software.
Prerequisite: TRST 60011 with minimum B (3.0) grade and graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

TRST 60013  LANGUAGE PROJECT MANAGEMENT  3 Credit Hours
Introduction to project management in the language industry. Course covers the body of knowledge and skills, including the use of project management software, required to perform the duties of a translation or localization project manager. Beginning with an overview of the language industry, the course examines the language industry project.
Prerequisite: TRST 60011 with minimum B (3.0) grade and graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

TRST 60095  SPECIAL TOPICS IN TRANSLATIONS STUDIES  1-3 Credit Hours
(Repeatable for a maximum of 12 credit hours) Content varies with the topic, which may include any aspect of translation studies (practical or theoretical). Topics are taught in English and some topics may be team taught.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

TRST 60098  RESEARCH IN TRANSLATION STUDIES  1-15 Credit Hours
(Repeatable for a maximum of 15 credit hours) Research for M.A. translation students. Credits earned may be applied toward degree if department approves.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

TRST 60298  APPLIED TRANSLATION RESEARCH  1-3 Credit Hours
(Repeatable for a maximum of 3 credit hours) Research experience in translation or interpreting in a corporate, translation bureau or freelance setting, supervised by a faculty member.
Prerequisite: Graduate standing and TRST 60010.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

TRST 70001  APPLIED LINGUISTICS AND TRANSLATION INFORMATICS  3 Credit Hours
Advanced topics in applied linguistics, including corpus and text linguistics as they apply to translation. Advanced topics in translation informatics in multilingual environments.
Prerequisite: TRST 60011 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 70002  THE LANGUAGE INDUSTRY  3 Credit Hours
Study of the socio-economic context of professional translation and the language services business sector. Includes in-depth study of the language industry drawing on industry analysis and business case studies.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 70003  TERMINOLOGY STUDIES  3 Credit Hours
Advanced topics in terminology, lexicography, ontology and knowledge organization systems.
Prerequisite: TRST 60011 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 70004  TRANSLATION PEDAGOGY  3 Credit Hours
Teaching methods and curriculum design for translation programs.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 70005  CURRENT TRENDS IN TRANSLATION STUDIES  3 Credit Hours
A critical examination of the main trends in translation theory and an exploration of emerging developments in translation studies.
Prerequisite: TRST 60010 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 70006  EMPIRICAL METHODS FOR TRANSLATION STUDIES  3 Credit Hours
Study of the methods and research designs used to conduct empirical research in translation, with an emphasis on experimental design of cross-language tasks, the use and analysis of bilingual verbal protocols, the application of new methods such as keystroke-logging and eye-tracking and the particular empirical and methodological issues involved in cross-language research data-gathering and statistical analysis.
Prerequisite: Doctoral standing and Translation Studies major (TRST).
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
TRST 70007  CORPORA IN TRANSLATION  3 Credit Hours
Exploration of corpus-based applications in translation studies research and the practice of translation. Competence in utilizing translation-oriented corpus-based tools and corpus building will be fostered.
Prerequisite: doctoral standing and Translation Studies major.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 70008  TRANSLATION AND COGNITION  3 Credit Hours
Study of foreign language translation and interpreting from a cognitive science perspective. Includes discussion of current empirical research, application of selected models of cognition to problems in translation studies and research design in translation process research.
Prerequisite: doctoral standing and Translation Studies major (TRST).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

TRST 80098  RESEARCH IN TRANSLATION STUDIES  1-15 Credit Hours
(Repeatable for credit) Research for doctoral students. Credits earned may be applied toward degree if department approves.
Prerequisite: Doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

TRST 80199  DISSERTATION I  15 Credit Hours
(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation, continuing until all degree requirements are met.
Prerequisite: TRST 80199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

Department of Pan-African Studies

Pan-African Studies (PAS)

PAS 10101  ELEMENTARY KISWAHILI I  4 Credit Hours
This course is an introduction to Kiswahili in which students will learn the essentials of speaking, reading and writing the most extensively used language in East Africa.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PAS 10102  ELEMENTARY KISWAHILI II  4 Credit Hours
Continuation of PAS 10101, aimed at advancing student knowledge and communication skills in Kiswahili by introducing Kiswahili literature, short narratives, proverbs, folktales.
Prerequisite: PAS 10101.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PAS 15200  INTRODUCTION TO WEST AFRICAN CULTURES  3 Credit Hours
Drawing on history, literature and social anthropology, students learn key events and places in W. Africa from the 9th century to the 19th century, covering the Trans-Atlantic Slave trade and the development of long distance networks, including Andalusian Spain, the trans-Saharan trade, the expulsion of Jews and Moors from Spain, state formation in W. Africa, and the role of Saharan—Savannah relations in the expansion of the Atlantic Slave Trade and the movement of European and African peoples to the Americas. The development of this Atlantic world assured the economic centrality of W. Europe and eventually the US, due to the immense transfer of labor and skills from W. Africa.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 20101  KISWAHILI III  3 Credit Hours
Continuation of Kiswahili II, aimed at developing knowledge competence and recognition of Kiswahili usage in all forms of Kiswahili literature.
Prerequisite: PAS 20102.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 20102  KISWAHILI IV  3 Credit Hours
Continuation of Kiswahili III, aimed at developing knowledge, competence and recognition of Kiswahili usage in all forms of Kiswahili literature.
Prerequisite: PAS 20101.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PAS 20200  RECOVERING THE PAST: KENT TO MEMPHIS (ELR)  3 Credit Hours
Prerequisite: none.
Schedule Type: Field Experience, Lecture
Contact Hours: 2 lecture, 1 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

PAS 20300  BLACK IMAGES  3 Credit Hours
Examines the historical origins of racial images and anti-black perceptions through newspapers, magazines, songs, plays, literature, textbooks, radio, television, films, comic books, etc. and the role of these images in American culture past and present.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 22000  CREATIVE WRITING IN THE BLACK WORLD  3 Credit Hours
Explores the major aesthetic and cultural issues that have historically shaped creative writing in the black world and begins by exploring the African Griot tradition. Students learn about the African-American tradition in literature as an organic part of the larger Pan-African world. Students are expected to write, perform, critique and produce original works in the modes and performance styles of the global African world.
Prerequisite: ENG 11011 or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 22101  AFRICAN AMERICAN VISUAL ARTISTS  3 Credit Hours
An Afrocentric survey of visual and aural artistry; course examines cultural context and perspectives, mediums of expression, form, style, content and patronage of African American artists from 1800.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 22200  INTRODUCTION TO THE AFRICAN ARTS  3 Credit Hours
Investigation of function of creative forms of artistic expression particular to experiences of Pan-African community at home and abroad.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 23001  BLACK EXPERIENCE I: BEGINNINGS TO 1865 (DIVG) (KHUM)  3 Credit Hours
Study and analysis of the African experience prior to, and following the arrival of Africans in the New World. Emphasis on North and South America, Africa and Caribbean.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, Transfer Module Humanities

PAS 23002  BLACK EXPERIENCE II: 1865 TO PRESENT (DIVD) (KHUM)  3 Credit Hours
Covers the Black Experience from 1865 to the present, including events, ideas and persons in Africa, North and South America, and the Caribbean.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Humanities, Transfer Module Humanities

PAS 23095  SPECIAL TOPICS IN PAN-AFRICAN LITERATURE AND COMMUNICATION SKILLS  1-4 Credit Hours
(Repeatable for a maximum of 6 credit hours) Introduction to a current and specialized topic in Pan-African Literature and/or communication skills.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 1-4 lecture
Grade Mode: Standard Letter

PAS 23310  NATIVE AMERICAN CULTURE  3 Credit Hours
Introduces American Indian culture, sovereignty and civil rights. Ensures an understanding of self-determination in the context of the colonization and decolonization process, through the use of American Indian literature, philosophy, politics and other cultural outlets. Being that we all live in a broader community, students also examine historical and contemporary relationships with the African American community and other ethnic communities in the US.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 24407  CARIBBEAN STUDIES (DIVG)  3 Credit Hours
Focus on people of African descent in the West Indies and their way of life for the cultural contributions made to Pan-African communities.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

PAS 24500  JAZZ IMAGINES AFRICA  3 Credit Hours
Students learn how to listen to jazz by exploring cultural and musical elements and gain an understanding of raw musical materials from West Africa, how they arrived in the western hemisphere through the “cultural memory” of Africans in bondage, and how those elements blended with materials from European music to inspire the development of jazz. Students also explore Caribbean “bush reggae,” a precursor to what became reggae, which contains some of the same root elements as jazz.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PAS 25200  EAST AFRICAN-KISWAHILI CULTURES  3 Credit Hours
Students learn about the relationship between the Kiswahili language and the cultures of East African peoples, especially those in Malawi, Mozambique, Zaire, Zambia and Zimbabwe. This includes geographical, historical and sociological perspectives and an analysis of common cultural elements (music, literature, proverbs).
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 26000  THE LEGACY OF SLAVERY  3 Credit Hours
Examines the legacy of slavery through literature about the Reconstruction and Jim Crow periods; the writings of Douglass, Washington, DuBois and Garvey; the impact of slavery on modern African American culture; and an investigation of the reparations issue.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 30010  AFRICAN AND AFRICAN-AMERICAN PHILOSOPHIES (DIVD)  3 Credit Hours
(Cross-listed with PHIL 31070) Exploration of philosophical issues in African and African-American or Black thought systems. Topics may include the examination of the issue of the existence of a Black philosophy, the nature of traditional African knowledge, beliefs about personhood, the basis and rationality of witchcraft or other metaphysical beliefs, communalism, the nature of Black moral and aesthetic values, and contemporary analysis of race, racism, slavery, civil rights, pan-Africanism, and criticisms of colonialism, Black development, democratic governance and social policies regarding Blacks. Students with Junior standing or above, who have not taken a Philosophy (PHIL) course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PAS 30310  BLACK HOLLYWOOD  3 Credit Hours
Examines the complexities of race relations in the film industry and the need for “Hollywood” and Black filmmakers to create films for mainstream audiences with a multitude of themes from the African American experience in America and around the world.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 30311  HIP HOP: THE SOCIAL, POLICIAL AND ECONOMIC INFLUENCES  3 Credit Hours
Examines the social, political and economic influences of and on Hip-hop and analyzes the historical and current relationships between Hip-hop and mainstream America, including the role that corporate America has played. In-depth history of the culture and major pioneers and contributors.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 30312  PRACTICUM IN AFRICAN THEATRE ARTS (ELR)  3-6 Credit Hours
(Repeatable for a maximum of 12 credit hours) Exposes students to fundamental techniques of stage through auditory, visual and physical participation. (Students are evaluated in performance and related theater activities.)
Prerequisite: none.
Schedule Type: Practicum or Internship
Contact Hours: 3-6 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

PAS 32001  AFRICAN-AMERICAN LITERATURE TO 1900  3 Credit Hours
(Cross-listed with ENG 33010) Study of African-American literature from its beginning to 1900, including such writers as Wheatley, J. Hammon, Terry, B. Hammon, Jones, Marrant, Allen, Hall, Walker, Truth, Garnet, Douglass, Delany, Harper, Stewart, Turner, Jacobs, Keckley, Brown, Wilson, Griggs, Chesenutt and Dunbar.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 32002  MODERN AFRICAN-AMERICAN LITERATURE  3 Credit Hours
Study of African-American literature from the early twentieth century to the present. The authors include Toomer, Hughes, Larsen, Wright, Baldwin, Hansberry, Jones, Lorde, Walker, Morrison, Mosley, Youngblood and Carter.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 32050  AFRICAN LITERATURES (DIVG)  3 Credit Hours
(Cross-listed with ENG 33015) Examines works of major 20th-century African, African American and Caribbean writers and intellectuals. Authors include Niane, Achebe, Emecheta, Prince, Hurston, Hughes, Cesaire, Senghor, Soyinka and many others.
Prerequisite: ENG 11011 or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

PAS 33100  AFRICAN AMERICAN FAMILY IN HISTORICAL PERSPECTIVES (DIVD)  3 Credit Hours
Examines the legacy of slavery through literature about the Reconstruction and Jim Crow periods; the writings of Douglass, Washington, DuBois and Garvey; the impact of slavery on modern African American culture; and an investigation of the reparations issue.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PAS 33102  AFRICAN AND AFRICAN-AMERICAN PHILOSOPHIES (DIVD)  3 Credit Hours
(Cross-listed with PHIL 31070) Exploration of philosophical issues in African and African-American or Black thought systems. Topics may include the examination of the issue of the existence of a Black philosophy, the nature of traditional African knowledge, beliefs about personhood, the basis and rationality of witchcraft or other metaphysical beliefs, communalism, the nature of Black moral and aesthetic values, and contemporary analysis of race, racism, slavery, civil rights, pan-Africanism, and criticisms of colonialism, Black development, democratic governance and social policies regarding Blacks. Students with Junior standing or above, who have not taken a Philosophy (PHIL) course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PAS 33109  AFRICAN AND AFRICAN-AMERICAN PHILOSOPHIES (DIVD)  3 Credit Hours
(Cross-listed with PHIL 31070) Exploration of philosophical issues in African and African-American or Black thought systems. Topics may include the examination of the issue of the existence of a Black philosophy, the nature of traditional African knowledge, beliefs about personhood, the basis and rationality of witchcraft or other metaphysical beliefs, communalism, the nature of Black moral and aesthetic values, and contemporary analysis of race, racism, slavery, civil rights, pan-Africanism, and criticisms of colonialism, Black development, democratic governance and social policies regarding Blacks. Students with Junior standing or above, who have not taken a Philosophy (PHIL) course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PAS 33110  AFRICAN AMERICAN FAMILY IN HISTORICAL PERSPECTIVES (DIVD)  3 Credit Hours
Examines the legacy of slavery through literature about the Reconstruction and Jim Crow periods; the writings of Douglass, Washington, DuBois and Garvey; the impact of slavery on modern African American culture; and an investigation of the reparations issue.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PAS 33112  AFRICAN AMERICAN FAMILY IN HISTORICAL PERSPECTIVES (DIVD)  3 Credit Hours
Examines the legacy of slavery through literature about the Reconstruction and Jim Crow periods; the writings of Douglass, Washington, DuBois and Garvey; the impact of slavery on modern African American culture; and an investigation of the reparations issue.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic
PAS 33101  AFRICAN AMERICAN HISTORY: SLAVERY TO FREEDOM  
3 Credit Hours 
(Cross-listed with HIST 31080) Survey of African American history form the colonial period to 1877. Course provides a general knowledge of the social, political and cultural history of African Americans from colonial times to the end of the Reconstruction.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

PAS 33110  THE BLACK WOMAN: HISTORICAL PERSPECTIVES (DIVD)  
3 Credit Hours  
Course surveys the experiences of African-American women throughout various periods of history, and their roles in shaping the social, economic, political and cultural development of societies.  
Prerequisite: sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Diversity Domestic  

PAS 33120  THE BLACK MAN: HISTORICAL PERSPECTIVES  
3 Credit Hours  
Focuses on various roles of the African American man within the context of the African experience and the African diaspora.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

PAS 33130  GENDER AND SEXUALITY IN AFRICA AND THE AFRICAN DIASPORA  
3 Credit Hours  
Using lectures, videos, discussions, readings and application this course explores ways in which gender and sexuality in Africa and the African Diaspora have and can be constructed, performed, articulated and researched. Attention is also paid to the existence of LGBTQ identities within the global black community.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

PAS 33171  THE AFRICAN AMERICAN COMMUNITY (DIVD)  
3 Credit Hours  
Explores problems of African-American communities: public administration, transportation, health, public finance, crime and justice, geography, black/demography and education.  
Prerequisite: sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Diversity Domestic  

PAS 33200  ANCIENT AFRICAN CIVILIZATIONS  
3 Credit Hours  
Examines the history of ancient African civilizations and their contributions to world history.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

PAS 33310  LATINOS, THE AFRICAN DIASPORA AND AMERICAN SOCIETY (DIVD)  
3 Credit Hours  
Introduction to Latino minorities. Focus on Mexican-Americans, Puerto Ricans and Cubans and African influences on Latino culture.  
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Diversity Domestic  

PAS 34000  INTRODUCTION TO AFRICAN WORLD VIEW (DIVG)  
3 Credit Hours  
Investigates traditional African cosmological world views and aesthetics in global Africa. Students who do not have prerequisites may request permission from instructor.  
Prerequisite: PAS 23001 or PAS 23002.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Diversity Global  

PAS 34100  ISLAMIC WEST AFRICA  
3 Credit Hours  
Familiarizes students with the cultural and historical specificities of Islamic communities in West Africa. Beginning with the introduction of Islam into West Africa in the eighth century, this course takes a multi-disciplinary point of view and covers contemporary political issues as well as historical topics. Students are provided the analytical tools and documentation to understand contemporary religious issues in West Africa and the diversity in expression of thought and practice of Islamic West Africa.  
Prerequisite: sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

PAS 34200  BLACK MUSIC REVISITED  
3 Credit Hours  
This is a survey course in the appreciation of, as well as an investigation into, that Great Black Tradition in Music. Students explore contemporary Black music from Africa into the New World and consider African world music from the Blues, Gospel, Jazz to Bebop, Rhythm & Blues, Hip Hop and Afro-Beat to Reggae. Students also learn the significance of local and individual artists.  
Prerequisite: PAS 23001 or PAS 23002.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

PAS 35100  BLACK SOCIAL AND POLITICAL THOUGHT  
3 Credit Hours  
Study of the history and nature of social and political thought of African Americans including an overview of various movements and individuals, as well as their strategies and tactics, in the struggle for social change in the U.S. as it relates to black people.  
Prerequisite: junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
PAS 35200  AFRICAN SOCIAL AND POLITICAL SYSTEMS  3 Credit Hours
An African-centered focus on traditional african institutions as these interact with the Jihad Movements, Western European incursion, the slave trade, colonialism, independence movements and contemporary issues.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 37000  ORAL AND WRITTEN DISCOURSES IN PAN-AFRICAN STUDIES (WIC)  3 Credit Hours
Examines the spoken and written English of African-Americans with some emphasis on mastering consensus English writing skills required in upper-division PAS courses.
Prerequisite: ENG 21011 or HONR 10297.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PAS 37001  THEORETICAL APPROACHES TO PAN-AFRICAN STUDIES  3 Credit Hours
A critical analysis of the diverse approaches to and underlying principles of Pan-African Studies.
Prerequisite: Sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 37010  RESEARCH METHODS IN PAN-AFRICAN STUDIES (ELR)  3 Credit Hours
This course will expose students to the basic components of research methods in Pan-African studies utilizing multidisciplinary approaches.
Prerequisite: PAS 37000 AND 37001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

PAS 37020  THE MODEL AFRICAN UNION (ELR)  3 Credit Hours
Students examine role, structure and performance of the African Union in the search for solutions to key economic, social and political-security issues facing Africa. Students attend the annual meeting of the Model African Union Conference in Washington D.C., which is a simulation of proceedings of the African Union, augmented by briefings at African Embassies. Participants gain an understanding of the various determinants, capabilities and constraints shaping the domestic and foreign policies of African countries.
Prerequisite: sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

PAS 37100  PAN-AFRICAN WOMEN'S LITERATURE (DIVG)  3 Credit Hours
(Cross-listed with ENG 33013) Introduces students to literary works by African and Caribbean women.
Prerequisite: ENG 11011 or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

PAS 37150  THE UNDERGROUND RAILROAD  3 Credit Hours
Examines the Underground Railroad and its impact as an American phenomenon.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 37200  AFRICAN-AMERICAN WOMEN'S LITERATURE  3 Credit Hours
(Cross-listed with ENG 33014) Introduces students to literary works by African-American women.
Prerequisite: ENG 11011 or HONR 10197.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 40120  CONTEMPORARY ISSUES IN AFRICAN-AMERICAN EDUCATION  3 Credit Hours
This course examines the interrelationship of contemporary issues and the education of people of African descent.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 41192  PRACTICUM IN AFRICAN AMERICAN AFFAIRS (ELR)  1-12 Credit Hours
(Repeatable for a maximum of 12 credit hours) Guided involvements in urban areas with large African-American populations to provide experience with community service, government agencies, public and private schools, non-profit organizations, etc.
Prerequisite: none.
Schedule Type: Practicum or Internship
Contact Hours: 3-36 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

PAS 42500  BLACK EDUCATION IN AMERICA  3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Analyzes the historical, social and political perspectives of educating people of African descent in America.
Prerequisite: PAS 23002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 43095  SPECIAL TOPICS IN PAN-AFRICAN LITERATURE, ARTS AND CULTURES  3 Credit Hours
(Repeatable for credit) Broadens upper division offerings in holistic study and performance in Pan-African literatures, arts and cultures.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 43100  RACE, CLASS AND FEMINIST THOUGHT  3 Credit Hours
Explores issues of race, class and gender through the lens of Black women and feminists of color.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PAS 43200  MALCOLM AND MARTIN  3 Credit Hours
A critical study of the major ideas and doctrines, including religious and
theological beliefs, of Malcolm X and Martin L. King and their roles in
American history.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 43395  SPECIAL TOPICS IN AFRICAN DIASPORA STUDIES  3 Credit Hours
(Repeatable for a maximum of 12 credit hours)Study of selected topics
related to people of African descent outside of the African continent
including, but not limited to the Americas and Europe.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 44095  SPECIAL TOPICS IN CONTEMPORARY AFRICA  3 Credit Hours
(Repeatable for a total of 12 credit hours when topic varies) Study of
selected topics related to contemporary Africa.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 47091  SENIOR SEMINAR IN PAN-AFRICAN STUDIES (WIC)  3 Credit Hours
Students prepare a capstone portfolio of their work to be presented
in departmental courses. Approval by faculty member or chairperson
necessary prior to registration.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PAS 47095  SPECIAL TOPICS IN THEORETICAL AND APPLIED
RESEARCH  3 Credit Hours
(Repeatable for a maximum of 12 credit hours)Selected topics in
the intellectual, cultural, political and historical development of Pan-
Africanism, its diverse theoretical approaches and multiple applications
including the Organization of African Unity.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PAS 49096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable once for credit)Research in areas of interest not available
in departmental courses. Approval by faculty member or chairperson
necessary prior to registration.
Prerequisite: Junior or senior standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

Department of Philosophy

Philosophy (PHIL)

PHIL 11001  INTRODUCTION TO PHILOSOPHY (DIVG) (KHUM)  3 Credit Hours
An introduction to the diverse methods and subject matters in
philosophy. Topics may include: What are the arguments for the existence
of God? Do humans have free will? Can we know anything with certainty,
and how do we know anything at all? Is what we see real, or might it
be only an illusion? What makes a person a person - their mind, or their
physical attributes? Is the mind the brain, or is it something else?
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, TAG Arts and
Humanities, Transfer Module Humanities

PHIL 11009  CRITICAL THINKING (KADL)  3 Credit Hours
Critical thinking is essential to every aspect of life, whether reading a
news report or editorial, examining a contract or other legal document, or
entering into a debate. This course teaches the strategies of “cognitive
self-defense” that allow students to see past false claims and avoid being
deceived by misleading rhetorical strategies. The course also examines
the role of argument in reasoning, including types of arguments and the
ways in which mistakes in reasoning can lead us astray. Examples from
everyday life illustrate the sorts of complex reasoning that are a crucial
part of practical decision-making.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Additional

PHIL 21001  INTRODUCTION TO ETHICS (DIVG) (KHUM)  3 Credit Hours
What makes an action morally right or morally wrong, and who gets to
decide? Is ethics about performing actions that are morally right, or is
it about being a virtuous person? This course examines at least three
competing theories about ethics, including challenges to each theory.
Students get to decide which theory they think is best, but every theory
presents its own strengths and weaknesses.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Humanities, TAG Arts and
Humanities, Transfer Module Humanities
PHIL 21002  INTRODUCTION TO FORMAL LOGIC (KMCR)  3 Credit Hours
This course is designed to sharpen students' reasoning skills and to help them better understand the structure of reasoning in general. To do this, it introduces students to some formal languages, such as Propositional Logic and Predicate Logic, that represent the logical structure of deductive reasoning. Unlike natural languages such as English, these formal languages allow students to focus on the general structure of different types of arguments, without discussing the content of any particular argument. Course covers both the construction of formal proofs in these languages, and translation between them and English. The study of formal logic contributes to effective and persuasive reasoning, not only in philosophy, but in any discipline or context. It also provides effective tools for evaluating the strength of English-language arguments. The skills that students acquire in this course are thus widely applicable in their personal, professional and academic lives. 
Prerequisite: Minimum 35 ALEKS math score; or minimum 22 ACT math score; or minimum 530 SAT math score; or minimum C grade in MATH 00022.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Mathematics and Critical Reasoning, Transfer Module Mathematics

PHIL 30015  MEDICINE AND MORALITY  3 Credit Hours
A philosophical exploration of at least three issues related to current medical practices, which may include ethical, religious, legal and clinical aspects. Topics may include: abortion, the use of genetic technologies, organ donation and transplantation, the use of human research subjects, or end-of-life decision-making. 
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 30025  ENVIRONMENTAL ETHICS  3 Credit Hours
A philosophical examination of ethical issues in environmental studies, including topics such as: animal ethics and the sources of our food; the value of nature and environmental aesthetics; sustainability and biodiversity; ecofeminism, social justice and radical ecology; and the human response to climate change. The course is designed to complement fields of study such as geography, environmental studies and biology.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 31001  ANCIENT GREEK PHILOSOPHY (WIC)  3 Credit Hours
Examination of Greek thought from its inception through Plato, Aristotle, and later philosophers who were greatly influenced by them, but who also challenged their views. The ancients made the move from explanation based on myth to philosophical explanation - what did that move involve? How did the ancients answer questions about the nature of reality, what exists, the reliability of the senses, and the types of things in the world? How did they conceive of the good life?
Prerequisite: At least one of PHIL 11009 or PHIL 21002 or PHIL 41038; and at least one of PHIL 11001 or PHIL 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31002  MEDIEVAL PHILOSOPHY (WIC)  3 Credit Hours
Examination of issues in medieval thought, such as the existence and nature of God, the relationship between faith and reason, the problem of universals, and the nature of causality. Selections from philosophers such as Augustine, Boethius, Aquinas, Abelard, Avicenna, Duns Scotus, and William of Ockham. 
Prerequisite: At least one of PHIL 11009 or PHIL 21002 or PHIL 41038; and at least one of PHIL 11001 or PHIL 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31003  CONTINENTAL RATIONALISM (WIC)  3 Credit Hours
Selections from rationalists such as Descartes, Spinoza, and Leibniz. The rationalists believed that the nature of reality was best understood using rational thought alone. What did they mean by this, and how did this belief shape their wider views of the world?
Prerequisite: At least one of PHIL 11009 or PHIL 21002 or PHIL 41038; and at least one of PHIL 11001 or PHIL 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31004  BRITISH EMPIRICISM (WIC)  3 Credit Hours
Selections from British Empiricists such as Locke, Berkeley, and Hume. The empiricists believed that reality was best understood using sensory evidence and observational methods. What do these human investigations tell us about the nature of properties, existence, and causation?
Prerequisite: At least one of PHIL 11009 or PHIL 21002 or PHIL 41038; and at least one of PHIL 11001 or PHIL 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31005  GERMAN CRITICAL PHILOSOPHY (WIC)  3 Credit Hours
Selections from philosophers such as Kant, Fichte, and others who began the movement known as German idealism. These thinkers emphasized a turn towards mind as constructing the world as it appears to us. 
Prerequisite: At least one of PHIL 11009 or PHIL 21002 or PHIL 41038; and at least one of PHIL 11001 or PHIL 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31006  NINETEENTH-CENTURY PHILOSOPHY (WIC)  3 Credit Hours
Nineteenth-century philosophy is primarily a response to German idealism. Questions in social and political philosophy, as well as in metaphysics and epistemology, are considered in the works of philosophers such as Hegel, Schelling, Schopenhauer, Marx, Kierkegaard, and Nietzsche. 
Prerequisite: At least one of PHIL 11009, 21002, 41038; and at least one of PHIL 11001, 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course
PHIL 31010  TWENTIETH-CENTURY PHILOSOPHY (WIC)  3 Credit Hours
Selections from representatives of the most influential schools of thought within twentieth-century philosophy; for example, existentialists such as Sartre, pragmatists such as Dewey, logical positivists such as Carnap, phenomenologists such as Heidegger, and post-structuralists such as Derrida.
Prerequisite: At least one of PHIL 11009 or PHIL 21002 or PHIL 41038; and at least one of PHIL 11001 or PHIL 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31020  AMERICAN PHILOSOPHY (WIC)  3 Credit Hours
Selections from principal American philosophers from colonial times to the present, such as Emerson, Peirce, William James, Dewey, Quine, and Martin Luther King. American philosophy reflects the historic values of liberty, enterprise, industry, practicality, and diversity interwoven in the fabric of American life.
Prerequisite: At least one of PHIL 11009, 21002, 41038; and at least one of PHIL 11001, 21001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31030  EXISTENTIALISM  3 Credit Hours
Examination of the themes of existentialism, which include absurdity, freedom, and the individual's relationship to the world. Philosophers studied may include Sartre, Kierkegaard, Nietzsche, Camus, de Beauvoir, Ortega y Gasset, Marcel, and Tillich. Students with junior standing or above, who have not taken a Philosophy (PHIL) course, should contact the department for a prerequisite override.
Prerequisite: One course in philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHIL 31035  PHILOSOPHY AND JUSTICE (DIVD)  3 Credit Hours
Consideration of topics and issues relevant to the concept of justice, as addressed by a range of classical and contemporary philosophers. Topics may include the nature of justice from feminist, libertarian, liberal, socialist, communitarian, egalitarian, and social welfare perspectives; and the application of these perspectives to practical issues such as affirmative action, democracy, equal pay, environmental justice, just war, criminal justice, civil disobedience, tort law and poverty. Students with junior standing or above, who have not taken a Philosophy [PHIL] course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PHIL 31040  WOMEN AND PHILOSOPHY (DIVD)  3 Credit Hours
This course philosophically investigates topics, ideas, and events that are relevant to the study of women's issues and gender theory. Topics may include the ways in which the history of philosophy has shaped our understanding of the role of women in society and gender more broadly; the ways in which women philosophers have shaped questions and issues regarding gender and their own treatment; and philosophical approaches to the ways that gender issues are manifest in contemporary society, such as pay inequality, rape culture, childcare and parenting, sexuality, and what it means to be a woman. Students with junior standing or above, who have not taken a Philosophy [PHIL] course should contact the department for a prerequisite override.
Prerequisite: One course in philosophy [PHIL].
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PHIL 31060  PHILOSOPHY OF ART AND BEAUTY (ELR)  3 Credit Hours
Investigation of concepts such as the artistic object and creative expression, and examination and critique of a range of theories designed to solve various problems in the field of aesthetics, or the study of the nature and principles of artistic beauty. Examples drawn from diverse genres such as the visual arts, drama, music, and dance provide the context for discussion of topics including what makes something beautiful and what is involved in an act of creativity. Students with junior standing or above, who have not taken a Philosophy (PHIL) course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement
PHIL 31072  AMERICAN INDIAN PHILOSOPHIES (DIVD)  3 Credit Hours
Examination of philosophical issues and themes in American Indian world views with attention given to the reflections of contemporary native scholars. Students with junior standing or above, who have not taken a Philosophy course should contact the department for a prerequisite override.
Prerequisite: one course in philosophy.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

PHIL 31075  PHILOSOPHY AND MULTICULTURALISM (DIVG)  3 Credit Hours
Philosophical examination of various approaches to multiculturalism, in terms of definitions, justifications and relevant alternative views regarding the scope and nature of multiculturalism. Students with junior standing or above, who have not taken a Philosophy course, should contact the department for a prerequisite override.
Prerequisite: one course in Philosophy.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

PHIL 31080  FOUNDATIONS IN THE HISTORY AND PHILOSOPHY OF SCIENCE  3 Credit Hours
(Cross-listed with HIST 31500) An introduction to the study of science as a social, cultural, and historical phenomenon with an emphasis on the history of science primarily in western civilization since 1500 and the major philosophical approaches to science developed in the twentieth century.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 32091  SEMINAR: PHILOSOPHICAL REFLECTIONS  3 Credit Hours
Junior-level seminar with variable topics of philosophical interest. Please check the departmental website or contact the instructor regarding each semester’s topic. Students with junior standing or above, who have not taken a Philosophy course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

PHIL 40005  HEALTH CARE ETHICS  3 Credit Hours
Ethical problems in health care critically assessed, and consideration of how these specific ethical problems illuminate the ethical enterprise. Students with junior standing or above, who have not taken a Philosophy course, should contact the department for a prerequisite override.
Prerequisite: one course in Philosophy.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 40093  VARIABLE TITLE WORKSHOP IN PHILOSOPHY  1-6 Credit Hours
(Repeatable for credit)S/u graded.
Prerequisite: Permission.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

PHIL 41010  PROBLEMS IN THE PHILOSOPHY OF RELIGION  3 Credit Hours
(Slashed with PHIL 51010) Philosophical examination of issues and problems presented by various writers in philosophy of religion.
Prerequisite: one of the following: PHIL 31001 or PHIL 31002 or PHIL 31003 or PHIL 31004 or PHIL 31005 or PHIL 31006 or PHIL 31010 or PHIL 31020
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41020  SOCIAL AND POLITICAL PHILOSOPHY  3 Credit Hours
(Slashed with PHIL 51020) Critical examination of classical and contemporary philosophical theories of the nature of society, and the state as political system that best represents a well-organized society. Topics may include the nature, existence, and justification of the state, the issue of political obligation, theories of anarchism, utopia, democracy, liberalism, communitarianism, citizenship, and patriotism, and examination of the nature of the social and political values or notions of rights, equality, and liberty.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41025  PHILOSOPHY OF LAW  3 Credit Hours
(Slashed with PHIL 51025) Critical examination of the nature, features, foundation, and function of law. Topics may include the debate between natural law theory and legal positivism, with respect to whether law and moral are necessarily connected, as well as the nature of judicial decision, constitution interpretation, the basis and elements of criminal, civil law (contract, tort) law, the grounds for obeying or disobeying bad laws, and analysis of some supreme court cases which raise philosophical issues about the nature and function of law.
Prerequisite: One of the following courses: PHIL 31001 or PHIL 31002 or PHIL 31003 or PHIL 31004 or PHIL 31005 or PHIL 31006 or PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41030  ETHICAL THEORY  3 Credit Hours
(Slashed with PHIL 51030) In this course, students will explore developments in the dominant normative theories of 20th and 21st century Anglo-American ethics, including consequentialism, deontology, virtue ethics, ethics of care, and varieties of contract theory.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010, or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PHIL 41034 PHILOSOPHY OF PSYCHOLOGY AND PSYCHIATRY 3 Credit Hours
(Slashed with PHIL 51034) This course addresses the question, “What are mental disorders?” using the methods of philosophy. We consider metaphysical questions such as, “Are mental disorders natural kinds or social kinds?” and “Can we provide a reductionist account of mental disorder?”, questions from Philosophy of Mind such as, “Can a theory of mind-brain dualism accommodate the possibility of mental disorder?” and ethical questions such as, “How can we hold people with personality disorders responsible for their actions without blaming them?” By addressing the nature of mental disorder from a variety of philosophical angles, we will examine not only how each subfield answers the question in isolation, but also how each subfield might complement or contradict other philosophical approaches.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41035 PHILOSOPHY OF SCIENCE 3 Credit Hours
(Slashed with PHIL 51035) What is science? What are its distinctive aims and methods, and how do they bolster the epistemic authority of scientific theories? Do sociological, historical, and cultural factors play a major role in the advancement of scientific thought? These questions, and others like them, define the philosophy of science - a branch of philosophy that deals with the metaphysical, epistemological, and normative issues that arise in the study of scientific practice.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41036 PHILOSOPHY OF COGNITIVE SCIENCE 3 Credit Hours
(Slashed with PHIL 51036) In this course, students focus on issues at the interface of philosophy, psychology, neuroscience, linguistics, and artificial intelligence. These fields, which comprise contemporary cognitive science, present the philosopher with an opportunity to clarify foundational concepts, such as computation, inattness, language, perception, and learning. Ultimately, the goal of the course is to understand various proposals about how neural computation could amount to human intelligence and consciousness.
Prerequisite: One of the following courses: PHIL 31001 or PHIL 31002 or PHIL 31003 or PHIL 31004 or PHIL 31005 or PHIL 31006 or PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41037 RENAISSANCE AND EARLY MODERN PHILOSOPHY AND SCIENCE 3 Credit Hours
(Slashed with PHIL 51037) An investigation of the work of the most important European philosophers of the 15th-17th centuries, with a particular emphasis on the interrelation between philosophy and science in their thought, and on the influence of Greek philosophy on the intellectual life of the time.
Prerequisite: PHIL 31001 or PHIL 31002 or PHIL 31003 or PHIL 31004 or PHIL 31005 or PHIL 31006 or PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41038 INTERMEDIATE LOGIC 3 Credit Hours
(Slashed with PHIL 51038; Cross-listed with CS 41038 and MATH 51038) A detailed, systematic study of symbolic logic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. The aim of the course is twofold: first, to develop a facility in understanding and using symbolic logic for various purposes, and second, to understand and appreciate symbolic logic as an area of study in itself. Topics include the distinction between syntactic, object-level proofs and semantic, meta-level proofs, the distinction between axiomatic systems and natural deduction systems of object-level proofs, various systems of modal logic, and some non-classical logics. Students with junior standing or above, who have not taken a Philosophy (PHIL) course, should contact the department for a prerequisite override.
Prerequisite: One course in Philosophy (PHIL).
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41040 EPISTEMOLOGY 3 Credit Hours
(Slashed with PHIL 51040) What is the difference between merely believing something to be the case and knowing it to be the case? In this course students examine various theories designed to answer this question and evaluate their respective strengths and weaknesses. The course will cover the Gettier problem that questions the traditional definition of knowledge as justified true belief, the debate between foundationalism and coherentism, the debate between internalism and externalism about justification, naturalized epistemology, and virtue epistemology.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010, or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41042 METAPHYSICS 3 Credit Hours
(Slashed with PHIL 51042) Covers several topics in contemporary analytic metaphysics. Topics may include existence, identity, things and their persistence over time, the nature of modalities and possible worlds, and the relationship between material parts and wholes.
Prerequisite: One of the following courses: PHIL 31001 or PHIL 31002 or PHIL 31003 or PHIL 31004 or PHIL 31005 or PHIL 31006 or PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PHIL 41045 METALOGIC 3 Credit Hours
(Slashed with PHIL 51045; Cross-listed with CS 41045 and CS 51045 and MATH 41045 and MATH 51045) A detailed, systematic study of metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. Topics include the soundness and completeness of the propositional and predicate calculus, the decidability of propositional calculus, the undecidability of predicate calculus, Gödel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionality of the set of general recursive functions, abacus computable functions, and the philosophical motivations for the Church-Turing Thesis that all computable functions are Turing computable.
Prerequisite: PHIL 41038.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41048 METAETHICS 3 Credit Hours
(Slashed with PHIL 51048) Metaethics is the study of the nature and justification of moral judgments, as distinct from ethics, which aims to articulate principles, criteria, or alternative approaches to understanding and achieving goodness and right action. Metaethics examines the concepts, ontology, psychology, and modes of justification employed within ethics. This course will explore recent developments about such questions as: which, if any, ethical judgments can be true or false; whether we can know true ethical statements; and to what kinds of properties, if any, ethical judgments and beliefs refer.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010, or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41050 ANALYTIC PHILOSOPHY 3 Credit Hours
(Slashed with PHIL 51040) Focuses on the history and continued evolution of analytic philosophy. Readings include works by philosophers such as Frege, Russell, Moore, Wittgenstein, Schlick, Carnap, Ryle, Austin, Strawson, Grice, Quine, Davidson, Kripke, Putnam, and others. The aim of the course is (i) to understand the theses and themes that commonly arise in analytic philosophy, their philosophical motivations, and the problems they face, and (ii) to become familiar with the methodologies used by analytic philosophers including (but not limited to) logical analysis, appeals to ordinary language, the use of thought experiments, and the use of possible world semantics.
Prerequisite: One of the following courses: PHIL 31001 or PHIL 31002 or PHIL 31003 or PHIL 31004 or PHIL 31005 or PHIL 31006 or PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41055 PHENOMENOLOGY 3 Credit Hours
(Slashed with PHIL 51055) In-depth study of the phenomenological movement in twentieth-century philosophy, from its origin in the thought of Edmund Husserl and his contemporaries, through such canonical thinkers as Martin Heidegger and Maurice Merleau-Ponty, to various contemporary developments. Substantial time is also devoted to considering applications of phenomenology to various disciplines in the humanities, social sciences, and arts. This is in keeping with the overall focus in this seminar on phenomenology not only as a philosophical school, but also as a methodology with broad and diverse applications.
Prerequisite: One of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41060 PRAGMATISM 3 Credit Hours
(Slashed with PHIL 51060) As America's distinctive “home-grown” philosophy, pragmatism embodies the values of action, problem-solving, and consensus-building within a pluralistic society. The core of this course examines the seminal works of the classical American pragmatists: Peirce, James, and Dewey. Special attention will be devoted to a phenomenology of experience that undercuts the dualisms of mind and matter, subject and object, self and world.
Prerequisite: one of the following courses: PHIL 31001, PHIL 31002, PHIL 31003, PHIL 31004, PHIL 31005, PHIL 31006, PHIL 31010 or PHIL 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41065 PLATO 3 Credit Hours
(Slashed with PHIL 51065) Detailed examination of selected Platonic dialogues, with some attention to Plato's development and dismissal of certain pre-Socratic (and Socratic) themes.
Prerequisite: one of the following - PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010 or 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41070 ARISTOTLE 3 Credit Hours
(Slashed with PHIL 51070) Detailed examination of selected works of Aristotle, with some attention given to Aristotle's development and dismissal of certain pre-Socratic and Platonic themes.
Prerequisite: one of the following - PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010 or 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41076 CONTINENTAL PHILOSOPHY 3 Credit Hours
(Slashed with PHIL 51076) Investigation of some figure, issue or theme in continental philosophy from Descartes to present.
Prerequisite: one of the following - PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010 or 31020.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PHIL 41080  PHILOSOPHY AND ART IN THE MODERN AGE  3 Credit Hours
(Slashed with PHIL 51080) Exploring, with emphasis on the modern age, philosophical conceptions of art in their interplays with, especially, practicing artists’ attitudes toward theory.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 41091  SEMINAR IN WORLD PHILOSOPHY  3 Credit Hours
(Slashed with PHIL 51091) (Repeatable for a maximum of 3 credit hours) Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues from traditions outside the Western canon.
Prerequisite: PHIL 310001 or 31002 or 31003 or 31004 or 31005 or 31006 or 31010 or 31020.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

PHIL 41491  SEMINAR IN ASIAN PHILOSOPHY  3 Credit Hours
(Slashed with PHIL 51491) (Repeatable a maximum of 2 times) Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues from traditions in Asian philosophy.
Prerequisite: at least one of PHIL 31001 or 31002 or 31003 or 31004 or 31005 or 31006 or 31010 or 31020.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

PHIL 41591  SEMINAR IN THE HISTORY OF ETHICS  3 Credit Hours
(Slashed with PHIL 51591) (Repeatable a maximum of 2 times) Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues from traditions in the history of ethics.
Prerequisite: at least of PHIL 31001 or 31002 or 31003 or 31004 or 31005 or 31006 or 31010 or 31020.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

PHIL 49995  SPECIAL TOPICS  2-3 Credit Hours
(Repeatable for credit when topic varies)
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 2-3 lecture
Grade Mode: Standard Letter

PHIL 49996  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit with departmental approval prior to registration)
Prerequisite: departmental special approval prior to registration.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

PHIL 49999  SENIOR HONORS PROJECT (ELR)  2-3 Credit Hours
(Repeated registration permitted with departmental approval prior to registration) Thesis or other independent study or creative project.
Prerequisite: Departmental permission before registration.
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 2-3 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

PHIL 50005  HEALTH CARE ETHICS  3 Credit Hours
Ethical problems in health care critically assessed and consideration of how these specific ethical problems illuminate the ethical enterprise.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 50093  VARIABLE TITLE WORKSHOP IN PHILOSOPHY  1-6 Credit Hours
(Repeatable for credit)
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory

PHIL 51010  PROBLEMS IN THE PHILOSOPHY OF RELIGION  3 Credit Hours
(Slashed with PHIL 41010) Philosophical examination of issues and problems presented by various writers in philosophy of religion.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51020  SOCIAL AND POLITICAL PHILOSOPHY  3 Credit Hours
(Slashed with PHIL 41020) Critical examination of classical and contemporary philosophical theories of the nature of society, and the state as political system that best represents a well-organized society. Topics may include the nature, existence, and justification of the state, the issue of political obligation, theories of anarchism, utopia, democracy, liberalism, communitarianism, citizenship, and patriotism, and examination of the nature of the social and political values or notions of rights, equality, and liberty.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51025  PHILOSOPHY OF LAW  3 Credit Hours
(Slashed with PHIL 41025) Critical examination of the nature, features, foundation, and function of law. Topics may include the debate between natural law theory and legal positivism, with respect to whether law and moral are necessarily connected, as well as the nature of judicial decision, constitution interpretation, the basis and elements of criminal, civil law (contract, tort) law, the grounds for obeying or disobeying bad laws, and analysis of some supreme court cases which raise philosophical issues about the nature and function of law.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51030  ETHICAL THEORY  3 Credit Hours
(Slashed with PHIL 41030) In this course, students will explore developments in the dominant normative theories of 20th and 21st century Anglo-American ethics, including consequentialism, deontology, virtue ethics, ethics of care, and varieties of contract theory.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PHIL 51034  PHILOSOPHY OF PSYCHOLOGY AND PSYCHIATRY  3 Credit Hours
(Slashed with PHIL 51034) This course addresses the question, “What are mental disorders?” using the methods of philosophy. We consider metaphysical questions such as, “Are mental disorders natural kinds or social kinds?” and “Can we provide a reductionist account of mental disorder?”, questions from Philosophy of Mind such as, “Can a theory of mind-brain dualism accommodate the possibility of mental disorder?”, and ethical questions such as, “How can we hold people with personality disorders responsible for their actions without blaming them?” By addressing the nature of mental disorder from a variety of philosophical angles, we will examine not only how each subfield answers the question in isolation, but also how each subfield might complement or contradict other philosophical approaches.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51035  PHILOSOPHY OF SCIENCE  3 Credit Hours
(Slashed with PHIL 41035) What is science? What are its distinctive aims and methods, and how do they bolster the epistemic authority of scientific theories? Do sociological, historical, and cultural factors play a major role in the advancement of scientific thought? These questions, and others like them, define the philosophy of science - a branch of philosophy that deals with the metaphysical, epistemological, and normative issues that arise in the study of scientific practice.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51036  PHILOSOPHY OF COGNITIVE SCIENCE  3 Credit Hours
(Slashed with PHIL 41036) In this course, students focus on issues at the interface of philosophy, psychology, neuroscience, linguistics, and artificial intelligence. These fields, which comprise contemporary cognitive science, present the philosopher with an opportunity to clarify foundational concepts, such as computation, innateness, language, perception, and learning. Ultimately, the goal of the course is to understand various proposals about how neural computation could amount to human intelligence and consciousness.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51037  RENAISSANCE AND EARLY MODERN PHILOSOPHY AND SCIENCE  3 Credit Hours
(Slashed with PHIL 41037) An investigation of the work of the most important European philosophers of the 15th-17th centuries, with a particular emphasis on the interrelation between philosophy and science in their thought, and on the influence of Greek philosophy on the intellectual life of the time.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51038  INTERMEDIATE LOGIC  3 Credit Hours
(Slashed with PHIL 41038; Cross-listed with CS 41038 and MATH 41038 and MATH 51038) A detailed, systematic study of symbolic logic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. The aim of the course is twofold: first, to develop a facility in understanding and using symbolic logic for various purposes, and second, to understand and appreciate symbolic logic as an area of study in itself. Topics include the distinction between syntactic, object-level proofs and semantic, meta-level proofs, the distinction between axiomatic systems and natural deduction systems of object-level proofs, various systems of modal logic, and some non-classical logics.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51040  EPISTEMOLOGY  3 Credit Hours
(Slashed with PHIL 41040) What is the difference between merely believing something to be the case and knowing it to be the case? In this course students examine various theories designed to answer this question and evaluate their respective strengths and weaknesses. The course will cover the Gettier problem that questions the traditional definition of knowledge as justified true belief, the debate between foundationalism and coherentism, the debate between internalism and externalism about justification, naturalized epistemology, and virtue epistemology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51042  METAPHYSICS  3 Credit Hours
(Slashed with PHIL 41042) Covers several topics in contemporary analytic metaphysics. Topics may include existence, identity, things and their persistence over time, the nature of modalities and possible worlds, and the relationship between material parts and wholes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51045  METALOGIC  3 Credit Hours
(Slashed with PHIL 41045; Cross-listed with CS 41045 and CS 51045 and MATH 41045 and MATH 51045) A detailed, systematic study of metalogic for philosophy majors, mathematics majors, computer science majors, and anyone else interested in advanced study in logic. Topics include the soundness and completeness of the propositional and predicate calculi, the decidability of propositional calculus, the undecidability of predicate calculus, Gödel's incompleteness proof for languages capable of expressing arithmetic, the co-extensionality of the set of general recursive functions, abacus computable functions, and Turing computable functions, and the philosophical motivations for the Church-Turing Thesis that all computable functions are Turing computable.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PHIL 51048 METAETHICS 3 Credit Hours
(Slashed with PHIL 41048) Metaethics is the study of the nature and justification of moral judgments, as distinct from ethics, which aims to articulate principles, criteria, or alternative approaches to understanding and achieving goodness and right action. Metaethics examines the concepts, ontology, psychology, and modes of justification employed within ethics. This course will explore recent developments about such questions as: which, if any, ethical judgments can be true or false; whether we can know true ethical statements; and to what kinds of properties, if any, ethical judgments and beliefs refer.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51050 ANALYTIC PHILOSOPHY 3 Credit Hours
(Slashed with PHIL 41050) Focuses on the history and continued evolution of analytic philosophy. Readings include works by philosophers such as Frege, Russell, Moore, Wittgenstein, Schlick, Carnap, Ryle, Austin, Strawson, Gric, Quine, Davidson, Kripke, Putnam, and others. The aim of the course is (i) to understand the theses and themes that commonly arise in analytic philosophy, their philosophical motivations, and the problems they face, and (ii) to become familiar with the methodologies used by analytic philosophers including (but not limited to) logical analysis, appeals to ordinary language, the use of thought experiments, and the use of possible world semantics.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51055 PHENOMENOLOGY 3 Credit Hours
(Slashed with PHIL 41055) In-depth study of the phenomenological movement in twentieth-century philosophy, from its origin in the thought of Edmund Husserl and his contemporaries, through such canonical thinkers as Martin Heidegger and Maurice Merleau-Ponty, to various contemporary developments. Substantial time is also devoted to considering applications of phenomenology to various disciplines in the humanities, social sciences, and arts. This is in keeping with the overall focus in this seminar on phenomenology not only as a philosophical school, but also as a methodology with broad and diverse applications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51060 PRAGMATISM 3 Credit Hours
(Slashed with PHIL 41060) As America’s distinctive "home-grown" philosophy, pragmatism embodies the values of action, problem-solving, and consensus-building within a pluralistic society. The core of this course examines the seminal works of the classical American pragmatists: Peirce, James, and Dewey. Special attention will be devoted to a phenomenology of experience that undercuts the dualisms of mind and matter, subject and object, self and world.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51065 PLATO 3 Credit Hours
(Slashed with PHIL 51065) Detailed examination of selected platonics dialogues, with some attention to Plato's development and dismissal of certain pre-Socratic (and Socratic) themes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51070 ARISTOTLE 3 Credit Hours
(Slashed with PHIL 41070) Detailed examination of selected works of Aristotle, with some attention given to Aristotle's development and dismissal of certain pre-Socratic and Platonic themes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51076 CONTINENTAL PHILOSOPHY 3 Credit Hours
(Slashed with PHIL 41076) Investigation of some figure, issue or theme in continental philosophy from Descartes to present.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51080 PHILOSOPHY AND ART IN THE MODERN AGE 3 Credit Hours
(Slashed with PHIL 41080) Exploring, with emphasis, on the modern age philosophical conceptions of art in their interplays with, especially, practicing artists' attitudes toward theory.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 51091 SEMINAR IN WORLD PHILOSOPHY 3 Credit Hours
(Slashed with PHIL 41091) (Repeatable for a maximum of 3 credit hours) Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues from traditions outside the Western canon.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

PHIL 51491 SEMINAR IN ASIAN PHILOSOPHY 3 Credit Hours
(Slashed with PHIL 41491) (Repeatable for a maximum of 2 times) Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues from traditions in Asian philosophy.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

PHIL 51591 SEMINAR IN THE HISTORY OF ETHICS 3 Credit Hours
(Slashed with PHIL 41591) (Repeatable twice for credit) Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues from traditions in the history of ethics.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
PHIL 59995  SPECIAL TOPICS  3 Credit Hours
(Repeatable for credit) When content varies, may be repeated for credit.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 59996  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit with department approval)
Prerequisite: Special approval and graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHIL 60191  GRADUATE SEMINAR  3 Credit Hours
Intensive primary-source reading and critical appreciation of the significant works of one or more philosophical figures or one or more philosophical issues.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 61000  RESPONSIBLE CONDUCT OF RESEARCH  1 Credit Hour
(Cross-listed with BMS 61000 and BMS 71000) Introduction into professional and ethical conduct of research. Topics include codes and laws governing research, identification of scientific misconduct, plagiarism, authorship and intellectual properties, ethical animal and human research.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

PHIL 61050  PHILOSOPHY OF LANGUAGE  3 Credit Hours
Critical examination of nature and function of language especially in relation to mental function and development.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 61055  SEMIOTICS  3 Credit Hours
(Cross-listed with MCLS 60020) An introduction to contemporary theories of semiotics and to the application of those theories to linguistics, literature, translation and technology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 61056  HERMENEUTICS  3 Credit Hours
Critical appreciation of the theories and practices of interpretation comprehended according to certain classical, current and emergent philosophic styles and traditions.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 61085  METAETHICS  3 Credit Hours
Examination of the conceptions, presuppositions and value judgments of ethical theories.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHIL 69194  COLLEGE TEACHING OF PHILOSOPHY  1 Credit Hour
(Repeatable for credit) Discussion, critique and development of concepts to guide the teaching of philosophy including concepts of procedures and tactics for planning, pacing, presenting, representing and reviewing philosophic texts figures and issues.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory-IP

PHIL 69198  FIRST YEAR PAPER  1 Credit Hour
Research paper for graduate students conducted under direction of the advisory group.
Prerequisite: graduate standing.
Schedule Type: Research
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHIL 69199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Departmental special approval before registration and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHIL 69299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: PHIL 69199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHIL 69995  SPECIAL TOPICS  3 Credit Hours
(Repeatable for credit) Selected topics in Philosophy.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PHIL 69997  COLLOQUIUM  1 Credit Hour
(Repeatable for credit) Student, faculty and invited guests participate in conference-like contexts to present and discuss issues of current philosophic interest.
Prerequisite: Graduate standing.
Schedule Type: Colloquium
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHIL 69998  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits earned may be applied toward meeting degree requirements.
Prerequisite: Special approval and graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

Department of Physics

Physics (PHY)

PHY 11030  SEVEN IDEAS THAT SHOOK THE UNIVERSE (KBS)  3 Credit Hours
Description of major revolutionary physical concepts and their implications for understanding the physical universe. Not counted toward requirements for physics major.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

PHY 12000  INTRODUCTORY PHYSICS SEMINAR (ELR)  1 Credit Hour
To provide a nurturing course for new physics majors, ideally to be taken in their first semester as majors. The course includes a journal club component, informational talks by industrial physicists and training in a select group of essential skills and tools for future work in the physics program.
Prerequisite: None.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

PHY 12111  PHYSICS FOR HEALTH TECHNOLOGIES  3 Credit Hours
Basic physics applied to health technologies: measurement techniques, force and motion of solids and fluids, energy, heat wave phenomena, electricity. Students taking this course should be in a health technologies major.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 12201  TECHNICAL PHYSICS I (KBS) (KLAB)  3 Credit Hours
Introduction to principles of physics: mechanics.
Prerequisite: MATH 11010; and pre- or corequisite: MATH 11022 or MATH 12001.
Schedule Type: Combined Lecture and Lab
Contact Hours: 2 lecture, 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

PHY 12202  TECHNICAL PHYSICS II (KBS) (KLAB)  4 Credit Hours
Introduction to principles of physics, including fluids, thermodynamics, electricity and magnetism.
Prerequisite: PHY 12201.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 lecture, 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

PHY 13001  GENERAL COLLEGE PHYSICS I (KBS)  4 Credit Hours
Principles of mechanics, heat and sound.
Prerequisite: Minimum C grade in MATH 11022 or MATH 12001; or pre/corequisite MATH 12002 or MATH 12012 or MATH 12021.
Corequisite: PHY 13021.
Schedule Type: Lecture, Recitation
Contact Hours: 3 lecture, 1 other
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Science, Transfer Module Natural Sciences

PHY 13002  GENERAL COLLEGE PHYSICS II (KBS)  4 Credit Hours
Principles of electricity and magnetism, optics and modern physics. Three hours lecture and one hour recitation weekly.
Prerequisite: PHY 13001 or PHY 23101.
Corequisite: PHY 13022.
Schedule Type: Lecture, Recitation
Contact Hours: 3 lecture, 1 other
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, TAG Science, Transfer Module Natural Sciences

PHY 13011  COLLEGE PHYSICS I (KBS)  2 Credit Hours
Principles of classical physics, primarily mechanics. Three-hour lecture and one-hour recitation weekly. This is a flexibly scheduled course that meets concurrently with PHY 13001 for the first half of the regular term.
Prerequisite: MATH 11022 or MATH 12001 with a minimum C grade; or pre/corequisite MATH 12002 or MATH 12012 or MATH 12021.
Corequisite: PHY 13021.
Schedule Type: Lecture, Recitation
Contact Hours: 3 lecture, 1 other
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

PHY 13012  COLLEGE PHYSICS II (KBS)  2 Credit Hours
Principles of classical physics, primarily electricity and magnetism. Three-hour lecture and one-hour recitation weekly. This is a flexibly scheduled course that meets concurrently with PHY 13002 for the first half of a regular term.
Prerequisite: PHY 13001 or PHY 13011 or PHY 23101.
Schedule Type: Lecture, Recitation
Contact Hours: 2 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

PHY 13021  GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)  1 Credit Hour
Introductory lab to accompany PHY 13001 or PHY 13011.
Corequisite: PHY 13021.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science, Transfer Module Natural Sciences
PHY 13022  GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)  1 Credit Hour
Introductory lab to accompany PHY 13002 or PHY 13012.
Corequisite: PHY 13002 or PHY 13012.
Schedule Type: Laboratory
Contact Hours: 2 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science, Transfer Module Natural Sciences

PHY 20095  SPECIAL TOPICS  1-3 Credit Hours
(Repeatable for credit) Topic announced when scheduled.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 20096  INDIVIDUAL INVESTIGATION IN PHYSICS  1-6 Credit Hours
(Repeatable for credit) Individual projects in physics.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-6 other
Grade Mode: Standard Letter-IP

PHY 21040  PHYSICS IN ENTERTAINMENT AND THE ARTS (KBS)  3 Credit Hours
Descriptive introduction to physics underlying selected forms of art and entertainment. Examples are drawn from music, visual arts and communications media. Not counted toward requirements for physics major.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 21430  FRONTIERS IN ASTRONOMY (KBS)  3 Credit Hours
Modern description of astrophysical observations, the results of these observations and the physical principles based on them. Not counted toward requirements for physics major.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences

PHY 21431  FRONTIERS IN ASTRONOMY LABORATORY (KBS) (KLAB)  1 Credit Hour
Laboratory component of PHY 21430.
Pre/corequisite: PHY 21430.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, Transfer Module Natural Sciences

PHY 22564  INTRODUCTION TO MATERIALS PHYSICS  3 Credit Hours
Survey of mechanical and electronic properties of materials with application in science and technology. Metals, semiconductors, ceramics, polymers and liquid crystals, and other special materials will be addressed.
Prerequisite: PHY 23102.
Schedule Type: Laboratory, Lecture
Contact Hours: 4 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, Transfer Module Natural Sciences

PHY 23101  GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)  5 Credit Hours
Principles of mechanics, heat and sound at calculus level.
Pre/corequisite: MATH 12002.
Schedule Type: Laboratory, Lecture
Contact Hours: 4 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science

PHY 23102  GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)  5 Credit Hours
Principles of electricity, magnetism, light and modern physics at calculus level.
Pre/corequisite: PHY 13001 or PHY 23101.
Pre/corequisite: MATH 12003.
Schedule Type: Laboratory, Lecture
Contact Hours: 4 lecture, 3 lab
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab, TAG Science

PHY 30020  INTERMEDIATE PHYSICS LABORATORY (WIC)  2 Credit Hours
(Repeatable for credit) Experiments in classical and modern physics are selected to accompany and to supplement junior-level physics courses.
Pre/corequisite: PHY 36001 and 10 hours of additional physics courses.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHY 30095  SPECIAL TOPICS  1-3 Credit Hours
(Repeatable for credit) Topic announced when scheduled.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter
Attributes: Kent Core Basic Sciences, Transfer Module Natural Sciences
PHY 32511 ELECTRONICS  4 Credit Hours
"Hands-on" course to give the student a working knowledge of analog electronics and of AC and DC circuits typically used by the scientist.
Prerequisite: MATH 12002 and; PHY 13002 or PHY 23102.
Schedule Type: Combined Lecture and Lab
Contact Hours: 6 other
Grade Mode: Standard Letter

PHY 34000 COSMOLOGY  3 Credit Hours
This course will provide a quantitative introduction to modern cosmology, from the Big Bang to the formation of the first stars. Subjects include the evolution of the geometry and temperature of the universe, its composition and select aspects of general relativity.
Prerequisite: PHY 36001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 35101 CLASSICAL MECHANICS  4 Credit Hours
Modern description of mechanics including both Lagrangian and Hamilton formulations, with applications to central force, motion, coupled oscillations, rigid body motion and motion in non-inertial reference frames.
Prerequisite: PHY 23102 and MATH 32052.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 36001 INTRODUCTORY MODERN PHYSICS  3 Credit Hours
Special theory of relativity, Rutherford-Bohr model of atom, quantization of light, matter waves, Schrödinger equation, hydrogen atom, electron spin, multi-electron atoms.
Prerequisite: MATH 12003 and PHY 23102.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 36002 APPLICATIONS OF MODERN PHYSICS  3 Credit Hours
Survey of applications of twentieth century physics. Topics include molecular bonding, conducting and insulating solids, degenerate matter, quantum condensates, subatomic and sub-nuclear particle physics, cosmology.
Prerequisite: PHY 36001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 40020 ADVANCED PHYSICS LABORATORY (WIC)  2 Credit Hours
(Repeatable for credit) Advanced experiments in classical and modern physics are selected to accompany and to supplement senior-level physics courses.
Prerequisite: PHY 30020; and pre- or corequisite: 6 credit hours of 40000-level physics courses.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PHY 40060 PHYSICAL LITERATURE  1-3 Credit Hours
Study of current or topical literature.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 40092 INTERNSHIP IN PHYSICS (ELR)  1-3 Credit Hours
(Repeatable for credit) Supervised capstone experience in physics at a national laboratory, a research university in industry or at a local research site. No more than 3 credit hours may be applied toward the major electives for physics majors.
Prerequisite: Permission.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

PHY 40095 SPECIAL TOPICS  1-3 Credit Hours
(Repeatable for credit) Topic announced when scheduled.
Prerequisite: Permission.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 40096 INDIVIDUAL INVESTIGATION (ELR)  1-6 Credit Hours
(Repeatable for credit) Individual projects for physics majors.
Prerequisite: 20 hours of physics; and special approval of department chairperson.
Schedule Type: Individual Investigation
Contact Hours: 1-6 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

PHY 40099 SENIOR HONORS THESIS (ELR)  1-10 Credit Hours
Thesis for departmental, general or university honors must be 1-10 hours with continuous registration throughout the senior year beginning in the summer prior to the senior year. Students taking this course must consult with their department and the Honors College and receive approval prior to the first semester of the senior year.
Prerequisite: Honors senior standing and special approval.
Schedule Type: Senior Project/Honors Thesis
Contact Hours: 1-10 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

PHY 40195 SPECIAL TOPICS  1-3 Credit Hours
(Repeatable for credit) (Slashed with PHY 50195) Topic announced when scheduled.
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 41010 BIOPHOTONICS  3 Credit Hours
(Slashed with PHY 51010; Cross-listed with BSCI 41110 and BSCI 51110 and CHEM 41010 and CHEM 51010) Interdisciplinary overview of the basics of biophotonics; application of biophotonic techniques to probe biological samples. Introduction to the foundations of optics and photonics and how the molecular structure of organic molecules translates into unique photonic properties and targeting in biological cells or tissue. Preparation of fluorescent materials, advanced spectroscopy and cell visualization using regular and confocal fluorescence microscopy.
Prerequisite: special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 6 lab
Grade Mode: Standard Letter
PHY 44600  INTRODUCTION TO BIOLOGICAL PHYSICS  3 Credit Hours
Introduces ideas essential to physical understanding of biological systems. Topics include: introduction to molecular components of the cell; statistical mechanics and transport in biological systems; selected topics in biophysics.
Prerequisite: PHY 23102.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 44802  ASTROPHYSICS  3 Credit Hours
Galactic structure, stellar formation and evolution, origin of the elements (or nucleosynthesis), nonoptical astronomies, and description of various cosmological theories.
Prerequisite: MATH 12003.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 45201  ELECTROMAGNETIC THEORY  4 Credit Hours
Properties of electric and magnetic fields developed by vector methods. Treatment on static fields in vacuum and matter. Theory of classical electromagnetic fields with emphasis on dynamic fields.
Prerequisite: MATH 32052 and PHY 23102.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 45301  THERMAL PHYSICS  3 Credit Hours
An introduction to thermodynamics and statistical mechanics, with applications in material science and engineering.
Prerequisite: PHY 36001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 45401  MATHEMATICAL METHODS IN PHYSICS  4 Credit Hours
Consolidation of vector analysis, curvilinear coordinate systems, tensors, matrix algebra, vector spaces, common groups in physics, calculus of residues, contour integration, methods for differential equations in physics; additional topics important for physics selected from special functions, integral equations, methods for differential equations in physics; additional topics important for physics selected from special functions, integral equations, calculus of variations.
Prerequisite: MATH 32052.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 45501  ELECTROMAGNETIC WAVES AND MODERN OPTICS  3 Credit Hours
Interactions between light and matter from both a macroscopic and microscopic perspective; producing and controlling light devices and spectroscopic techniques based on modern optics.
Prerequisite: PHY 45201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 46101  QUANTUM MECHANICS  4 Credit Hours
Systematic introduction to the principles and solution techniques of quantum mechanics, including the Schroedinger equation in one and three dimensions. Topics include: angular momentum formalism, introductory Dirac notation and vector space formalism, intrinsic spin, identical particle systems and perturbation theory.
Prerequisite: PHY 36001.
Pre/corequisite: MATH 32052.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 46301  INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS  4 Credit Hours
(Cross-listed with PHY 56301) Introduction to nuclear and particle physics including particle detectors and accelerators, experimental techniques, nuclear fission and fusion, nuclear reactors, medical applications, and connections to astrophysics and cosmology.
Prerequisite: PHY 36001.
Pre/corequisite: MATH 32052.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 46401  INTRODUCTION TO SOLID STATE PHYSICS  3 Credit Hours
Fundamental unifying concepts and experimental techniques needed to understand thermal, electrical and optical properties of ions and electrons in solids. Special topics of current research.
Prerequisite: PHY 36002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 46501  ADVANCED PHYSICS LAB  2 Credit Hours
(Repeatable for credit) Advanced experiments in classical and modern physics are selected to accompany and to supplement graduate-level physics courses.
Prerequisite: Graduate standing.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter

PHY 50093  VARIABLE TITLE WORKSHOP IN PHYSICS  1-6 Credit Hours
(Repeatable for credit) Workshops individually designed to provide instruction and training in specific areas of physics.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory
PHY 50095  SPECIAL TOPICS  1-3 Credit Hours
(Repeatable for credit) Topic announced when scheduled.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 50096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) Individual projects for physics graduate students.
Prerequisite: Graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PHY 50195  SPECIAL TOPICS  1-3 Credit Hours
(Repeatable for credit) (Slashed with PHY 40195). Topic announced when scheduled.
Prerequisite: special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 51010  BIOPHOTONICS  3 Credit Hours
(Slashed with PHY 41010; Cross-listed with BSCI 41110 and BSCI 51110 and CHEM 41010 and CHEM 51010) Interdisciplinary overview of the basics of biophotonics: application of biophotonic techniques to probe biological samples. Introduction to the foundations of optics and photonics and how the molecular structure of organic molecules translates into unique photonic properties and targeting in biological cells or tissue. Preparation of fluorescent materials, advanced spectroscopy and cell visualization using regular and confocal fluorescence microscopy.
Prerequisite: special approval and graduate standing.
Schedule Type: Combined Lecture and Lab
Contact Hours: 1 lecture, 6 lab
Grade Mode: Standard Letter

PHY 54600  INTRODUCTION TO BIOLOGICAL PHYSICS  3 Credit Hours
Introduces ideas essential to physical understanding of biological systems. Topics include: introduction to molecular components of the cell; statistical mechanics and transport in biological systems; selected topics in biophysics.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 54802  ASTROPHYSICS  3 Credit Hours
Galactic structure, stellar formation and evolution, origin of the elements (or nucleosynthesis), non optical astronomies, and a description of various cosmological theories. Graduate standing.
Prerequisite: MATH 12003.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 55201  ELECTROMAGNETIC THEORY  4 Credit Hours
Properties of electric and magnetic fields developed by vector methods. Treatment of static fields in vacuum and matter. Theory of classical electromagnetic fields with emphasis on dynamic fields.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 55301  THERMAL PHYSICS  3 Credit Hours
An introduction to thermodynamics and statistical mechanics, with applications in material science and engineering.
Prerequisite: PHY 36001 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 55401  MATHEMATICAL METHODS IN PHYSICS  4 Credit Hours
Consolidation of vector analysis, curvilinear coordinate systems, tensors, matrix algebra, vector spaces, common groups in physics, calculus of residues, contour integration, methods for differential equations in physics; additional topics important for physics selected from special functions, integral equations, calculus of variations.
Prerequisite: MATH 32052 and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 55501  ELECTROMAGNETIC WAVES AND MODERN OPTICS  3 Credit Hours
Prerequisite: MATH 12003 and PHY 23102 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 55601  INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS  4 Credit Hours
(Slashed with PHY 46301) Introduction to nuclear and particle physics including particle detectors and accelerators, experimental techniques, nuclear fission and fusion, nuclear reactors, medical applications, and connections to astrophysics and cosmology.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
PHY 56401 INTRODUCTION TO SOLID STATE PHYSICS  3 Credit Hours
Fundamental unifying concepts and experimental techniques needed to understand thermal, electrical and optical properties of ions and electrons in solids. Special topics of current research.
Prerequisite: PHY 36002 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 60091 PHYSICS SEMINAR  1 Credit Hour
(Repeatable for credit)Discussion of current literature or of original research in physics. Participation by students, faculty and guests.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 60093 VARIABLE TITLE WORKSHOP IN PHYSICS  1-6 Credit Hours
(Repeatable for credit)Workshops individually designed to provide instruction and training in specific areas of physics.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory

PHY 60094 COLLEGE TEACHING OF PHYSICS  1-3 Credit Hours
(Repeatable for credit)Methodology of teaching in a university, college or junior college. Includes observation of kinds of teaching and practice teaching.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 60098 RESEARCH  1-15 Credit Hours
(Repeatable for credit)Research or individual investigation. Credits earned may be applied toward meeting degree requirements if department approves.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 60199 THESIS I  2-6 Credit Hours
Thesis students must register for total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Special approval of adviser and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Standard Letter-S/U-IP

PHY 60295 ADVANCED TOPICS  1-3 Credit Hours
(Repeatable for credit)Selected special topics of current research interest.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U-IP

PHY 60299 THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: PHY 60199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 64101 ADVANCED PROBLEM SOLVING IN PHYSICS  3 Credit Hours
The course imparts advanced problem-solving skills not acquired in regular courses. Examples from four basic areas of physics (classical mechanics, electricity and magnetism, quantum mechanics and statistical physics) will be emphasized. Graduate standing.
Prerequisite: PHY 6/75101 or PHY 6/75203 or PHY 6/76161 or PHY 6/75301 or departmental instructor approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U

PHY 65101 CLASSICAL MECHANICS  3 Credit Hours
Lagrange's equations, variational principles, two-body central force problem and rigid body motion. Hamilton's equations, canonical transformations, Hamilton-Jacobi theory and small oscillations.
Prerequisite: special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 65203 CLASSICAL ELECTRODYNAMICS I  3 Credit Hours
Introduction to electrostatics, boundary-value problems, multipoles, electrostatics of macroscopic media, magnetostatics, time-varying fields, Maxwell's equations, conservation laws.
Prerequisite: special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 65204 CLASSICAL ELECTRODYNAMICS II  3 Credit Hours
Plane electromagnetic waves, simple radiating systems, scattering, special theory of relativity, relativistic dynamics, radiation of moving charges, Bremsstrahlung.
Prerequisite: PHY 6/75203 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 65301 STATISTICAL MECHANICS I  4 Credit Hours
An introduction to statistical mechanics, including classical and quantum statistics. Derives thermodynamic quantities from a statistical viewpoint.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PHY 66161 QUANTUM MECHANICS I  3 Credit Hours
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Grade Mode:
Contact Hours:
Schedule Type:
Prerequisite:
PHY 66162 QUANTUM MECHANICS II 3 Credit Hours
Angular momentum theory. Symmetries and conservation laws.
Prerequisite: PHY 6/76161 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 66201 PARTICLE PHYSICS 3 Credit Hours
Discussion of particle detectors, invariance principles and conservation laws, fundamental interactions, quark model of hadrons, basic concepts of field theory, the Standard Model and selected topics of current interest.
Prerequisite: PHY 6/76162 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 66302 MODERN NUCLEAR PHYSICS 3 Credit Hours
Survey of basic physics of nucleons and nuclei including associated experimental techniques, emphasizing interaction of radiation with matter. Applications covered include detectors, electron scattering from nuclei, quark-parton model of the nucleon, heavy-ion collisions, quark-gluon plasma, and nuclear astrophysics.
Prerequisite: PHY 56101; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 66401 SOLID STATE PHYSICS I 3 Credit Hours
Crystalline state, with emphasis on wave propagation, zone and band theory, phonons. Applications to electrical and thermal conductivities, specific heats, optical, dielectric and magnetic properties.
Prerequisite: PHY 56101 or PHY 6/76161; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 66403 ADVANCED CONDENSED MATTER PHYSICS 3 Credit Hours
(Slashed with PHY 76403) Advanced theories of solids, fluids, superfluids, magnetic, ferroelectric and liquid crystal systems and the experimental methods that probe them.
Prerequisite: PHY 66402 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 68401 LIQUID CRYSTAL PHYSICS 3 Credit Hours
The molecular structure and properties of liquid crystals and their role in biological systems and industrial applications.
Prerequisite: Graduate standing in physics or chemical physics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 70094 COLLEGE TEACHING OF PHYSICS 1-3 Credit Hours
(Repeatable for credit)Methodology of teaching in a university, college or junior college. Includes observation of kinds of teaching and practice teaching.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 70095 SPECIAL TOPICS 1-3 Credit Hours
(Repeatable for credit) Topic announced when scheduled.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

PHY 70295 ADVANCED TOPICS 1-3 Credit Hours
(Repeatable for credit) Selected special topics of current research interest.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U-IP

PHY 74101 ADVANCED PROBLEM SOLVING IN PHYSICS 3 Credit Hours
The course imparts advanced problem-solving skills not acquired in regular courses. Examples from four basic areas of physics (classical mechanics, electricity and magnetism, quantum mechanics and statistical physics) will be emphasized. Doctoral standing.
Prerequisite: PHY 6/75101 or PHY 6/75203 or PHY 6/76161 or PHY 6/75301; or departmental instructor approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U

PHY 75101 CLASSICAL MECHANICS 3 Credit Hours
Lagrange's equations, variational principles, two-body central force problems, rigid body motion, Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, small oscillations.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 75203 CLASSICAL ELECTRODYNAMICS I 3 Credit Hours
Introduction to electrostatics, boundary value problems, multipoles, electrostatics of macroscopic media, magnetostatics, time-varying fields, Maxwell's equations, conservation laws.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 75204 CLASSICAL ELECTRODYNAMICS II 3 Credit Hours
Plane electromagnetic waves, simple radiating systems, scattering special theory of relativity, relativistic dynamics, radiation of moving charges, Bremsstrahlung.
Prerequisite: PHY 6/75203 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 75301 STATISTICAL MECHANICS I 4 Credit Hours
An introduction to statistical mechanics, including classical and quantum statistics. Derives thermodynamic quantities from a statistical viewpoint.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
PHY 76161 QUANTUM MECHANICS I 3 Credit Hours
Prerequisite: Permission and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 76162 QUANTUM MECHANICS II 3 Credit Hours
Prerequisite: PHY 6/76161 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 76163 QUANTUM MECHANICS III 3 Credit Hours
Second quantization and field theory formalism are developed for the many-particle system. Topics include the electron gas and nuclear matter.
Prerequisite: PHY 6/76162 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 76201 PARTICLE PHYSICS 3 Credit Hours
Discussion of particle detectors, invariance principles and conservation laws, fundamental interactions, quark model of hadrons, basic concepts of a field theory, the Standard Model and selected topics of current interest.
Prerequisite: PHY 6/76162 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 76303 APPLICATIONS OF QUANTUM CHROMODYNAMICS 3 Credit Hours
Introduces the key attributes and techniques of Quantum Chromodynamics, which is the relativistic quantum field theory of the strong interaction. Topics treated include the properties, structure and interactions of strongly interacting sub-nuclear particles (hadrons) and the physics of hadronic and nuclear matter at finite temperature and density, as applicable to modern nuclear particle physics research.
Prerequisite: PHY 76163.
Corequisite: PHY 66201 or PHY 76201.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 76401 SOLID STATE PHYSICS I 3 Credit Hours
Crystalline state, with emphasis on wave propagation zone and band theory phonons. Applications to electrical and thermal conductivities specific heats optical dielectric and magnetic properties.
Prerequisite: PHY 56101 or PHY 6/76161; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 76403 ADVANCED CONDENSED MATTER PHYSICS 3 Credit Hours
(Slashed with PHY 66403) Advanced theories of solids, fluids, superfluids, magnetic, ferroelectric and liquid crystal systems, and the experimental methods that probe them.
Prerequisite: PHY 66402 or 76402; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 78401 LIQUID CRYSTAL PHYSICS 3 Credit Hours
The molecular structure and properties of liquid crystals and their role in biological systems and industrial applications.
Prerequisite: Doctoral standing in physics or chemical physics.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PHY 80091 PHYSICS SEMINAR 1 Credit Hour
(Repeatable for credit)Discussion of current literature or of original research in physics. Participation by students faculty and guests.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 80097 PHYSICS COLLOQUIUM 1 Credit Hour
(Repeatable for credit)Presentation by invited speakers of research and other topics on graduate level followed by discussion period. Regular attendance of all physics majors expected. Three or more meetings each semester as arranged.
Prerequisite: Doctoral standing.
Schedule Type: Colloquium
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 80098 RESEARCH 1-15 Credit Hours
(Repeatable for credit)Research or individual investigation for doctoral students who have not yet passed their candidacy exams. Credit earned may be applied toward the degree if the department approves.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP

PHY 80199 DISSERTATION I 15 Credit Hours
(Repeatable for credit)Doctoral dissertation, for which registration in at least two semesters is required; the first of which will be the semester in which dissertation work is begun, and continuing until the completion of 30 hours.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

PHY 80299 DISSERTATION II 15 Credit Hours
(Repeatable for credit)Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.
Prerequisite: PHY 80199 and doctoral standing.
Schedule Type: Dissertation
Contact Hours: 15 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Department of Political Science

Political Science (POL)

POL 10001  INTRODUCTION TO POLITICAL SCIENCE  3 Credit Hours
This course introduces the history and structure of political science, including its relationship to neighboring disciplines. This course thus asks what does it mean to study politics? What does it mean to study politics scientifically? What are the consequences of different conceptions of politics?
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 10004  COMPARATIVE POLITICS (DIVG) (KSS)  3 Credit Hours
Introduces the different institutional structures of governance (e.g., parliamentary versus presidential systems) in a range of different states for different types of regimes (e.g., democratic and authoritarian) and at the international level.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

POL 10100  AMERICAN POLITICS (DIVD) (KSS)  3 Credit Hours
Covers the basic elements of politics at the national level in the United States: structures, processes, behaviors, institutions, policies. Special emphasis is given to conflicting theories of power as they apply to different economic, sexual and racial groups.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

POL 10300  PUBLIC POLICY  3 Credit Hours
This course provides a survey of basic public policy concepts and processes within an historical context. It incorporates applied work to bridge conceptual understanding and empirical cases.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 10500  WORLD POLITICS (DIVG) (KSS)  3 Credit Hours
A practical, theoretical introduction to a study of systematic patterns in international relations. Includes analysis of rules, instruments, processes, decision-making factors, conflict resolution.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

POL 10504  THE NEW PANGAEA: YOUR ROLE IN OUR GLOBAL COMMUNITY  3 Credit Hours
Introduces students to the myriad ways in which they are individually and collectively connected to the global community. Looking specifically at ways in which we are interconnected as consumers, patients, donors and participants in discourse, the course introduces students to the concepts, institutions and dynamics of globalization. Through assignments that focus on important global issues and engage students directly with the global community, students will (a) learn how to engage the global community as informed consumers of information, (b) understand the basic structure of the global political arena, (c) learn how to engage actively and consciously within that arena and (d) understand the ways in which their daily behavior impacts global trends.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30000  MAY 4 1970 AND ITS AFTERMATH  3 Credit Hours
(Cross-listed with CACM 30000) Study of the events of the 1960s in the US leading up to May 4, 1970 when the Ohio National Guard killed and wounded KSU students protesting the US war in Vietnam and Cambodia. Topics are considered within their cultural, historical, social and political contexts. Also examines the aftermath of May 4th, including the controversy over constructing the Gym Annex on the May 4th site, the legal trials, the role of commemorations and memorials and the politics of remembering May 4, 1970.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30001  RESEARCH METHODS (ELR)  3 Credit Hours
This course is designed to bring students to a basic level of "statistical literacy" by introducing the fundamentals of research design and interpretation; as well as to basic descriptive and inferential statistics.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

POL 30002  POLITICAL THOUGHT  3 Credit Hours
This course is designed to introduce the student to basic methodological and substantive concerns in the tradition of western political thought.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30003  POLITICAL ECONOMY  3 Credit Hours
This course is designed to introduce students to the fundamental questions surrounding the relationship between the public and private sectors, considered from the perspective of the state and its major political institutions. Of central concern is the growing internationalization of capital and its consequences for both domestic and international politics.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
POL 30100 AMERICAN POLITICAL THEORY 3 Credit Hours
Major political ideas and controversies associated with the development of American political thought. Nonmajors should contact the Department of Political Science for a prerequisite override.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30110 THE CONGRESS 3 Credit Hours
This course deals with the powers of Congress, its organization, leadership of the two houses, role of the parties, relationships with the chief executive and the executive agencies and recent reforms enacted by the House and Senate.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30110 THE CONGRESS 3 Credit Hours
This course deals with the powers of Congress, its organization, leadership of the two houses, role of the parties, relationships with the chief executive and the executive agencies and recent reforms enacted by the House and Senate.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30120 PRESIDENCY AND EXECUTIVE BUREAUCRACY 3 Credit Hours
Intensive study of the American Presidency, focusing on personality, organization of the office, use and misuse of power and policy making.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30130 THE JUDICIAL PROCESS 3 Credit Hours
Intensive study of the judicial process in United States and the relationship between the judicial system and the larger American social system. Nonmajors should contact the Department of Political Science for a prerequisite override.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30130 THE JUDICIAL PROCESS 3 Credit Hours
Intensive study of the judicial process in United States and the relationship between the judicial system and the larger American social system. Nonmajors should contact the Department of Political Science for a prerequisite override.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30300 PUBLIC POLICY THEORY 3 Credit Hours
The core issues of public policy process, institutional contexts and ethical considerations form the basis of this introductory survey of traditional and contemporary theories of public policy.
Prerequisite: POL 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30301 INTRODUCTION TO PUBLIC ADMINISTRATION 3 Credit Hours
Introduction to the theory and practice of governmental administration, including structure, organization, direction and control of governmental departments and agencies.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30310 PUBLIC POLICY ANALYSIS 3 Credit Hours
Introduces students to the political and economic tools used to analyze public policies and discusses the political elements influencing that analysis. Essentially, the goal is to ensure that students understand the basic economic principles used to evaluate different public policy proposals while questioning the assumptions underlying those economic assumptions.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30350 ENVIRONMENTAL CONFLICT RESOLUTION 3 Credit Hours
Examines alternative dispute resolution principles applicable to complex, multi-party public sector disputes, especially environmental and land use disputes. Students learn about deliberative democracy, a variety of circle processes, consensus decision-making, collaborative problem-solving, digital dialogue processes, and town hall meeting structures among others. Case studies of environmental conflicts and multi-party mediation simulations are used.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30430 OHIO POLITICS 3 Credit Hours
Addresses the history, structure, and current practices of politics and public policy in the state of Ohio.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30450 URBAN POLITICS AND POLICY 3 Credit Hours
Discusses local governance in the context of metropolitan change, and issues such as governing capacity, local democracy, individual choice, and economic and racial inequality. Examines the formal and informal arrangements that shape change and public policy. Nonmajors should contact the Department of Political Science for a prerequisite override.
Prerequisite: POL 10100 or POL 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30460 STATE POLITICS AND POLICY 3 Credit Hours
Introduces the theoretical and legal infrastructures of federalism and intergovernmental relations, with a particular emphasis on political and policy operations at the state level. Political behavior and institutions, as well as the specifics of selected, substantive policy areas are emphasized.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 30500 INTERNATIONAL RELATIONS THEORY 3 Credit Hours
This course introduces competing theoretical approaches to the study of international relations; an examination of the historical developments followed by an examination of current issues in world politics.
Prerequisite: POL 10500.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL 30511</td>
<td>PROBLEMS OF INTERNATIONAL ORGANIZATION</td>
<td>3</td>
<td>Intensive study of major European problems handled by international organizations, including the United Nations and nongovernmental organizations. Combines classroom and field investigations. Prerequisite: registration in the Geneva Semester required. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>POL 30520</td>
<td>EUROPEAN POLITICS (DIVG)</td>
<td>3</td>
<td>Examines major European national political systems (British, French, German, Russian and Scandinavian) relations between the European states, the institutions of the European Union and prospects and problems of European integration. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Diversity Global</td>
</tr>
<tr>
<td>POL 30530</td>
<td>ASIAN POLITICS (DIVG)</td>
<td>3</td>
<td>Introduction to the political, economic, and social dynamics of Asia: from Siberia in the north to the Indian Ocean in the south, and from the Pacific Ocean in the east to the Hindu Kush in the west. The first part of the course examines Asia’s modern political history (particularly the past half-century). The second part of the course focuses on contemporary issues, including the roles of the US and sub-regional actors such as ASEAN. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Diversity Global</td>
</tr>
<tr>
<td>POL 30540</td>
<td>AFRICAN POLITICS (DIVG)</td>
<td>3</td>
<td>An analysis of major issues in African politics and international relations. The contemporary development of Africa will be analyzed in the global context of the historical forces of imperialism and colonialism. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Diversity Global</td>
</tr>
<tr>
<td>POL 30550</td>
<td>LATIN AMERICAN POLITICS (DIVG)</td>
<td>3</td>
<td>Analysis of political culture/process in selected Latin American states, with particular emphasis on Mexico, Brazil, Argentina and Columbia. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Diversity Global</td>
</tr>
<tr>
<td>POL 30560</td>
<td>MIDDLE EAST POLITICS (DIVG)</td>
<td>3</td>
<td>Introduces students to the theory and context of politics in the Middle East in a way that contests the often-simplistic stereotypes communicated through western media and throughout western culture, in order to encourage a more nuanced appreciation of the Middle East. Theoretical approaches utilized include modernization, dependency, structuralism and constructivism. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Diversity Global</td>
</tr>
<tr>
<td>POL 30810</td>
<td>POLITICS OF THE GLOBAL ECONOMY</td>
<td>3</td>
<td>Examines interaction between economics and politics in international relations. Topics: poverty and uneven economic development, political prerequisites for free trade, intra-western and north-south economic conflict, and distributive justice. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Diversity Global</td>
</tr>
<tr>
<td>POL 30820</td>
<td>INTERNATIONAL ORGANIZATION AND LAW</td>
<td>3</td>
<td>This course introduces the subject matter in historical and theoretical contexts, then devotes detailed attention to the full range of international organizations that exist today. A final section addresses the role of international law in world politics. Prerequisite: POL 10004 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>POL 30840</td>
<td>NONGOVERNMENTAL ORGANIZATIONS</td>
<td>3</td>
<td>This course introduces the diverse range of nongovernmental organizations which exist today and explores their varying roles in setting agendas, shaping legislation and implementing public policy reforms. Prerequisite: POL 10004 or POL 10300 or POL 10500. Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter</td>
</tr>
<tr>
<td>POL 39592</td>
<td>GENEVA INTERNSHIP (ELR)</td>
<td>3</td>
<td>(Repeatable for credit) Allows students to earn academic credit while performing intern's duties as part of the Semester in Geneva program. Prerequisite: none. Schedule Type: Practicum or Internship Contact Hours: 21 other Grade Mode: Standard Letter Attributes: Experiential Learning Requirement</td>
</tr>
<tr>
<td>POL 40091</td>
<td>VARIABLE TOPIC SEMINAR</td>
<td>3</td>
<td>(Slashed with POL 50091 and POL 70091) Variable topic seminar in political science. Prerequisites: POL 10100 or POL 10300; and POL 10500 or POL 10004; and POL 30001 and Sophomore Standing Schedule Type: Lecture Contact Hours: 3 lecture Grade Mode: Standard Letter Attributes: Experience Global</td>
</tr>
</tbody>
</table>
POL 40112 POLITICS AND THE MASS MEDIA 3 Credit Hours
This course examines the multiple roles played by the mass media in contemporary politics and analyzes the implications of those roles. Nonmajors should contact the Department of Political Science for a prerequisite override.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40116 PUBLIC OPINION AND POLITICAL BEHAVIOR 3 Credit Hours
Analysis of determinants of public opinion and political behavior. Study of how public makes up its mind and impact of public opinion on government policy.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40118 POLITICAL PARTIES AND INTEREST GROUPS 3 Credit Hours
An examination of the changing roles of political parties and interest groups in the American political system, including a comparison of their respective electoral activities.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40168 MOOT COURT I 2 Credit Hours
Prepares students for oral advocacy in a simulated court room experience known as moot court. Preparation includes learning pre-trial and trial processes, including case evaluation, legal investigation, discovery and motion practice, and trial processes.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

POL 40170 MOOT COURT I 2 Credit Hours
Prepares students for oral advocacy in a simulated court room experience known as moot court. Preparation includes learning pre-trial and trial processes, including case evaluation, legal investigation, discovery and motion practice, and trial processes.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

POL 40171 MOOT COURT II 1 Credit Hour
Prepares students to engage in oral advocacy by using a learning experiential exercise, including a regional competition hosted by the American Collegiate Mock Trial Association, known as Moot Court. Students will perform relevant roles (including case evaluation and strategy, legal investigation, discovery and motion practice, and trial preparation) both in the competition and in preparing a hypothetical case for trial.
Prerequisite: POL 40170.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

POL 40182 CONSTITUTIONAL LAW: GOVERNMENTAL STRUCTURES AND FUNCTIONS 3 Credit Hours
Nature and scope of constitutional government. Study of judicial review, separation of powers, federalism, commerce and taxation.
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40183 CONSTITUTIONAL LAW: CIVIL RIGHTS AND LIBERTIES (DIVD) 3 Credit Hours
Prerequisite: POL 10100.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

POL 40191 SEMINAR IN AMERICAN POLITICS (WIC) 3 Credit Hours (Repeatable with special approval) A required, writing-intensive seminar for juniors and seniors in the American politics concentration. The focus of the seminar will vary depending on instructor.
Prerequisite: POL 10100 or 10300; and POL 10004 or 10500; and POL 20001 and POL 20002 or POL 20003; and political science (POL) major.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

POL 40320 ETHICS AND PUBLIC POLICY 3 Credit Hours
The ethical obligations of public policy makers are examined in this course, within a series of applied cases. The goal is to empower students with the intellectual tools of critical analysis within diverse policy environments.
Prerequisite: POL 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40391 SEMINAR IN PUBLIC POLICY (WIC) 3 Credit Hours (Repeatable with special approval) A required, writing-intensive seminar for juniors and seniors in the public policy concentration. The focus of the seminar will vary depending on instructor.
Prerequisite: POL 10100 or 10300; and POL 10004 or POL 10500; and POL 20001 and POL 20002 or POL 20003; and political science (POL) major.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

POL 40410 REGULATORY POLICY 3 Credit Hours
Provides an advanced understanding of the nature of government regulation: its definition; the institutions and groups involved in developing it; and current practices. The focus is on analyzing why regulation exists and how regulatory agencies function.
Prerequisite: POL 10100 or POL 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
POL 40440 U.S. ENVIRONMENTAL POLITICS AND POLICIES 3 Credit Hours
This is a course in United States environmental politics and policies. It deals with topics such as the history of the U.S. environmental movement, public opinion and environmental issues, environmental racism and classism, and environmental policy making and implementation.
Prerequisite: POL 10100 or POL 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40450 HEALTH CARE AND SOCIAL POLICY 3 Credit Hours
Addresses health care policy in the United States from both theoretical (political, economic as well as public policy) and substantive perspectives at the state, national and comparative-international levels. Further, the examination of health care policy takes place in the context of social welfare policy more broadly considered.
Prerequisite: POL 10100 or 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40470 WOMEN, POLITICS AND POLICY (DIVD) 3 Credit Hours
Examines origins, development and current record of century-old women's movement unique in U.S. annals; compares it with other contemporary social movements. Examines issues of women and public policy.
Prerequisite: POL 10100 or POL 10300.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

POL 40530 POLITICS OF WAR 3 Credit Hours
Examines central questions concerning the justification, explanation characteristic features and consequences of war. Specific cases are examined such as World War II, the Chinese Revolution, Vietnam's civil war and potential nuclear war.
Prerequisite: POL 10004 or POL 10500.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

POL 40540 POLITICS OF DEVELOPMENT (DIVG) 3 Credit Hours
Examines practice, record and theories of political development for less developed, developing and developed political systems. Includes extensive analysis of issues, problems through case studies.
Prerequisite: POL 10004 or POL 10500.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

POL 40560 HUMAN RIGHTS AND SOCIAL JUSTICE (DIVG) 3 Credit Hours
Examines the relationship between human rights and problems of the Third World in the civic, political, social and cultural arenas. Particular attention is placed on the struggle of women.
Prerequisite: POL 10004 or POL 10500.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

POL 40591 SEMINAR IN INTERNATIONAL RELATIONS-COMPARATIVE POLITICS (WIC) 3 Credit Hours
(Repeatable with special approval) A required, writing-intensive seminar for juniors or seniors in the International Relations-Comparative Politics concentration. The focus of the seminar varies depending on instructor. International Relations (INTL) majors who have completed POL 10004, 10500, and six (6) hours from the Political Science - International Relations and Comparative Politics concentration may request a prerequisite override from the Department of Political Science.
Prerequisite: POL 10100 or 10300; and POL 10004 or 10500; and POL 30002 or POL 30003; and political science (POL) major.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

POL 40620 POLITICS OF SOCIAL MOVEMENTS (DIVD) 3 Credit Hours
Examines the role of social movements both in the US and around the world. Focuses on labor, environmental, social justice and other initiatives in the push for political and economic democracy. North-South, public-private, labor-management and regional perspectives are emphasized.
Prerequisite: POL 10004 or POL 10100 or POL 10500.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

POL 40840 COMPARATIVE FOREIGN POLICY 3 Credit Hours
Comparative analysis of foreign policy patterns and determinants on the basis of the examination of foreign policy of selected countries.
Prerequisite: POL 10004 or POL 10300 or POL 10500.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40930 U.S. FOREIGN POLICY 3 Credit Hours
Examines policy objectives, patterns of decision-making and foreign policy actions, roles of interest groups, public opinion, congress, executive and external influences on policy.
Prerequisite: POL 10500 or POL 10100 or POL 10004.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 40980 COLUMBUS PROGRAM IN STATE ISSUES (ELR) 15 Credit Hours
(Repeatable for credit) Annual fall semester resident-study in Columbus. Students spend three days per week working at an internship and two days per week attending briefings and completing course studies.
Prerequisite: Minimum 2.500 overall GPA; and special approval.
Schedule Type: Lecture, Practicum or Internship, Seminar
Contact Hours: 7 lecture, 24 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

College of Arts and Sciences 231
POL 40981  WASHINGTON PROGRAM IN NATIONAL ISSUES (ELR)  15 Credit Hours
(Repeatable for credit) Annual spring semester resident-study in Washington, D.C. Credit hours divided among three units: lecture and course work, on-site briefings seminar and internship.
Prerequisite: Junior standing; and 2.750 overall GPA; and special approval.
Schedule Type: Lecture, Practicum or Internship, Seminar
Contact Hours: 7 lecture, 24 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

POL 40992  INTERNSHIP (ELR)  1-3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Allows academic credit for approved participation in variety of political processes, or as an intern with governmental or private agencies dealing with public affairs.
Prerequisite: Minimum 2.000 overall GPA; and special approval.
Schedule Type: Field Experience
Contact Hours: 3-9 other
Grade Mode: Satisfactory/Unsatisfactory
Attributes: Experiential Learning Requirement

POL 40993  VARIABLE TITLE WORKSHOP IN POLITICAL SCIENCE  1-6 Credit Hours
(Repeatable for credit)
Prerequisite: None.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

POL 40995  SELECTED TOPICS IN POLITICAL SCIENCE  1-3 Credit Hours
(Repeatable for credit)Special course, not regularly offered. Subject varies depending on the emerging issue, staff availability and competencies. Precise title always listed in the schedule of classes.
Prerequisite: Junior or senior standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

POL 40996  INDEPENDENT STUDY  1-3 Credit Hours
(Repeatable for credit) For students desiring research into subjects beyond level of completed course work, or on subjects for which no regular course is offered. A minimum GPA of 2.750 is required prior to registration for this course.
Prerequisite: Any two of the following courses: POL 10004, POL 10100, POL 10300, and POL 10500; and junior standing; and special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

POL 50091  VARIABLE TOPIC SEMINAR  3 Credit Hours
(Slashed with POL 40091 and 70091)Variable topic seminar in political science. Prerequisites: Graduate Standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 51191  SEMINAR: PROBLEMS IN AMERICAN GOVERNMENT  3 Credit Hours
(Repeatable for credit) For graduate students outside of political science who wish to take 40000-level American Government courses for graduate credit. Students must meet all of the requirements of the 40000 level plus do additional work as agreed upon by the instructor. May be taken more than once but never for more than 3 hours in any one semester. Instructor and course content may vary from semester to semester.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter-IP

POL 51391  SEMINAR: PROBLEMS IN PUBLIC POLICY  3 Credit Hours
(Repeatable for credit) For graduate students outside of political science who wish to take 40000-level Public Policy courses for graduate credit. Students must meet all of the requirements of the 40000 level plus do additional work as agreed upon by the instructor. May be taken more than once but never for more than 3 hours in any one semester. Instructor and course content may vary from semester to semester. "IP" permissible. Core seminars.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-IP

POL 51591  SEMINAR: PROBLEMS IN INTERNATIONAL RELATIONS/COMPARATIVE GOVERNMENT  3 Credit Hours
(Repeatable for credit) For graduate students outside of political science who wish to take 40000 International/Comparative Government courses for graduate credit. Students must meet all of the requirements of the 40000 level plus do additional work as agreed upon by the instructor. May be taken more than once but never for more than 3 hours in any one semester. Instructor and course content may vary from semester to semester. Public policy.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-IP

POL 60002  SCOPE AND EPISTEMOLOGY  3 Credit Hours
Introduces students to the philosophy of science and scientific inquiry within the context of the social sciences, and presents a broad survey of leading paradigms and debates within political science.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60003  QUANTITATIVE METHODS I  3 Credit Hours
Provides a selective introduction to basic quantitative methods for the analysis of political and public policy data dealing with basic descriptive and inferential statistics.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60004  QUANTITATIVE METHODS II  3 Credit Hours
Introduces students to multivariate quantitative techniques appropriate for the analysis of political and public policy data.
Prerequisite: POL 60003 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
POL 60010 QUALITATIVE RESEARCH METHODS 3 Credit Hours
Introduces the principles and methods of qualitative research, examining the place of qualitative research alongside discussions about positivist, interpretivist and critical approaches. A variety of qualitative research methods are introduced including: social observation and ethnography, interviewing, discourse analysis, oral history, document analysis, historical analysis and case studies.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60099 CAPSTONE SEMINAR 3 Credit Hours
The purpose of this directed research is to use completed course work to identify ways in which scholarship speaks to application, for instance in the non-profit, policy, consulting, or programming world. Prerequisites: Graduate standing
Schedule Type: Master's Project, Research
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory/IP

POL 60101 STATUS OF THE FIELD: AMERICAN POLITICS AND POLICY 3 Credit Hours
This course provides a broad survey of the policymaking process in the U.S. government. Coverage includes formal government structures as well as more informal networks of private groups that seek to influence public policy at the national level.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60102 AMERICAN POLICY PROCESS 3 Credit Hours
This course emphasizes the politics of the policy process. Among topics covered are theories of policy formulation implementation and evaluation.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60103 CONGRESS, THE PRESIDENCY AND THE COURTS 3 Credit Hours
Focuses on the three branches of the U.S. government, specifically Congress, the presidency and the judiciary. Coverage includes institutional rules and procedures that shape the incentives of these political actors and ultimately policy outcomes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60105 FEDERALISM AND STATE POLICYMAKING 3 Credit Hours
This course covers the theory and practice of federalism with emphasis on its consequences for policy outcomes. Students also examine the transformation of the policy role of state governments in recent years.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60106 URBAN POLICY AND POLITICS 3 Credit Hours
Urban public policy takes place within the context of suburbanization and metropolitan sprawl. Issues raised in this course include poverty, race and the role of business in local policymaking.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60108 AMERICAN POLITICAL BEHAVIOR 3 Credit Hours
Explores scholarship on the behavior of non-elite political actors including various forms of electoral participation, voting, psychological attachments, affect, cognitions, perceptions, attitudes, and beliefs. Additional topics include: ethnic, racial, and gender politics; political participation; voting choice; political psychology; politics and networks; macro politics; and connecting individual-level and macro-level findings with democratic outcomes and citizen capacity.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60191 SEMINAR IN AMERICAN POLITICS AND POLICY 3 Credit Hours
(Repeatable for credit) Seminar on current and important topics in American politics and policy. Subject matter varies depending on the emerging issue. This course may be repeated for credit with departmental approval.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

POL 60301 ANALYTIC TECHNIQUES OF POLICY-MAKING 3 Credit Hours
This course covers the concepts, techniques, and conventions for assessing economic efficiency when this is one of the social and political goals relevant to public policymakers. Students are introduced to theories of cost-benefit analysis as they pertain to public policy.
Prerequisite: POL 60301 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60501 STATUS OF THE FIELD: TRANSNATIONAL AND COMPARATIVE POLITICS AND POLICY 3 Credit Hours
This course introduces students to the primary concepts, theories and subfields of comparative and transnational politics. Each field of study is reviewed along with the primary subfields of analysis.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60502 GLOBAL GOVERNANCE 3 Credit Hours
This course examines issues, problems and debates regarding global governance in the contemporary world. Of primary interest is the array of actors in this process including nation-states, intergovernmental organizations and non-governmental organizations.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
POL 60503 FOREIGN POLICY ANALYSIS  3 Credit Hours
This course provides an overview of the diverse analytic traditions and issues that relate to the study of foreign policy. Areas of coverage include theories of foreign policy decision-making, levels of analysis, and policy domains.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60507 CONFLICT TRANSFORMATION AND RECONCILIATION  3 Credit Hours
Cross-cultural analysis of transition from mass violence to justice and from protracted conflict to democracy. Subjects of study include truth and reconciliation commissions, criminal tribunals, apologies, reparations, and other aids to conflict transformation.
Prerequisite: POL 60501 or POL 60701 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60510 POLITICS OF DEVELOPMENT  3 Credit Hours
Surveys the scholarship on political development, examining the ways in which the conceptualization of development has evolved over time, looking specifically at institutionalization, state failure and the role of civil society.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60511 INTERNATIONAL POLITICAL ECONOMY  3 Credit Hours
Introduces students to the study of how politics and economics interact on a global scale, covering the major theories of IPE, the international monetary system, global trade, and the connections between international economics and domestic development.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60591 SEMINAR IN TRANSLATIONAL AND COMPARATIVE POLITICS AND POLICY  3 Credit Hours
(Repeatable for credit) Seminar on current and important topics in transnational and comparative politics and policy. Subject matter varies depending on the emerging issue.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

POL 60902 POWER, CONFLICT AND THE POLITICS OF GENDER  3 Credit Hours
Examines power disparities and gender as sources of conflict in multiple arenas—including family, community, workplace and the political sphere. The intersections of gender and power in the generation and resolution of social conflicts are examined. Emphases is placed on empowerment strategies and tactics used to transform gendered conflicts and redress power imbalances.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60903 IDENTITY DRIVEN CONFLICTS  3 Credit Hours
Explores the roles played by ethnicity, race, religion, culture and other elements of identity in the generation, resolution and conduct of conflicts within and between groups. Physical and symbolic markers of difference are examined in order to understand both why groups differentiate themselves from one another and how mechanisms such as skin color, religious affiliation, ethnic background or cultural traditions can provide the impetus for conflict or the grounds for resolution.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60904 SOCIAL MOVEMENTS AND NONVIOLENT CONFLICTS  3 Credit Hours
The waging and escalating of conflicts by social movements through nonviolent actions frequently shifts conflicts from one stage to another while also contributing to conflict transformation and to substantive social and political changes. Foci on social movement theories and practices, and on the complicated dynamics of nonviolent action campaigns waged by social movements.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60906 POLITICAL VIOLENCE  3 Credit Hours
Examines the dynamics, networks, interests and resource mobilization underlying state-sponsored political violence, focusing on “low-intensity conflict” and counter-insurgency, paramilitarism and genocide. Of special interest is the relationship of the state to various non-state actors, both perpetrators and victims, and the role of the international community in domestic-level violence.
Prerequisite: POL 60501 or POL 60901; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 60907 TERRORISM AND HUMAN RIGHTS  3 Credit Hours
Examines how governments try to adhere to the rule of law in managing terrorist threats in a post 9-11 era, striking a balance between the competing demands of public safety, personal freedom and human rights. Topics include understanding terrorism as a problem for western governments, the rule of law and human rights.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
POL 60991  SEMINAR IN CONFLICT ANALYSIS AND MANAGEMENT  3 Credit Hours
(Repeatable for a total of 9 credit hours) Seminar on current and important topics in Conflict Analysis and Management. This course may be repeated for credit with departmental approval.
Prerequisite: graduate standing.
Schedule Type: Seminar
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 61094  COLLEGE TEACHING IN POLITICAL SCIENCE  1 Credit Hour
(Repeatable for credit) Staff training and experience in college teaching, colloquia on professional ethics and responsibilities of political scientists. Maximum of 4 hours applicable toward Ph.D. requirements, with graduate studies committee approval.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

POL 61098  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits may be applied toward meeting degree requirements if department approves and a letter grade is given.
Prerequisite: Graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-IP

POL 61199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

POL 61299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: POL 61199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

POL 69091  SEMINAR:QUANTITATIVE METHODS  3 Credit Hours
(Repeatable a maximum of 3 times) Focuses on select topics in quantitative methods, including limited and categorical dependent variables, hierarchical linear models, panel data, structural equation modeling, and Q Methodology. More than one seminar may be offered.
Prerequisite: POL 60004 and graduate standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

POL 69095  SPECIAL TOPICS IN POLITICAL SCIENCE AND PUBLIC POLICY  3 Credit Hours
(Repeatable for a maximum of 12 credit hours) (Slashed with POL 79095) Topics course.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70002  SCOPE AND EPISTEMOLOGY  3 Credit Hours
Introduces students to the philosophy of science and scientific inquiry within the context of the social sciences, and presents a broad survey of leading paradigms and debates within political science.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70003  QUANTITATIVE METHODS I  3 Credit Hours
Provides a selective introduction to basic quantitative methods for the analysis of political and public policy data dealing with basic descriptive and inferential statistics.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70004  QUANTITATIVE METHODS II  3 Credit Hours
Introduces students to multivariate quantitative techniques appropriate for the analysis of political and public policy data.
Prerequisite: POL 70003 and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70010  QUALITATIVE RESEARCH METHODS  3 Credit Hours
Introduces the principles and methods of qualitative research, examining the place of qualitative research alongside discussions about positivist, interpretivist and critical approaches. A variety of qualitative research methods are introduced including: social observation and ethnography, interviewing, discourse analysis, oral history, document analysis, historical analysis and case studies.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70091  VARIABLE TOPIC SEMINAR  3 Credit Hours
Variable topic seminar in political science.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70101  STATUS OF THE FIELD: AMERICAN POLITICS AND POLICY  3 Credit Hours
This course provides a broad survey of the policymaking process in the U.S. government. Coverage includes formal government structures as well as more informal networks of private groups that seek to influence public policy at the national level.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70102  AMERICAN POLICY PROCESS  3 Credit Hours
This course emphasizes the politics of the policy process. Among topics covered are theories of policy formulation implementation and evaluation.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>POL 70103</td>
<td>CONGRESS, THE PRESIDENCY AND THE COURTS</td>
<td>3</td>
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<td></td>
<td>Focuses on the three branches of the U.S. government specifically congress the presidency and the judiciary. Coverage includes institutional rules and procedures that shape the incentives of these political actors and ultimately policy outcomes.</td>
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<tr>
<td>POL 70105</td>
<td>FEDERALISM AND STATE POLICYMAKING</td>
<td>3</td>
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<td>This course covers the theory and practice of federalism with emphasis on its consequences for policy outcomes. Students also examine the transformation of the policy role of state governments in recent years.</td>
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<tr>
<td>POL 70106</td>
<td>URBAN POLICY AND POLITICS</td>
<td>3</td>
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<td>POL 70108</td>
<td>AMERICAN POLITICAL BEHAVIOR</td>
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<td>Explores scholarship on the behavior of non-elite political actors including various forms of electoral participation, voting, psychological attachments, affect, cognitions, perceptions, attitudes and beliefs. Additional topics include: ethnic, racial and gender politics; political participation; voting choice; political psychology; politics and networks; macro politics; and connecting individual-level and macro-level findings with democratic outcomes and citizen capacity.</td>
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<td>POL 70119</td>
<td>SEMINAR IN AMERICAN POLITICS AND POLICY</td>
<td>3</td>
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<td>(Repeatable for credit) Seminar on current and important topics in American politics and policy. Subject matter varies depending on the emerging issue. This course may be repeated for credit with departmental approval.</td>
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<tr>
<td>POL 70195</td>
<td>SPECIAL TOPICS IN PUBLIC ADMINISTRATION</td>
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<td>(Repeatable for maximum 12 credit hours) Various topics offered by the Master of Public Administration program.</td>
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<td>Prerequisite: doctoral standing and special approval.</td>
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<tr>
<td>POL 70198</td>
<td>RESEARCH IN PUBLIC ADMINISTRATION</td>
<td>1-3</td>
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<tr>
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<td>(Repeatable 3 times for credit) Research or individual investigation for graduate students. Credits earned may be applied toward meeting requirements if department approves.</td>
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<td>Prerequisite: political science (POL) major; and doctoral standing; and special approval.</td>
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<td></td>
<td>Schedule Type: Research</td>
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<td>Contact Hours: 1-3 other</td>
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<td>Grade Mode: Standard Letter-IP</td>
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<tr>
<td>POL 70304</td>
<td>ANALYTIC TECHNIQUES OF POLICY-MAKING</td>
<td>3</td>
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<td></td>
<td>This course covers the concepts, techniques and conventions for assessing economic efficiency when this is one of the social and political goals relevant to public policymakers. Students are introduced to theories of cost-benefit analysis as they pertain to public policy.</td>
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<td></td>
<td>Prerequisite: POL 70301 and doctoral standing.</td>
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<td>Schedule Type: Lecture</td>
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<td>Contact Hours: 3 lecture</td>
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<td>Grade Mode: Standard Letter</td>
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<tr>
<td>POL 70317</td>
<td>GRADUATE INTRODUCTION TO PUBLIC ADMINISTRATION</td>
<td>3</td>
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<td></td>
<td>Introductory graduate course to the theory and study of public administration. Topics include: evolution and characteristics of the modern nation state; core functions of public bureaucracy in any nation state; intergovernmental relations; formal and informal institutions and their role in policy; legal-regulatory processes; historical evolution of public administration as an academic field; major paradigms in organization theory and internal organizational dynamics.</td>
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<td>Prerequisite: political science (POL) major and doctoral standing.</td>
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<td>Schedule Type: Lecture</td>
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<td>Contact Hours: 3 lecture</td>
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<td>Grade Mode: Standard Letter</td>
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<tr>
<td>POL 70377</td>
<td>PUBLIC BUDGETING AND FINANCIAL MANAGEMENT</td>
<td>3</td>
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<td></td>
<td>(Slashed with PADM 70377) Focuses on two aspects of public financial analysis: budgeting and financial management. The topics in budgeting are the basic purposes of budgets as mechanisms of resource control and allocation, and as legal documents; distinct budget formats and cross-walking of formats; budget preparation; legislative review; implementation and auditing. The topics in financial management are the mechanisms and tools for financing public operations, debt management, fund accounting, analyzing budgets, and forecasting.</td>
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<td></td>
<td>Prerequisite: political science (POL) major and doctoral standing.</td>
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<td>Schedule Type: Lecture</td>
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<td>Contact Hours: 3 lecture</td>
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<td>Grade Mode: Standard Letter</td>
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<tr>
<td>POL 70379</td>
<td>PROGRAM EVALUATION</td>
<td>3</td>
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<td></td>
<td>(Slashed with PADM 60379) Introduction to evaluation of government programs. Emphasis on familiarizing students with the theory and specifically the techniques utilized under different evaluation formats.</td>
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<td>Prerequisite: Doctoral standing.</td>
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<td></td>
<td>Schedule Type: Lecture</td>
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<td></td>
<td>Contact Hours: 3 lecture</td>
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<td></td>
<td>Grade Mode: Standard Letter</td>
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</tbody>
</table>
POL 70386 PUBLIC SECTOR INFORMATION TECHNOLOGY MANAGEMENT  3 Credit Hours
Management of information technology systems in the public sector. Specific focus on: planning and acquisition of hardware and software and networking technologies, organizational governance and implementation, information security and privacy, legal requirements, IT service delivery and emerging enterprise technologies.
Prerequisite: political science (POL) major and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70387 ELECTRONIC GOVERNANCE  3 Credit Hours
An introduction to electronic governance with an emphasis on public administration. Examines the implications of information and communication technology in public organizations with regard to democracy, civic engagement, and performance improvement. Through case studies from the United States and across the world, students become familiar with the factors and issues surrounding the implementation of electronic governance on a comparative basis.
Prerequisite: political science (POL) major and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70392 INTERNSHIP IN PUBLIC ADMINISTRATION  3 Credit Hours
(Repeatable maximum 3 times for credit) Provides an opportunity for students to gain practical experience and be exposed to processes of public decision making and policy development.
Prerequisite: political science (POL) major; and doctoral standing; and special approval.
Schedule Type: Practicum or Internship
Contact Hours: 3 lecture
Grade Mode: Standard Letter-IP

POL 70470 PERSONAL ACCOUNTABILITY IN THE PUBLIC SERVICE  3 Credit Hours
(Slashed with PADM 60470) Focus is on students internalizing their role in the public service as stewards of the public trust. Topics covered include dimensions of stewardship: maintaining personal honor; protecting the liberty and dignity of the citizen, dimensions of justice; anti-corruption, incorporating principles of stewardship in their personal decision making and throughout the organization.
Prerequisite: political science (POL) major and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70471 NONPROFIT LAW  3 Credit Hours
(Slashed with PADM 60471) Introduction to legal issues for nonprofit organizations in the United States, including types of IRS tax-exempt status; basic requirements for establishing/operating nonprofit organizations specifically in Ohio.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70472 NONPROFIT BOARD-EXECUTIVE RELATIONS  3 Credit Hours
(Slashed with PADM 60472) Key aspects of effective nonprofit governance, major roles of nonprofit board members and their responsibilities and governance structures.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70475 CAPSTONE SEMINAR  3 Credit Hours
(Repeatable for credit) (Slashed with PADM 60475) Students complete an approved, written project that is analytical and research based.
Prerequisite: political science (POL) major; doctoral standing; and special approval.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-IP

POL 70477 NONPROFIT FINANCIAL RESOURCE DEVELOPMENT  3 Credit Hours
(Slashed with PADM 60477) Successful strategies for fundraising and resource development for nonprofit organizations. Students will be exposed to fundraising in practice and will write a resource development plan.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70501 STATUS OF THE FIELD: TRANSNATIONAL AND COMPARATIVE POLITICS AND POLICY  3 Credit Hours
This course introduces students to the primary concepts, theories and subfields of comparative and transnational politics. Each field of study is reviewed along with the primary sub-fields of analysis.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70502 GLOBAL GOVERNANCE  3 Credit Hours
This course examines issues, problems and debates regarding global governance in the contemporary world. Of primary interest is the array of actors in this process including nation-states, intergovernmental organizations, and non-governmental organizations.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

POL 70503 FOREIGN POLICY ANALYSIS  3 Credit Hours
(Slashed with POL 60503) This course provides an overview of the diverse analytic traditions and issues that relate to the study of foreign policy. Areas of coverage include theories of foreign policy decision-making, levels of analysis, and policy domains.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Grade Mode</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL 70507</td>
<td>CONFLICT TRANSFORMATION AND RECONCILIATION</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
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<tr>
<td>POL 70510</td>
<td>POLITICS OF DEVELOPMENT</td>
<td>3</td>
<td>Lecture</td>
<td>POL 70501 or POL 70701; and doctoral standing.</td>
</tr>
<tr>
<td>POL 70511</td>
<td>INTERNATIONAL POLITICAL ECONOMY</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
</tr>
<tr>
<td>POL 70547</td>
<td>STRATEGIC PLANNING</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
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<tr>
<td>POL 70591</td>
<td>SEMINAR IN TRANSNATIONAL AND COMPARATIVE POLITICS AND POLICY</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
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<tr>
<td>POL 70902</td>
<td>POWER, CONFLICT AND THE POLITICS OF GENDER</td>
<td>3</td>
<td>Lecture</td>
<td>POL 70501 or POL 70901; and doctoral standing.</td>
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<tr>
<td>POL 70903</td>
<td>IDENTITY DRIVEN CONFLICTS</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
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<tr>
<td>POL 70904</td>
<td>SOCIAL MOVEMENTS AND NONVIOLENT CONFLICTS</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
</tr>
<tr>
<td>POL 70906</td>
<td>POLITICAL VIOLENCE</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
</tr>
<tr>
<td>POL 70907</td>
<td>TERRORISM AND HUMAN RIGHTS</td>
<td>3</td>
<td>Lecture</td>
<td>Doctoral standing.</td>
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</table>

Cross-cultural analysis of transition from mass violence to justice and from protracted conflict to democracy. Subjects of study include truth and reconciliation commissions, criminal tribunals, apologies, reparations, and other aids to conflict transformation.

Explores the roles played by ethnicity, race, religion, culture and other elements of identity in the generation, resolution and conduct of conflicts within and between groups. Physical and symbolic markers of difference are examined in order to understand both why groups differentiate themselves from one another and how mechanisms such as skin color, religious affiliation, ethnic background or cultural traditions can provide the impetus for conflict or the grounds for resolution.

Examines the dynamics, networks, interests and resource mobilization underlying state-sponsored political violence, focusing on “low-intensity conflict” and counter-insurgency, paramilitarism and genocide. Of special interest is the relationship of the state to various non-state actors, both perpetrators and victims, and the role of the international community in domestic-level violence.

Examines power disparities and gender as sources of conflict in multiple arenas—including family, community, workplace and the political sphere. The intersections of gender and power in the generation and resolution of social conflicts is examined. Emphases is placed on empowerment strategies and tactics used to transform gendered conflicts and redress power imbalances.

The waging and escalating of conflicts by social movements through nonviolent actions frequently shifts conflicts from one stage to another while also contributing to conflict transformation and to substantive social and political changes. Focuses on social movement theories and practices, and on the complicated dynamics of nonviolent action campaigns waged by social movements.

The intersections of gender and power in the generation and resolution of social conflicts is examined. Emphases is placed on empowerment strategies and tactics used to transform gendered conflicts and redress power imbalances.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Schedule Type</th>
<th>Contact Hours</th>
<th>Grade Mode</th>
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</thead>
<tbody>
<tr>
<td>POL 70991</td>
<td>Seminar in Conflict Analysis and Management</td>
<td>3</td>
<td>Repeatable for a maximum of 9 credit hours) Seminar on current and important topics in Conflict Analysis and Management. This course may be repeated for credit with departmental approval.</td>
<td>Seminar</td>
<td>3 other</td>
<td>Standard Letter</td>
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<tr>
<td>POL 71094</td>
<td>College Teaching in Political Science</td>
<td>1</td>
<td>(Repeatable for credit)Staff training and experience in college teaching; colloquia on professional ethics and responsibilities of political scientists. Maximum of 4 hours applicable toward Ph.D. requirements with graduate studies committee approval.</td>
<td>Seminar</td>
<td>1 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>POL 79091</td>
<td>Seminar: Quantitative Methods</td>
<td>3</td>
<td>(Repeatable a total of 3 times) Focuses on select topics in quantitative statistical methods, including limited and categorical dependent variables, hierarchical linear models, panel data, structural equation modeling, and Q Methodology. More than one seminar may be offered.</td>
<td>Seminar</td>
<td>3 other</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>POL 79095</td>
<td>Special Topics in Political Science and Public Policy</td>
<td>3</td>
<td>(Repeatable for a maximum of 12 credit hours) Topics course.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
</tr>
<tr>
<td>POL 81098</td>
<td>Research</td>
<td>1-15</td>
<td>(Repeatable for credit)Research or individual investigation for doctoral students who have not yet passed their candidacy examination. Credits may be applied toward degree if department approves and if letter grade given.</td>
<td>Research</td>
<td>1-15 other</td>
<td>Standard Letter-IP</td>
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<tr>
<td>POL 81299</td>
<td>Dissertation I</td>
<td>15</td>
<td>(Repeatable for credit)Continuing registration required for doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.</td>
<td>Dissertation</td>
<td>15 other</td>
<td>Satisfactory/Unsatisfactory-IP</td>
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Public Administration (PADM)

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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Schedule Type</th>
<th>Contact Hours</th>
<th>Grade Mode</th>
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</thead>
<tbody>
<tr>
<td>PADM 60195</td>
<td>Special Topics in Public Administration</td>
<td>3</td>
<td>(Repeatable for credit)Various topics offered by the Master of Public Administration program.</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>PADM 60198</td>
<td>Research in Public Administration</td>
<td>1-3</td>
<td>(Slashed with POL 70198) Research or individual investigation for master's level graduate students. Credits earned may be applied toward meeting requirements if department approves.</td>
<td>Research</td>
<td>1-3 other</td>
<td>Standard Letter-IP</td>
</tr>
<tr>
<td>PADM 60200</td>
<td>Nonprofit Advocacy</td>
<td>3</td>
<td>This course explores the U.S. public-policy making process as it applies to nonprofit organizations. Nonprofits influence policy making or “advocacy” through a variety of methods, such as lobbying, campaigning, protesting, and policy monitoring. The course explores how nonprofit organizations both shape and are shaped by public policy. Prerequisites: Graduate Standing</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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<tr>
<td>PADM 60310</td>
<td>Leadership in the Nonprofit and Public Sector</td>
<td>3</td>
<td>This course teaches students theory, practice, and skills for leading nonprofit and public organizations. Topics include: organizational theory and behavior; organizational culture; integrity and ethics; group dynamics; conflict management; and creating an environment that promotes diversity and inclusion. Prerequisites: Graduate standing</td>
<td>Lecture</td>
<td>3 lecture</td>
<td>Standard Letter</td>
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</table>
PADM 60371  GRADUATE INTRODUCTION TO PUBLIC ADMINISTRATION  3 Credit Hours
Introductory graduate course to the theory and study of public administration. Topics include: evolution and characteristics of the modern nation state; core functions of public bureaucracy in any nation state; intergovernmental relations; formal and informal institutions and their role in policy, legal-regulatory processes; historical evolution of public administration as an academic field; major paradigms in organization theory and internal organizational dynamics.
Prerequisite: public administration (PADM) major and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60375  PUBLIC PERSONNEL ADMINISTRATION  3 Credit Hours
Study of public personnel systems, including underlying system values and current problems with emphasis on skill development and understanding of techniques for public personnel managers.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60376  LABOR MANAGEMENT RELATIONS IN THE PUBLIC SECTOR  3 Credit Hours
This course focuses on issues peculiar to public sector labor relations, including the impact of public employee unionism on traditional merit systems and personnel policy decision processes.
Prerequisite: PADM 60375 and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60377  PUBLIC BUDGETING AND FINANCIAL MANAGEMENT  3 Credit Hours
(Slashed with POL 70377) Focuses on two aspects of public financial analysis: budgeting and financial management. The topics in budgeting are the basic purposes of budgets as mechanisms of resource control and allocation, and as legal documents; distinct budget formats and cross-walking of formats; budget preparation; legislative review; implementation and auditing. The topics in financial management are the mechanisms and tools for financing public operations, debt management, fund accounting, analyzing budgets, and forecasting.
Prerequisite: public administration (PADM) major and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60378  MUNICIPAL MANAGEMENT AND ADMINISTRATION  3 Credit Hours
Detailed analysis of metropolitan complex. Emphasis given to administrative, political, fiscal and legal problems in governing cities.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60379  PROGRAM EVALUATION I  3 Credit Hours
(Slashed with POL 70379) Introduction to evaluation of government programs. Emphasis on familiarizing students with the theory and specifically the techniques utilized under different evaluation formats.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60381  METHODS IN PUBLIC ADMINISTRATION  3 Credit Hours
This course is a graduate-level introduction to statistical methods and their use in public administration.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60382  SEMINAR IN PUBLIC ADMINISTRATION  3 Credit Hours
Study of selected problem areas in public service organizations with emphasis on understanding the factors contributing to them, their solution and literature bearing on the problems.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60386  PUBLIC SECTOR INFORMATION TECHNOLOGY MANAGEMENT  3 Credit Hours
Management of information technology systems in the public sector. Specific focus on: planning and acquisition of hardware and software and networking technologies, organizational governance and implementation, information security and privacy, legal requirements, IT service delivery and emerging enterprise technologies.
Prerequisite: public administration (PADM ) major and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60387  ELECTRONIC GOVERNANCE  3 Credit Hours
An introduction to electronic governance with an emphasis on public administration. Examines the implications of information and communication technology in public organizations with regard to democracy, civic engagement, and performance improvement. Through case studies from the United States and across the world, students will become familiar with the factors and issues surrounding the implementation of electronic governance on a comparative basis.
Prerequisite: PADM 60386; public administration (PADM) major; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PADM 60392  INTERNSHIP IN PUBLIC ADMINISTRATION  3 Credit Hours
(Repeatable for credit)Provides an opportunity for students to gain practical experience and be exposed to processes of public decision making and policy development.
Prerequisite: public administration (PADM) major; and graduate standing; and special approval.
Schedule Type: Practicum or Internship
Contact Hours: 3 other
Grade Mode: Standard Letter-IP
Department of Psychological Sciences

Psychology (PSYC)

PSYC 11762 GENERAL PSYCHOLOGY (DIVD) (KSS) 3 Credit Hours
Introduction to the scientific approach to understanding human behavior and mental processes such as emotions, perceptions and cognitions. Topics may include personality, social and environmental factors, biological aspects of behavior and the experience of emotion and psychological disorders.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

PSYC 20651 CHILD PSYCHOLOGY (DIVD) (KSS) 3 Credit Hours
A review of the data, concepts and theories of psychology that contribute to the understanding of child development from conception to age 14.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

PSYC 21211 PSYCHOLOGY OF EVERYDAY LIFE (DIVD) (KSS) 3 Credit Hours
A review of theories, concepts and data that contribute to the understanding of human adjustment. Topics may include the following: personality, stress and coping, transitions from adolescence to adulthood, psychological disorders and psychotherapy.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, Transfer Module Social Sciences

PSYC 21621 QUANTITATIVE METHODS IN PSYCHOLOGY I 3 Credit Hours
Application of quantitative, statistical methods in psychological research. Descriptive and inferential methods (includes ANOVA, t-test and correlation).
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, Transfer Module Social Sciences

PSYC 22221 MULTICULTURAL PSYCHOLOGY (DIVD) (KSS) 3 Credit Hours
Examination of areas of psychology upon which diversity issues have a bearing and focused study of psychological issues relevant to African-American, Asian-American, Hispanic/Latino American and American Indian groups.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, Transfer Module Social Sciences
PSYC 30005 CAREER PATHWAYS IN PSYCHOLOGY 1 Credit Hour
Designed to equip students with a better understanding of the career pathways available to them in psychology at the bachelor's and graduate school level. Using a combination of videos, articles, and activities, students will learn about many different topics and strategies related to careers and the graduate school application process.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

PSYC 30111 FORENSIC PSYCHOLOGY 3 Credit Hours
Surveys major areas of forensic psychology, which focuses on the application of the science and profession of psychology to legal settings. Topics include roles and responsibilities of forensic psychologists, forensic assessment, psychological theories of criminal behavior, law enforcement psychology and eyewitness testimony.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 30651 ADOLESCENT PSYCHOLOGY 3 Credit Hours
A review of the theories, concepts and data that contribute to our understanding of the physical, intellectual, educational, personality and social development of adolescents in contemporary society.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 30652 SOCIAL AND PERSONALITY DEVELOPMENT 3 Credit Hours
Processes and findings in social and personality development, with a focus on childhood and adolescence. Will include the examination of individual differences as well as developmental changes in social function and personality.
Prerequisite: PSYC 11762; and PSYC 20651 or HDFS 24012.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 30655 CHILDREN'S THINKING 3 Credit Hours
Focuses on how children's cognitive processes and mental representations change from infancy to early adulthood. Theoretical claims, empirical findings, and methodological issues are critically evaluated. Topics include children's visual and auditory perception, language and literacy, learning and memory, mathematical and spatial thinking, logical and scientific reasoning, problem solving, theory of mind and social cognition.
Prerequisite: PSYC 11762; and PSYC 20651 or HDFS 24012.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 30821 PSYCHOLOGY OF MOTIVATION 3 Credit Hours
Factors that provide the energy and direction for behaviors, emotions and cognitive processes. Seeks to answer the question "why" concerning the things people do, feel and think. A survey approach is used to include both the traditional and newly emerging concepts in motivation.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 31141 PERCEPTION 3 Credit Hours
Investigates how humans detect, organize and interpret information from the environment. Considers how both biological and psychological process create and influence our perception of the world.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 31282 PERSONALITY 3 Credit Hours
A review of the data, concepts and theories of psychology that contribute to the understanding of personality.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Social and Behavioral Sciences

PSYC 31498 UNDERGRADUATE RESEARCH (ELR) 1-6 Credit Hours
(Repeatable for a maximum 16 credit hours) Individual research open to qualified students. See Arts and Sciences and psychology major/minor requirements for applicability repeatable limits.
Prerequisite: PSYC 11762 and special approval.
Schedule Type: Research
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory/IP
Attributes: Experiential Learning Requirement

PSYC 31532 SOCIAL PSYCHOLOGY 3 Credit Hours
Study of environmental/situational influences on our own and others' thoughts, behaviors and feelings-focus on topics such as aggression, attitudes and behaviors, conformity, helping, personal relationships and social cognition.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Social and Behavioral Sciences

PSYC 31574 RESEARCH METHODS IN PSYCHOLOGY (ELR) 3 Credit Hours
The rationale, logic and procedures of scientific research in psychology with an emphasis on measurement, causal inference and research design.
Prerequisite: PSYC 11762 and PSYC 21621.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement
PSYC 31634  ANIMAL COGNITION  3 Credit Hours
Focuses on the nature of cognition and intelligence in nonhuman animals. Topics include animal studies of perception and attention, associative learning, memory, spatial cognition, concept formation, reasoning and language in nonhuman animals.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 31684  QUANTITATIVE METHODS IN PSYCHOLOGY II  3 Credit Hours
Small sample theory, analysis of variance, linear regression and nonparametric statistics (e.g. Chi Square). This course may include qualitative analyses and computer based data analyses with SPSS.
Prerequisite: PSYC 21621.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 31773  INDUSTRIAL PSYCHOLOGY  3 Credit Hours
Application of principles, facts and theories of psychology to people at work. Includes motivation and satisfaction at work, personnel selection and placement, training and development, performance appraisal, organizational development, quality of work life, ergonomics and consumer psychology.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40111  ABNORMAL PSYCHOLOGY  3 Credit Hours
Survey of the definitions as well as the biological, psychological and sociocultural causes of various psychological disorders. Illustrations of these disorders with cases. Overview of treatment approaches to these disorders may be included.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Social and Behavioral Sciences

PSYC 40112  PSYCHOLOGICAL DISORDERS OF CHILDHOOD AND ADOLESCENCE  3 Credit Hours
Covers the biological, psychological, and socio-cultural factors influencing the development of psychological disorders in children and adolescents. Emphasis is placed on conceptual and research issues and the application of knowledge to understanding diagnosis and case studies of specific disorders.
Prerequisite: PSYC 11762; and PSYC 20651 or PSYC 30651 or HDFS 24012; and junior or senior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40231  PSYCHOLOGICAL ASSESSMENT  3 Credit Hours
Introduction to psychometrics and test theory. Use and basic interpretation of intellectual and personality tests. Skills in using tests at a professional level not given.
Prerequisite: PSYC 11762 and PSYC 21621.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40382  PEDIATRIC PSYCHOLOGY  3 Credit Hours
(Slashed with PSYC 50382 and PSYC 70382) Survey of the current topics and research in the field of pediatric, or child health, psychology. Includes a general overview of a number of pediatric psychology topics, including opportunities for more focused study of specific conditions and illnesses. Class sessions cover a mix of general issues (e.g., systems, adherence, diversity, stress and coping), descriptions of clinical roles in pediatric psychology (e.g., consultation liaison, multidisciplinary teams) and specific pediatric conditions with a focus on understanding the role of pediatric psychology.
Prerequisite: PSYC 20651; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40383  INTRODUCTION TO CLINICAL PSYCHOLOGY  3 Credit Hours
Application of psychological principles and techniques to the problems of the individual. This course is designed to introduce the field of clinical psychology, including models of understanding abnormal behavior, treatment of individuals and ethics and professional issues.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40445  COGNITIVE PSYCHOLOGY  3 Credit Hours
Covers the mental processes that underlie human thought and behavior, such as attention, memory, comprehension, reasoning, problem-solving and language. Considers established and current theoretical models, research methods and experimental results.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40446  COGNITIVE NEUROSCIENCE  3 Credit Hours
Covers the cognitive and neural processes that underlie vision, attention, spatial processing, memory, language, social processes, executive functioning, and action. Introduces basic brain structure and the behavioral and functional imaging techniques used to study the brain bases of cognition. Data from patients with neurological disorders such as Alzheimer's, aphasia, amnesia and others are also examined.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 40461  PSYCHOLOGY OF LANGUAGE  3 Credit Hours
Investigates psychological processes involved in language production, comprehension and development. Within each broad area emphasis is on theories, psychological experiments, key findings and the relationships between theory, method and data.
Prerequisite: PSYC 11762 and PSYC 40445.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 40625  DEVELOPMENT OF GENDER ROLE AND IDENTITY (DIVD)  
3 Credit Hours  
A life-span, developmental model is used to analyze the changes which occur with age in gender-related role performance and identity formation.  
Prerequisite: PSYC 11762.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Diversity Domestic

PSYC 40974  HISTORY OF PSYCHOLOGY  
3 Credit Hours  
(Slashed with PSYC 50974) Course examines the historical context, influences and individuals instrumental in the development of psychology. Course organization is designed to compare and contrast systems, theories and fundamental issues with which psychologists have concerned themselves in past and contemporary stages of the science.  
Prerequisite: PSYC 11762 and special approval.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

PSYC 41043  BASIC LEARNING PROCESSES  
3 Credit Hours  
Examination of basic principles of Pavlovian conditioning, instrumental conditioning, animal learning and memory processes, and animal cognition. Emphasis on major empirical phenomena derived from research with animals with reference to related psychological processes in humans.  
Prerequisite: PSYC 11762.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

PSYC 41363  BIOPSYCHOLOGY  
3 Credit Hours  
Rigorous course covering the relationship between brain and behavior at the physiological, chemical and anatomical levels. Focuses on the association between the central nervous system and various processes and behaviors such as learning, emotions, neurological disorders and psychopathology. Students with no background or coursework in biological science should plan to devote considerable time to mastering the relevant concepts for this course (e.g., structure and function of neurons).  
Prerequisite: PSYC 11762; and sophomore standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

PSYC 41364  DRUGS AND BEHAVIOR  
3 Credit Hours  
Provides an overview of drug taking in society, the actions of drugs in the body, and the effects of drugs on behavior. Focus is on drugs and the nervous system, psychopharmacology, and actions and side effects of such drugs as alcohol, opiates, stimulants, marijuana, hallucinogens, depressants, and performance-enhancing drugs. Particular focus is on medications for psychiatric disorders, abuse-potential and the causes of addiction, dependence and relapse.  
Prerequisite: PSYC 11762.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

PSYC 41395  SPECIAL TOPICS IN CHILD PSYCHOLOGY  
3 Credit Hours  
(Slashed with PSYC 51395 and PSYC 71395) (Repeatable for Credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of child psychology. Specific topics announced.  
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

PSYC 41492  INTERNSHIP IN PSYCHOLOGY (ELR)  
1-6 Credit Hours  
(Repeatable for credit) Application of psychological knowledge and skills in applied settings. Allows academic credit for participation as an intern at approved internship sites including social service, non-profit agencies, government agencies and hospital settings. Open to psychology majors only. Special approval required.  
Prerequisite: Must have junior standing and 9 credit hours in psychology and 3.00 GPA overall.  
Schedule Type: Practicum or Internship  
Contact Hours: 7-42 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  
Attributes: Experiential Learning Requirement

PSYC 41495  SPECIAL TOPICS IN PSYCHOLOGY  
3 Credit Hours  
(Repeatable for credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of research theory or methodology may be covered. Specific topics announced.  
Prerequisite: Junior standing and special approval.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

PSYC 41498  INDIVIDUAL INVESTIGATION (ELR)  
1-6 Credit Hours  
(Repeatable for a maximum of 16 credit hours) Involves participation in empirical research, review of psychological literature and preparation of a paper or annotated bibliography. See Arts and Sciences and psychology major/minor requirements for applicability repeatable limits.  
Prerequisite: PSYC 11762 and special approval.  
Schedule Type: Individual Investigation  
Contact Hours: 1-6 other  
Grade Mode: Standard Letter-IP  
Attributes: Experiential Learning Requirement

PSYC 41573  LABORATORY EXPERIENCE IN PSYCHOLOGICAL RESEARCH:SOCIAL/CLINICAL (WIC)  
3 Credit Hours  
Intensive experience in the conduct, analysis and reporting of empirical research in social or clinical psychology. Specific content varies with instructor. Repeatable once with instructor, and departmental permission if topic is different.  
Prerequisite: 3.200 GPA and PSYC 11762 and PSYC 21621 and PSYC 31574.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: Writing Intensive Course
PSYC 41574  LABORATORY EXPERIENCE IN PSYCHOLOGICAL RESEARCH: COGNITIVE/LEARNING (WIC)  3 Credit Hours
(Repeatable once for credit with instructor and departmental permission if topic is different) Intensive experience in the conduct, analysis and reporting of empirical research in cognitive psychology or human/animal learning. Specific content varies with instructor.
Prerequisite: 3.200 GPA and PSYC 11762 and PSYC 21621 and PSYC 31574 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PSYC 41581  HEALTH PSYCHOLOGY  3 Credit Hours
Role of psychological and social factors in health and illness, typically covering three general areas: (1) psychological factors affecting disease, (2) psychological and social consequences of illness and (3) psychotherapeutic interventions.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 41584  THE PSYCHOLOGY OF EXERCISE  3 Credit Hours
Provides an introduction to exercise psychology, which is the application of psychology to promote, maintain, enhance, and explain the parameters of exercise. This course will introduce students to the cutting-edge research and practical application of exercise psychology. Topics include use of psychological theory to predict adoption and adherence to exercise behavior; social and personality influences on exercise behavior; research on effectiveness of various exercise interventions; and consequences of exercise, including mental health states such as depression and anxiety, emotional well-being, self-esteem, self-concept, health-related quality of life, and cognition.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 41595  SPECIAL TOPICS IN COUNSELING CAREERS  3 Credit Hours
(Slashed with PSYC 51595 and PSYC 71595) (Repeatable for credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of psychology relevant to counseling careers. Special topics to be announced.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 41980  RESEARCH WRITING IN PSYCHOLOGY (WIC)  1 Credit Hour
Writing-intensive course taken in conjunction with PSYC 31574. Pre/Co-requisite: PSYC 31574.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PSYC 41990  WRITING IN PSYCHOLOGY (WIC)  1 Credit Hour
Writing-intensive course taken in conjunction with a 3-credit-hour, upper-division psychology course (except PSYC 31498, 41498, 41573, 41574 or 41993).
Prerequisite: special approval.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

PSYC 41993  VARIABLE TITLE WORKSHOP IN PSYCHOLOGY  1-6 Credit Hours
(Repeatable for credit) Variable topic offered as need arises. Specific topics will be announced in the schedule of classes.
Prerequisite: PSYC 11762 and special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

PSYC 42574  ADVANCED RESEARCH METHODS  3 Credit Hours
This course helps students integrate information learned in previous courses to better understand the process of conducting research in the field of psychology. Through hands-on experiences, students undertake the following: (1) Using basic statistical analyses to answer hypotheses; (2) Reviewing the scientific literature and generating hypotheses; (3) Testing hypotheses using a dataset; (4) Presenting research findings.
Prerequisite: PSYC 31574.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 43001  CLINICAL NEUROANATOMY  3 Credit Hours
(Slashed with PSYC 53001 and PSYC 73001; Cross-listed with BMS 50701 and 70701) This course examines the anatomical organization of the human brain, emphasizing functional aspects of various neural systems, neuroimaging, and topics of clinical relevance. A conceptual understanding of central nervous system organization and memorization of specific neural structures and pathways, as well as knowledge of the impact of structure and systems dysfunction is required.
Prerequisite: Junior standing; minimum 3.250 overall GPA; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 43002  CURRENT TECHNIQUES IN BEHAVIORAL NEUROSCIENCE  3 Credit Hours
(Slashed with PSYC 53002 and 73002; Cross-listed with BMS 50702 and BMS 70702) This course details current and advanced techniques used in behavioral neuroscience research. Emphasis is placed on understanding the theory behind each technique, and its use in understanding the neural mechanisms of behavior. Detailed protocols for each technique are also covered. 250 overall GPA; and junior standing; and special approval from instructor
Prerequisite: minimum B grade in BSCI 30140 or BSCI 30156 or BSCI 30520 or PSYC 41363; and minimum 3.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 43003  NEURAL MECHANISMS OF LEARNING AND MEMORY  3
Credit Hours
(Slashed with PSYC 53003 and PSYC 73003; cross-listed with BMS 50703 and BMS 70703) This course examines the neural and molecular mechanisms underlying learning and memory formation. Cellular mechanisms of learning, including long-term potentiation and basic electrophysiology in invertebrate and mammalian preps are covered. Transcriptional and post-translational modifications required for learning and memory formation, genomic signaling and protein synthesis. The course covers structural changes of neurons associated with memory formation, and the different behavioral methods for studying memory.
Prerequisite: minimum B grade in BSCI 30520 or PSYC 41363; and minimum 3.250 overall GPA; and junior standing; and special approval of instructor.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 44383  THE MIND OF A CHAMPION: INTRODUCTION TO SPORT PSYCHOLOGY  3 Credit Hours
Sport psychology is the science dedicated to understanding psychological factors that influence athletic performance and is used by elite athletes in all sports to boost their performance. This course will introduce students to the cutting-edge research and practical application of sport psychology. Topics include: Role of personality and motivation in sports; leadership and team dynamics; methods to improve athletic performance and psychological benefits of sports and exercise.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 47385  BROKEN BRAINS: INTRODUCTION TO CLINICAL NEUROPSYCHOLOGY  3 Credit Hours
Clinical neuropsychology is the study of brain-behavior relationships—or, the ways in which the brain allows us to think, feel, and behave in our everyday life. This course will introduce students to cutting-edge research into the inner workings of the brain in both healthy individuals and those with neurological disorders (e.g. Alzheimer’s disease, brain injury, ADHD, bipolar disorder). Topics will include: Organization of the brain; how we learn, pay attention, and solve problems; brain plasticity; neurological disorders and neuropsychological assessment.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 47387  NEUROPSYCHOPHARMACOLOGY  3 Credit Hours
(Slashed with PSYC 57387 and PSYC 77387) Neuropsychopharmacology is the study of how drugs and other chemicals affect brain and behavior. This course will introduce students to the behavioral effects of psychoactive/therapeutic drugs and neurotoxic chemicals in relation to their neural and molecular mechanisms of action. The course will cover general principles of neuropsychopharmacology, nervous system structure in relation to behavior and mind, brain and behavioral systems that are impacted by different classes of drugs and toxic chemicals, and methods employed in neuropsychopharmacology research.
Prerequisite: PSYC 11762.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 50382  PEDIATRIC PSYCHOLOGY  3 Credit Hours
(Slashed with PSYC 40382 and PSYC 70382) Survey of the current topics and research in the field of pediatric, or child health, psychology. Includes a general overview of a number of pediatric psychology topics, including opportunities for more focused study of specific conditions and illnesses. Class sessions cover a mix of general issues (e.g., systems, adherence, diversity, stress and coping), descriptions of clinical roles in pediatric psychology (e.g., consultation liaison, multidisciplinary teams) and specific pediatric conditions with a focus on understanding the role of pediatric psychology.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 50974  HISTORY OF PSYCHOLOGY  3 Credit Hours
(Slashed with PSYC 40974) Course examines the historical context, influences and individuals instrumental in the development of psychology. Course organization is designed to compare and contrast systems theories and fundamental issues with which psychologists have concerned themselves in past and contemporary states of the science.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 51395  SPECIAL TOPICS IN CHILD PSYCHOLOGY  3 Credit Hours
(Slashed with PSYC 41395 and PSYC 71395) (Repeatable for credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of child psychology. Specific topics to be announced.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 51595  SPECIAL TOPICS IN COUNSELING CAREERS  3 Credit Hours
(Slashed with PSYC 41595 and PSYC 71595) (Repeatable for credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of psychology relevant to counseling careers. Special topics to be announced.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 51993  VARIABLE TITLE WORKSHOP IN PSYCHOLOGY  1-6 Credit Hours
(Repeatable for credit) Variable topics offered as need arises to train in specific area of field. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory
PSYC 53001 CLINICAL NEUROANATOMY 3 Credit Hours
(Slashed with PSYC 43001 and PSYC 73001; Cross-listed with BMS 50701 and BMS 70701) This course examines the anatomical organization of the human brain, emphasizing functional aspects of various neural systems, neuroimaging, and topics of clinical relevance. A conceptual understanding of central nervous system organization and memorization of specific neural structures and pathways, as well as knowledge of the impact of structure and systems dysfunction is required.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 53002 CURRENT TECHNIQUES IN BEHAVIORAL NEUROSCIENCE 3 Credit Hours
(Slashed with PSYC 43002 and PSYC 73002; Cross-listed with BMS 50702 and BMS 70702) This course details current and advanced techniques used in behavioral neuroscience research. Emphasis is placed on understanding the theory behind each technique, and its use in understanding the neural mechanisms of behavior. Detailed protocols for each technique will also be covered. Students should contact the instructor for permission to enroll.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 53003 NEURAL MECHANISMS OF LEARNING AND MEMORY 3 Credit Hours
(Slashed with PSYC 43003 and PSYC 73003; Cross-listed with BMS 50703 and BMS 70703) This course examines the neural and molecular mechanisms underlying learning and memory formation. Cellular mechanisms of learning, including long-term potentiation and basic electrophysiology in invertebrate and mammalian preps are covered. Transcriptional and post-translational modifications required for learning and memory formation, genomic signaling and protein synthesis. The course covers structural changes of neurons associated with memory formation, and the different behavioral methods for studying memory.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 57387 NEUROPSYCHOPHARMACOLOGY 3 Credit Hours
(Slashed with PSYC 47387 and PSYC 77387) Neuropsychopharmacology is the study of how drugs and other chemicals affect brain and behavior. This course will introduce students to the behavioral effects of psychoactive therapeutic drugs and neurotoxic chemicals in relation to their neural and molecular mechanisms of action. The course will cover general principles of neuropsychopharmacology, nervous system structure in relation to behavior and mind, brain and behavioral systems that are impacted by different classes of drugs and toxic chemicals, and methods employed in neuropsychopharmacology research.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60105 DEVELOPMENTAL PSYCHOPATHOLOGY 3 Credit Hours
(Slashed with PSYC 70105) Nature and theoretical explanations of various forms of psychopathology in children and adults. Students will learn about the methods used to research psychopathology and understand contemporary controversies in the study of developmental psychopathology.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60110 INTRODUCTION TO PSYCHOPATHOLOGY: CHILD 3 Credit Hours
Introduction to psychopathology from a developmental perspective. Covers models of classification and specific disorders of childhood.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60170 INTRODUCTION TO PSYCHOPATHOLOGY: ADULT 3 Credit Hours
An examination of the etiology, symptomology and theoretical models of adult psychopathology.
Prerequisite: Graduate status in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60192 INTEGRATION PRACTICUM 1-3 Credit Hours
(Repeatable for credit) Integration of assessment, psychopathology and psychotherapy coursework. Emphasis on learning how to conceptualize cases in general and from differing theoretical perspectives.
Prerequisite: PSYC 6/70292 and PSYC 6/70792 and graduate standing in psychology.
Schedule Type: Lecture, Practicum or Internship
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter-S/U-IP

PSYC 60272 INTRODUCTION TO PSYCHOLOGICAL ASSESSMENT 3 Credit Hours
Introduction to psychological assessment as a process for solving important clinical problems. Theoretical methodological and research issues are emphasized. Students will also become familiar with major psychological tests.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60273 ADVANCED PSYCHOLOGICAL ASSESSMENT: ADULT 3 Credit Hours
Examines psychodiagnosis within a context of “personality-as-a-coherent-whole.” Emphasizes an ideographic approach with a theoretical framework, which organizes and gives meaning to observations.
Prerequisite: PSYC 6/70272 and graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 60274 ADVANCED PSYCHOLOGICAL ASSESSMENT: CHILD 3 Credit Hours
Interviewing, developmental and intellectual assessments; personality evaluations; behavioral assessments; and assessment of special child populations. Emphasis on the rationale and integration of research relevant to appropriate use and interpretation.
Prerequisite: PSYC 6/70272 and PSYC 6/70292; and graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60275 BEHAVIORAL ASSESSMENT 3 Credit Hours
Considers behavioral assessment from an empirical as well as an applied perspective. Intended for persons familiar with general assessment, psychopathology and psychotherapy issues.
Prerequisite: PSYC 6/70272 and PSYC 6/70292; and graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60276 NEUROPSYCHOLOGICAL ASSESSMENT 3 Credit Hours
Introduction to the conceptual foundations of neuropsychological assessment and practical knowledge in assessment procedures, methods of interpretation and differential diagnosis.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60292 PSYCHOLOGICAL ASSESSMENT PRACTICUM 1-3 Credit Hours
(Repeatable for credit) Applied aspects of material presented in PSYC 6/70272. Emphasis on administering, scoring and interpreting major assessment tools.
Prerequisite: Concurrent enrollment in PSYC 6/70272; and graduate standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 60324 PROFESSIONAL ISSUES AND ETHICS IN CLINICAL PSYCHOLOGY 3 Credit Hours
Review of professional concerns in the field, including training, ethics, client rights, economics, legal issues, relationship to other professions and professional organization and policy.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60326 CLINICAL ASPECTS OF HEALTH PSYCHOLOGY 3 Credit Hours
Consideration of psychosocial influences on health status that are relevant to the clinician. Attention is given to interventions on both individual and community levels. Emphasis on approaches to prevention treatment and public policy.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60371 INTRODUCTION TO PSYCHOLOGICAL THERAPY 3 Credit Hours
Introduction to psychotherapy with special emphasis on psychodynamic and phenomenological approaches with theory, technique and major research findings considered.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60375 COGNITIVE BEHAVIOR THERAPY 3 Credit Hours
Empirical and clinical aspects of cognitive and behavioral interventions. Intended for students familiar with basic psychotherapy assessment and psychopathology issues.
Prerequisite: PSYC 6/70371 and PSYC 6/70292; and graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60376 CHILD PSYCHOTHERAPY 3 Credit Hours
Consideration of various aspects of child psychotherapy, including general issues, traditional therapies, behavior and cognitive behavior therapies, and child therapy research. Emphasis on integration of theory, technique and research.
Prerequisite: PSYC 6/70371; and graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60395 ADVANCED TOPICS-CLINICAL PSYCHOLOGY 1-6 Credit Hours
(Repeatable for credit) Advanced-level consideration of selected content areas in assessment, psychotherapy psycho pathology professional issues and community psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Permission and graduate standing.
Schedule Type: Lecture
Contact Hours: 1-6 lecture
Grade Mode: Standard Letter-S/U

PSYC 60453 INTRODUCTION TO COGNITIVE PSYCHOLOGY 3 Credit Hours
Information-processing approaches to human thought. Focus on processes used to transform store, manipulate, and retrieve sensory input. Topics include attention, pattern recognition, memory, and language.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 60592 PRACTICUM IN DIAGNOSTIC INTERVIEWING 1-3 Credit Hours
(Repeatable for maximum 3 credit hours) (Slashed with PSYC 70592) Covers skills clinical psychologists must possess to help clients, effectively work within the field, communicate effectively with peers and colleagues and excel as a clinical researcher. Provides a foundation of skills, knowledge, and expertise necessary to competently conduct a diagnostic interview and provides an introduction to the process of conceptualize a client's presenting problem(s).
Prerequisite: Graduate standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 3-9 other
Grade Mode: Standard Letter-IP
PSYC 60792  PSYCHOTHERAPY PRACTICUM  1-3 Credit Hours
(Repeatable for credit) Basic training in applied aspects of psychotherapy. Through didactic and experiential methods students learn basic listening and communication skills that are then applied to specific techniques, situations and issues.
Prerequisite: Graduate standing in psychology.
Corequisite: PSYC 6/70371.
Schedule Type: Practicum or Internship
Contact Hours: 3-9 other
Grade Mode: Standard Letter-S/U-IP
PSYC 60895  ADVANCED TOPICS-EXPERIMENTAL PSYCHOLOGY  1-6
Credit Hours
(Repeatable for credit) Advanced-level consideration of selected content areas in experimental psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 1-6 lecture
Grade Mode: Standard Letter-S/U
PSYC 60950  HISTORY AND CONTEMPORARY SYSTEMS  3 Credit Hours
Relationships between historical antecedents and the major contemporary systems and theories of psychology.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61054  LEARNING AND CONDITIONING  3 Credit Hours
Introduction to basic conditioning processes. Emphasis on Pavlovian and instrumental learning phenomena particularly as these are exemplified in animal models of behavior.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Special approval and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP
PSYC 61260  THEORIES OF PERSONALITY  3 Credit Hours
Consideration of major theoretical orientations including psychoanalysis, phenomenology and those stressing learning. Emphasis on principal concepts deals less with research methods and findings.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: PSYC 61199 and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP
PSYC 61350  PHYSIOLOGICAL PSYCHOLOGY  3 Credit Hours
Neurophysiological, neurochemical and neuroanatomical factors in the control of cognitive processes motivation and behavior. Emphasis is on the broad coverage of major topics in the field.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61496  INDIVIDUAL INVESTIGATION  3 Credit Hours
(Repeatable for credit) Intensive pursuit of a subject matter beyond normal course coverage with possibility of associated research.
Prerequisite: Special approval and graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U-IP
PSYC 61498  RESEARCH  1-15 Credit Hours
(Repeatable for credit) Research or individual investigation for master’s level graduate students. Credits may be applied toward meeting degree requirements if department approves and if letter grade or “S” is given.
Prerequisite: Graduate standing and special approval.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Standard Letter-S/U-IP
PSYC 61548  PSYCHOLOGY OF GENDER AND MINORITIES  3 Credit Hours
Neurophysiological, neurochemical and neuroanatomical factors in the control of cognitive processes motivation and behavior. Emphasis is on the broad coverage of major topics in the field.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61580  SOCIAL PSYCHOLOGY  3 Credit Hours
Introduction to empirical research and theories on the psychological processes related to interpersonal and small group behavior.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61651  QUANTITATIVE STATISTICAL ANALYSIS I  3 Credit Hours
(Slashed with PSYC 71651) Review of univariate statistics and an introduction to using bivariate and multivariate statistics. Part one of a two semester sequence on statistical analysis.
Prerequisite: Graduate standing in psychology and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61654  QUANTITATIVE STATISTICAL ANALYSIS II  3 Credit Hours
(Slashed with PSYC 71654) Multivariate statistics for classifying individuals and variables. Additional topics include power/effect size and handling missing data. Part two of a two-semester sequence on statistical analysis.
Prerequisite: PSYC 61651 or 71651 and graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 61685  CLINICAL RESEARCH METHODS  3 Credit Hours
Consideration of research methodologies relevant to clinical psychology
with emphasis on strengths and weaknesses of research designs and
issues related to collection and evaluation of data.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 61993  VARIABLE TITLE WORKSHOP IN PSYCHOLOGY  1-6
Credit Hours
(Repeatable for a maximum of 6 credit hours) Training and experience in
college teaching.
Prerequisite: Graduate standing in psychology (PSYC).
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

PSYC 62392  CLINICAL PRACTICUM  1-3 Credit Hours
(Repeatable for credit) Beginning practicum in psychological clinic
involving selection, administration and evaluation of tests of ability and
personality.
Prerequisite: Special approval and graduate standing.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 62492  ADVANCED PRACTICUM  1-3 Credit Hours
(Repeatable for credit) Intensified experience in the diagnosis and
treatment of specific disorders from the scientist-practitioner model.
Prerequisite: PSYC 6/70192 and PSYC 6/70292 and PSYC 6/70792; and
graduate standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 62685  RESEARCH METHODS IN PSYCHOLOGICAL SCIENCE  3
Credit Hours
(Slashed with PSYC 72685) This course fosters the development of
graduate students as independent researchers by helping them
acquire knowledge of and facility with quantitative research methods
in psychology. The course covers a range of topics that are essential
for successful research in psychology, including formulating research
questions, measurement, research design, sampling, ethics, writing,
replication, and validity.
Prerequisite: Graduate standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70110  INTRODUCTION TO PSYCHOPATHOLOGY: CHILD  3
Credit Hours
Introduction to psychopathology from a developmental perspective.
Covers models of classification and specific disorders of childhood.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70170  INTRODUCTION TO PSYCHOPATHOLOGY: ADULT  3
Credit Hours
An examination of the etiology, symptomology and theoretical models of
adult psychopathology.
Prerequisite: Doctoral status in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70192  INTEGRATION PRACTICUM  1-3 Credit Hours
(Repeatable for credit) Integration of assessment, psychopathology and
psychotherapy coursework. Emphasis on learning how to conceptualize
cases in general and from differing theoretical perspectives.
Prerequisite: PSYC 6/70292 and PSYC 6/70792; and doctoral standing in
psychology.
Schedule Type: Lecture, Practicum or Internship
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U-IP

PSYC 70272  INTRODUCTION TO PSYCHOLOGICAL ASSESSMENT  3
Credit Hours
Introduction to psychological assessment as a process for solving
important clinical problems. Theoretical methodological and research
issues are emphasized. Students will also become familiar with major
psychological tests.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70273  ADVANCED PSYCHOLOGICAL ASSESSMENT:ADULT  3
Credit Hours
Examines psychodiagnosis within a context of "personality-as-a-
coherent-whole." Emphasizes an ideographic approach with a theoretical
framework, which organizes and gives meaning to observations.
Prerequisite: PSYC 6/70272 and doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70274  ADVANCED PSYCHOLOGICAL ASSESSMENT:CHILD  3
Credit Hours
Interviewing, developmental and intellectual assessments, personality
evaluations, behavioral assessments, and assessment of special child
populations. Emphasis on the rationale and integration of research
relevant to appropriate use and interpretation.
Prerequisite: PSYC 6/70272 and PSYC 6/70292; and doctoral standing in
psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 70275  BEHAVIORAL ASSESSMENT  3 Credit Hours
Considers behavioral assessment from an empirical as well as an applied perspective. Intended for persons familiar with general assessment, psychopathology and psychotherapy issues.
Prerequisite: PSYC 6/70272 and PSYC 6/70292; and doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70276  NEUROPSYCHOLOGICAL ASSESSMENT  3 Credit Hours
Introduction to the conceptual foundations of neuropsychological assessment and practical knowledge in assessment procedures, methods of interpretation and differential diagnosis.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70292  PSYCHOLOGICAL ASSESSMENT PRACTICUM  1-3 Credit Hours
(Repeatable for credit) Applied aspects of material presented in PSYC 6/70272. Emphasis on administering, scoring and interpreting major assessment tools.
Prerequisite: Concurrent enrollment in PSYC 6/70272 and doctoral standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 70324  PROFESSIONAL ISSUES AND ETHICS IN CLINICAL PSYCHOLOGY  3 Credit Hours
Review of professional concerns in the field, including training, ethics, client rights, economics, legal issues, relationship to other professions and professional organization and policy.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70326  CLINICAL ASPECTS OF HEALTH PSYCHOLOGY  3 Credit Hours
Consideration of psychosocial influences on health status that are relevant to the clinician. Attention is given to interventions on both individual and community levels. Emphasis on approaches to prevention treatment and public policy.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70371  INTRODUCTION TO PSYCHOLOGICAL THERAPY  3 Credit Hours
Introduction to psychotherapy with special emphasis on psychodynamic and phenomenological approaches with theory, technique and major research findings considered.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70375  COGNITIVE BEHAVIOR THERAPY  3 Credit Hours
Empirical and clinical aspects of cognitive and behavioral interventions. Intended for students familiar with basic psychotherapy assessment and psychopathology issues.
Prerequisite: PSYC 6/70371 and PSYC 6/70292; and doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70376  CHILD PSYCHOTHERAPY  3 Credit Hours
Consideration of various aspects of child psychotherapy, including general issues, traditional therapies, behavior and cognitive behavior therapies, and child therapy research. Emphasis on integration of theory technique and research.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70382  PEDIATRIC PSYCHOLOGY  3 Credit Hours
(Slashed with PSYC 40382 and PSYC 50382) Survey of the current topics and research in the field of pediatric, or child health, psychology. Includes a general overview of a number of pediatric psychology topics, including opportunities for more focused study of specific conditions and illnesses. Class sessions cover a mix of general issues (e.g., systems, adherence, diversity, stress and coping), descriptions of clinical roles in pediatric psychology (e.g., consultation liaison, multidisciplinary teams) and specific pediatric conditions with a focus on understanding the role of pediatric psychology.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70392  SUPERVISED CLINICAL EXPERIENCE  1-3 Credit Hours
(Repeatable for credit) Post-practicum, psychological service provision and/or research activities in institution or agency under supervision of licensed psychologist and by arrangement of department of psychology. Requires successful completion of PSYC 6/72392.
Prerequisite: PSYC 6/72392 and special approval; and doctoral standing.
Schedule Type: Field Experience
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 70395  ADVANCED TOPICS-CLINICAL PSYCHOLOGY  1-6 Credit Hours
(Repeatable for credit) Advanced-level consideration of selected content areas in assessment, psychotherapy, psychopathology, professional issues and community psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-6 lecture
Grade Mode: Standard Letter-S/U

PSYC 70413  COGNITIVE NEUROPSYCHOLOGY  3 Credit Hours
The effect of brain injury and anomalous neurological development on cognitive skills such as language, perception and memory are explored.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 70453  INTRODUCTION TO COGNITIVE PSYCHOLOGY  3 Credit Hours
Information-processing approaches to human thought. Focus on processes used to transform, store, manipulate and retrieve sensory input. Topics include attention, pattern recognition, memory and language.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70485  READING PROCESSES  3 Credit Hours
Analysis of basic psychological processes involved in reading with emphasis on models of the skilled reader and of learning to read. Current research is surveyed.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70592  PRACTICUM IN DIAGNOSTIC INTERVIEWING  1-3 Credit Hours
(Repeatable for maximum 3 credit hours) (Slashed with PSYC 60592)
Covers skills clinical psychologists must posses to help clients, effectively work within the field, communicate effectively with peers and colleagues and excel as a clinical researcher. Provides a foundation of skills, knowledge, and expertise necessary to competently conduct a diagnostic interview and provides an introduction to the process of conceptualizing a client's presenting problem(s).
Prerequisite: Doctoral standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 3-9 other
Grade Mode: Standard Letter-IP

PSYC 70604  COGNITIVE DEVELOPMENT  3 Credit Hours
Examination of theories and research concerning changes in memory, perception, thought and language over the life span.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70615  SOCIAL AND PERSONALITY DEVELOPMENT  3 Credit Hours
Examination of theories and research in social development, with a focus on how personal relationships influence personality development.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 70792  PSYCHOTHERAPY PRACTICUM  1-3 Credit Hours
(Repeatable for credit) Basic training in applied aspects of psychotherapy. Through didactic and experiential methods students learn basic listening and communication skills that are then applied to specific techniques situations and issues.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 3-9 other
Grade Mode: Standard Letter-S/U-IP

PSYC 70895  ADVANCED TOPICS-EXPERIMENTAL PSYCHOLOGY  1-6 Credit Hours
(Repeatable for credit) Advanced-level consideration of selected content areas in experimental psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-6 lecture
Grade Mode: Standard Letter-S/U

PSYC 70950  HISTORY AND CONTEMPORARY SYSTEMS  3 Credit Hours
Relationships between historical antecedents and the major contemporary systems and theories of psychology.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71054  LEARNING AND CONDITIONING  3 Credit Hours
Introduction to basic conditioning processes. Emphasis on Pavlovian and instrumental learning phenomena, particularly as these are exemplified in animal models of behavior.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71260  THEORIES OF PERSONALITY  3 Credit Hours
Consideration of major theoretical orientations including psychoanalysis, phenomenology and those stressing learning. Emphasis on principal concepts deals less with research methods and findings.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71307  PSYCHOBIOLOGICAL ASPECTS OF HEALTH PSYCHOLOGY  3 Credit Hours
An introduction to non-neural aspects of psychobiology, with emphasis on psycho-endocrinology, psychoimmunology and the psychobiologic aspects of disease.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71350  PHYSIOLOGICAL PSYCHOLOGY  3 Credit Hours
Neurophysiological, neurochemical and neuroanatomical factors in the control of cognitive processes motivation and behavior. Emphasis is on the broad coverage of major topics in the field.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 71395 SPECIAL TOPICS IN CHILD PSYCHOLOGY 3 Credit Hours
(Slashed with PSYC 41395 and PSYC 51395) (Repeatable for credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of child psychology. Specific topics to be announced.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71498 SELECTED LITERATURE REVIEW 3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Comprehensive literature survey and review prepared by graduate student in area of interest.
Prerequisite: Doctoral standing in psychology (PSYC).
Schedule Type: Research
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U

PSYC 71507 PSYCHOSOCIAL ASPECTS OF HEALTH PSYCHOLOGY 3 Credit Hours
Examines concepts of disease and their implications for health. Emphasizes psychosocial stress in disease etiology and psychological factors influencing illness recovery.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71548 PSYCHOLOGY OF GENDER AND MINORITIES 3 Credit Hours
Neurophysiological, neurochemical and neuroanatomical factors in the control of cognitive processes motivation and behavior. Emphasis is on the broad coverage of major topics in the field.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71580 SOCIAL PSYCHOLOGY 3 Credit Hours
Introduction to empirical research and theories on the psychological processes related to interpersonal and small group behavior.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71595 SPECIAL TOPICS IN COUNSELING CAREERS 3 Credit Hours
(Slashed with PSYC 41595 and PSYC 51595) (Repeatable for credit) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of psychology related to counseling careers. Special topics to be announced.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71651 QUANTITATIVE STATISTICAL ANALYSIS I 3 Credit Hours
(Slashed with PSYC 61651) Review of univariate statistics and an introduction to using bivariate and multivariate statistics. Part one of a two semester sequence on statistical analysis.
Prerequisite: Doctoral standing in psychology and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71654 QUANTITATIVE STATISTICAL ANALYSIS II 3 Credit Hours
(Slashed with PSYC 61654) Multivariate statistics for classifying individuals and variables. Additional topics include power/effect size and handling missing data. Part two of a two semester sequence on statistical analysis.
Prerequisite: PSYC 61651 or 71651 and doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71685 CLINICAL RESEARCH METHODS 3 Credit Hours
Consideration of research methodologies relevant to clinical psychology with emphasis on strengths and weaknesses of research designs and issues related to collection and evaluation of data.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 71894 COLLEGE TEACHING OF PSYCHOLOGY 3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Training and experience in college teaching.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-S/U

PSYC 71993 VARIABLE TITLE WORKSHOP IN PSYCHOLOGY 1-6 Credit Hours
(Repeatable for a maximum of 6 credit hours) Training and experience in college teaching.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

PSYC 72392 CLINICAL PRACTICUM 1-3 Credit Hours
(Repeatable for credit) Beginning practicum in psychological clinic involving selection, administration and evaluation of tests of ability and personality.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 72445 MULTIVARIATE STATISTICS 3 Credit Hours
Intended to cover two major multivariate statistical techniques in psychology: structural equation modeling (SEM) and hierarchical linear modeling (HLM).
Prerequisite: PSYC 61651 or PSYC 71651; and PSYC 61654 or PSYC 71654; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
PSYC 72492 ADVANCED PRACTICUM 1-3 Credit Hours
(Repeatable for credit) Intensified experience in the diagnosis and treatment of specific disorders from the scientist-practitioner model.
Prerequisite: PSYC 6/70192 and PSYC 6/70292 and PSYC 6/70792; and doctoral standing in psychology.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

PSYC 72685 RESEARCH METHODS IN PSYCHOLOGICAL SCIENCE 3 Credit Hours
(Slashed with PSYC 62685) This course fosters the development of graduate students as independent researchers by helping them acquire knowledge of and facility with quantitative research methods in psychology. The course covers a range of topics that are essential for successful research in psychology, including formulating research questions, measurement, research design, sampling, ethics, writing, replication, and validity.
Prerequisite: Doctoral standing in psychology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 73001 CLINICAL NEUROANATOMY 3 Credit Hours
(Slashed with PSYC 43001 and PSYC 53001; Cross-listed with BMS 50701 and 70701) This course examines the anatomical organization of the human brain, emphasizing functional aspects of various neural systems, neuroimaging, and topics of clinical relevance. A conceptual understanding of central nervous system organization and memorization of specific neural structures and pathways, as well as knowledge of the impact of structure and systems dysfunction is required.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 73002 CURRENT TECHNIQUES IN BEHAVIORAL NEUROSCIENCE 3 Credit Hours
(Slashed with PSYC 43002 and PSYC 53002; Cross-listed with BMS 50702 and BMS 70702) This course details current and advanced techniques used in behavioral Neuroscience research. Emphasis is placed on understanding the theory behind each technique, and its use in understanding the neural mechanisms of behavior. Detailed protocols for each technique will also be covered. Students should contact the instructor for permission to enroll.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 73003 NEURAL MECHANISMS OF LEARNING AND MEMORY 3 Credit Hours
(Slashed with PSYC 43003 and PSYC 53003; Cross-listed with BMS 50703 and BMS 70703) This course examines the neural and molecular mechanisms underlying learning and memory formation. Cellular mechanisms of learning, including long-term potentiation and basic electrophysiology in invertebrate and mammalian preps are covered. Transcriptional and post-translational modifications required for learning and memory formation, genomic signaling and protein synthesis. The course covers structural changes of neurons associated with memory formation, and the different behavioral methods for studying memory.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 77387 NEUROPSYCHOPHARMACOLOGY 3 Credit Hours
(Slashed with PSYC 47387 and PSYC 57387) Neuropsychopharmacology is the study of how drugs and other chemicals affect brain and behavior. This course will introduce students to the behavioral effects of psychoactive/therapeutic drugs and neurotoxic chemicals in relation to their neural and molecular mechanisms of action. The course will cover general principles of neuropsychopharmacology, nervous system structure in relation to behavior and mind, brain and behavioral systems that are impacted by different classes of drugs and toxic chemicals, and methods employed in neuropsychopharmacology research.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PSYC 80391 SEMINAR IN CLINICAL PSYCHOLOGY 3 Credit Hours
(Repeatable for credit) Seminar devoted to detailed study of various topics in field of clinical psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U

PSYC 80491 SEMINAR IN COGNITIVE PSYCHOLOGY 3 Credit Hours
(Repeatable for credit) Seminar on current research in cognitive psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U

PSYC 80691 SEMINAR IN CHILD AND DEVELOPMENTAL PSYCHOLOGY 3 Credit Hours
(Repeatable for credit) Seminar on current research in child and developmental psychology. Specific topics will be announced in schedule of classes.
Prerequisite: Special approval and doctoral standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-S/U
PSYC 81091  SEMINAR IN LEARNING AND BIOPSYCHOLOGY  3 Credit Hours  (Repeatable for credit)Seminar on current research in learning and biopsychology. Specific topics will be announced in the schedule of classes.  
Prerequisite: Doctoral standing in psychology.  
Schedule Type: Seminar  
Contact Hours: 3 other  
Grade Mode: Standard Letter-S/U  
PSYC 81199  DISSERTATION I  15 Credit Hours  (Repeatable for credit)Doctoral dissertation, for which registration in at least two semesters is required the first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Dissertation  
Contact Hours: 15 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  
PSYC 81299  DISSERTATION II  15 Credit Hours  (Repeatable for credit)Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.  
Prerequisite: PSYC 81199 and doctoral standing.  
Schedule Type: Dissertation  
Contact Hours: 15 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  
PSYC 81498  RESEARCH  1-15 Credit Hours  (Repeatable for credit)Research or individual investigation for doctoral students. Credits may be applied toward degree if department approves.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Research  
Contact Hours: 1-15 other  
Grade Mode: Standard Letter-S/U-IP  
PSYC 81591  SEMINAR IN PERSONALITY AND SOCIAL PSYCHOLOGY  3 Credit Hours  (Repeatable for credit)Seminar on current research in areas of social psychology. Specific topics will be announced in schedule of classes.  
Prerequisite: Doctoral standing in psychology.  
Schedule Type: Seminar  
Contact Hours: 3 other  
Grade Mode: Standard Letter  
PSYC 81691  SEMINAR IN QUANTITATIVE METHODS  3 Credit Hours  (Repeatable for credit)Seminar on applications of quantitative methods within various content areas of psychology. Specific topics will be announced in schedule of classes.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Seminar  
Contact Hours: 3 other  
Grade Mode: Standard Letter-S/U  

Department of Sociology
Criminology and Justice Studies (CRIM)

CRIM 12000  INTRODUCTION TO JUSTICE STUDIES  3 Credit Hours  
Surveys the U.S. criminal justice system and its component institutions and processes, including overviews of policing, corrections, courts, and their inter-relations in the criminal justice system. An overview is also provided of the nature and measurement of crime, patterns of offending and victimization, and criminal justice responses to offending and victimization. Historical and emerging issues are introduced including a variety of insights related to effective, professional and ethical practices in criminal justice.  
Prerequisite: None.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: TAG Social and Behavioral Sciences  
CRIM 22100  BASIC INTERVIEWING  3 Credit Hours  
Foundation of basic interviewing principles, including communication models, question format, distortions, topic control, inhibitors, facilitators, listening, types of interviews and practical exercises.  
Prerequisite: CRIM 12000.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: TAG Social and Behavioral Sciences  
CRIM 22300  POLICE ROLE  3 Credit Hours  
Systematic analysis of the police role. An examination of the related research with an emphasis on divergent perspective and development of conceptual models.  
Prerequisite: CRIM 12000.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: TAG Social and Behavioral Sciences  
CRIM 22301  THE INVESTIGATIVE PROCESS  3 Credit Hours  
An examination of established investigative processes, techniques employed in conducting a systematic investigation and legal implications.  
Prerequisite: CRIM 12000.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: TAG Social and Behavioral Sciences  
CRIM 22303  THE INVESTIGATIVE PROCESS  3 Credit Hours  
An examination of established investigative processes, techniques employed in conducting a systematic investigation and legal implications.  
Prerequisite: CRIM 12000.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: TAG Social and Behavioral Sciences  
CRIM 26701  CORRECTIONS  3 Credit Hours  
Course topics include history of corrections, punishment, community corrections, correctional institutions, correctional administration, issues in corrections, and future trends of corrections.  
Prerequisite: CRIM 12000.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
Attributes: TAG Social and Behavioral Sciences
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
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<tbody>
<tr>
<td>CRIM 26704</td>
<td>ISSUES IN LAW AND SOCIETY (KSS)</td>
<td>3</td>
<td>General treatment of the legal system with special emphasis on its origin, structure and functional consequences on issues and problems in modern society.</td>
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<tr>
<td>Prerequisite:</td>
<td>None.</td>
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<tr>
<td>Schedule Type:</td>
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<td>Contact Hours:</td>
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<td>Grade Mode:</td>
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<tr>
<td>Attributes:</td>
<td>Kent Core Social Sciences, Transfer Module Social Sciences</td>
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<tr>
<td>CRIM 27095</td>
<td>SPECIAL TOPICS IN CRIMINOLOGY AND JUSTICE STUDIES</td>
<td>2,3</td>
<td>Intensive analysis of issues significant and current in the field which are not covered in regular courses.</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 and CRIM 22300; and sophomore standing.</td>
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<td>Grade Mode:</td>
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<tr>
<td>CRIM 27311</td>
<td>VICTIMOLOGY</td>
<td>3</td>
<td>Patterns of victim-offender relationship and process of victimization. Role of victims in criminal process. Problems of adjustment to victimization and issues in victim compensation.</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>CRIM 12000.</td>
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<td>Grade Mode:</td>
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<tr>
<td>CRIM 32200</td>
<td>POLICE AND COMMUNITY</td>
<td>3</td>
<td>An examination of the rights of individuals, citizen involvement, the police as members of the community, and the development implementation and evaluation of related programs.</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 and CRIM 22300; and sophomore standing.</td>
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<tr>
<td>CRIM 32500</td>
<td>CRISIS INTERVENTION</td>
<td>3</td>
<td>Crisis intervention situations in criminal justice are considered. The service role of criminal justice personnel, community resources and skill development are also considered.</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>CRIM 12000; and CRIM 22300 or CRIM 27311; and sophomore standing.</td>
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<tr>
<td>CRIM 33200</td>
<td>CRIMINAL LAW</td>
<td>3</td>
<td>Developmental backgrounds and principles of criminal law; structure, functions of criminal law; rules of criminal liability and procedural requisites in criminal proof. Case analysis included.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000.</td>
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<tr>
<td>CRIM 33300</td>
<td>DEVELOPMENT OF JUSTICE IN AMERICA</td>
<td>3</td>
<td>Course focuses on the evolution of the criminal justice process from its establishment in the United States to the present.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 and CRIM 36704; and Junior Standing.</td>
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<tr>
<td>CRIM 33400</td>
<td>CRIME AND JUSTICE IN POPULAR CULTURE</td>
<td>3</td>
<td>Crime and criminal justice as they are socially constructed and portrayed in popular culture including television, news and entertainment, popular film and other media of popular culture. Critical analysis of relations between popular culture, media institutions, crime and justice. Role of popular culture media in shaping public opinions about crime and justice, and in turn the relevance of public opinion for understanding criminal justice politics and policy.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 and sophomore standing.</td>
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<tr>
<td>CRIM 34200</td>
<td>CRIMINAL PROCEDURES AND EVIDENCE</td>
<td>3</td>
<td>This course focuses on the use of evidence and the legal procedures followed in the processing of criminal cases. Case analysis and writing assignments required.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 or PLST 18000.</td>
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<tr>
<td>CRIM 34311</td>
<td>YOUTH AND THE JUSTICE SYSTEM</td>
<td>3</td>
<td>Analysis of situations involving the legal rights of children and youths, which demand intervention by justice institutions or service agencies.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000.</td>
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<td>Grade Mode:</td>
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<td>CRIM 34500</td>
<td>UNDERSTANDING CRIMINAL LAW THROUGH FICTION</td>
<td>3</td>
<td>Exploration of legal concepts and their application as reflected in popular and literary fiction. Legal analysis of important issues involving criminal and civil law, criminal and civil procedures, evidence, courts and related legal topics. Application of legal issues and procedures to real life situations.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 and CRIM 26704; and Junior Standing.</td>
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<td>CRIM 36702</td>
<td>CRIMINOLOGY</td>
<td>3</td>
<td>Examines crime from the legal and social viewpoints; including extent and patterns of criminal behavior. Special emphasis on theoretical explanations of criminal behavior and crime rates.</td>
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<td>Prerequisite:</td>
<td>CRIM 12000 or SOC 12050; and junior standing.</td>
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<tr>
<td>CRIM 36703</td>
<td>JUVENILE DELINQUENCY</td>
<td>3</td>
<td>Social and personal factors in juvenile delinquency; operation of juvenile justice system; prevention and control of delinquency.</td>
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<tr>
<td>Prerequisite:</td>
<td>CRIM 12000 and CRIM 36704.</td>
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CRIM 36800  LGBTQ POPULATIONS IN THE JUSTICE SYSTEM  3 Credit Hours
This course explores research on LGBTQ (lesbian, gay, bisexual, transgender, and queer) populations in the juvenile and criminal justice systems. Students will examine the role that sexual orientation, gender identity, and gender expression play in the juvenile and criminal justice system, with particular attention given to the experiences of LGBTQ people within these institutions. Drawing on sociological theories of sex and gender and queer criminology, the course will review historical trends in the treatment of LGBTQ people in the justice systems, circumstances facing LGBTQ populations (sexual assault, harassment, hate crimes, institutional discrimination), and policy developments and innovations. Prerequisites: SOC 12050 or CRIM 12000 and Sophomore standing
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 37091  SEMINAR IN CRITICAL ISSUES IN CRIMINOLOGY AND JUSTICE STUDIES  1-3 Credit Hours
(Repealable for credit) Intense analysis of issues significant and current in the justice field which are not covered in regular courses. In-progress (IP) mark permissible.
Prerequisite: CRIM 12000 and sophomore standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter-IP

CRIM 37095  SPECIAL TOPICS IN CRIMINOLOGY AND JUSTICE STUDIES  3 Credit Hours
(Repealable for a maximum of 6 credit hours) Intensive analysis of issues significant and current in the field which are not covered in regular courses. Repeatable for a total of 6 hours.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 37311  MINORITIES IN CRIME AND JUSTICE (DIVD)  3 Credit Hours
Focus on the role of social and ethnic minorities as victims, offenders and participants in the justice process.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

CRIM 37411  WOMEN IN CRIME AND JUSTICE (DIVD)  3 Credit Hours
Women as a significant group in crime and their role in the development and operation of the criminal justice system.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

CRIM 37511  IMMIGRATION: LAW, CRIME AND JUSTICE (DIVD)  3 Credit Hours
Covers issues of immigration related to law, crime, and justice. Students will be introduced to issues of international diversity through the consideration of issues of law, criminal justice, and social justice related to immigration. Topics to be covered include legal and illegal immigration, immigration law enforcement, immigrants as criminal offenders and as crime victims, police-community relations, immigrants in correctional or detention facilities, and immigration as a national security concern and controversy.
Prerequisite: junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

CRIM 44400  JUSTICE ADMINISTRATION  3 Credit Hours
Identification of administrative and management functions, leadership management styles and supervision of personnel in justice organizations.
Prerequisite: CRIM 12000, and CRIM 22300 (or CRIM 26701); and CRIM 26704.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 45093  VARIABLE TITLE WORKSHOP IN CRIMINOLOGY AND JUSTICE STUDIES  1-6 Credit Hours
(Repealable for credit) (Slashed with CRIM 55093) Satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

CRIM 45096  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repealable for a maximum of 6 credit hours when topic varies) Involves an individual research project of considerable depth in a subject area not covered by regular course offerings. Prior consent of supervising faculty member is required.
Prerequisite: CRIM 12000 and 26704; and SOC 32210; and junior standing; and special approval.
Schedule Type: Individual Investigation
Contact Hours: 3-9 other
Grade Mode: Standard Letter-IP

CRIM 46200  ADVANCED CRIMINAL AND LEGAL ISSUES  3 Credit Hours
Focuses on reading, analyzing, and discussing current criminal, evidentiary and procedural issues as set forth in recent and historical U.S. Supreme Court cases. Case analysis, discussion and writing assignments are required.
Prerequisite: CRIM 12000 or PLST 18000; and junior standing.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter-IP

CRIM 46701  CRIME, JUSTICE AND SUBSTANCE ABUSE  3 Credit Hours
(Slashed with CRIM 56701) Examination of the relationship between drug and alcohol abuse and criminal behavior. Efforts to regulate, control, prevent and treat chemical abuse offenders are considered.
Prerequisite: CRIM 12000 and CRIM 26704.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CRIM 46705 COMMUNITY CORRECTIONS 3 Credit Hours  
(Slashed with CRIM 56705) This course is devoted to an examination of formal and informal approaches to correctional supervision and treatment through probation, parole and community residential treatment.  
Prerequisite: CRIM 12000 and CRIM 26701.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46707 CORRECTIONAL INSTITUTIONS 3 Credit Hours  
A thorough examination of the correctional institution, including the structure and organization, personnel, inmate social world and examination of the issues in contemporary correctional institutions.  
Prerequisite: CRIM 12000 and CRIM 26701.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46708 TREATMENT METHODS 3 Credit Hours  
(Slashed with CRIM 56708) Various methods of treatment are applied to corrections field. Focus is on specific techniques in community and institutional correctional settings. Direct observation utilized when possible.  
Prerequisite: CRIM 12000 and 26701; and junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46792 INTERNSHIP (ELR) 3-9 Credit Hours  
(Repeatable for a maximum of 12 credit hours) Work experience under direction of supervising faculty member in a private, federal, state or local justice agency or law agency. Students must have a 2.00 major GPA in Criminology and Justice Studies (CRJU) to enroll in this course.  
Prerequisite: 9 credit hours of criminology and justice studies (CRIM) coursework, including CRIM 12000; and a minimum 2.00 cumulative GPA; and junior standing; and special approval.  
Schedule Type: Practicum or Internship  
Contact Hours: 3-9 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  
Attributes: Experiential Learning Requirement  

CRIM 46798 RESEARCH IN CRIMINOLOGY AND JUSTICE STUDIES (ELR) 3-12 Credit Hours  
(Repeatable for a maximum of 12 credit hours) Individual research under direct supervision of a faculty member to provide direct hands-on research experience working on faculty research projects. Prior consent of supervising faculty member is required. Only 6 hours of nontraditional coursework can count towards the major.  
Prerequisite: CRIM 12000 and CRIM 26704; and SOC 32210; and special approval.  
Schedule Type: Research  
Contact Hours: 3-12 other  
Grade Mode: Standard Letter-IP  
Attributes: Experiential Learning Requirement  

CRIM 46800 INTELLIGENCE AND NATIONAL SECURITY 3 Credit Hours  
(Slashed with CRIM 56800) Addresses topics related to global security, including economic and industrial espionage, trade secret thefts, law and technology and cyber-crimes. Implications of industrial espionage and intellectual property theft for the global economy, national and international security, and the control and regulation of white collar crime. Foundational exploration of Intelligence and Counterintelligence (IC) as concepts, processes and careers.  
Prerequisite: CRIM 12000 and CRIM 22300; and junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46801 HOMELAND SECURITY 3 Credit Hours  
(Slashed with CRIM 56801) Explores the nexus between terrorism and homeland security as it relates to homeland security strategy, assessment, evaluation, preparation, responses, and recovery actions and mechanisms relating to terrorism and homeland security. There is a focus on the importance of coordination of various assessments, plans, strategies and implementation of plans of action involving local, county, state, federal and international responses pertaining to terrorism and homeland security.  
Prerequisite: CRIM 12000 and junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46802 TERRORISM AND COUNTERTERRORISM 3 Credit Hours  
(Slashed with CRIM 56802) Examines the origins and evolution of modern terrorism, challenges posed by terrorist groups to states and to the international system, and strategies employed to confront and combat terrorism. Assesses a wide variety of terrorist organizations, and explores the psychological, socioeconomic, political, and religious causes of terrorist violence past and present. Also analyzes the strengths and weaknesses of various counterterrorism efforts.  
Prerequisite: CRIM 12000 and junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46803 INFORMATION AND CYBER SECURITY 3 Credit Hours  
(Slashed with CRIM 56803) Vulnerabilities of computer networks and techniques for protecting networks and data are discussed. Basic elements of symmetric and asymmetric cryptography, secure e-commerce, involving secure transmission, authentication, digital signatures, digital certificates and Public Key Infrastructure (PKI) are presented. Provides students with an introduction to the field of information security risk assessment. Incorporates cases in risk analysis derived from actual state and law enforcement agencies or private firms.  
Prerequisite: CRIM 12000 and junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 46904 ISSUES IN POLICE WORK 3 Credit Hours  
(Slashed with CRIM 56904) Analysis of police practices and functions at the municipal, state and federal level. Examination of emerging trends and issues in policing. Review of changes in police department policies and research on problem-solving in policing.  
Prerequisite: CRIM 12000 and CRIM 22300; and junior standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
CRIM 47002  HUMAN SERVICE AGENCIES AND THE LAW  3 Credit Hours
(Slashed with CRIM 57002) An overview of the law as it pertains to human service agencies, as well as on the relationships between such agencies and the criminal and juvenile justice systems. Focused attention is given to agencies that closely connect with vulnerable populations (such as children and the poor) and those that work closely with policing and corrections (such as mental health agencies and halfway houses).
Prerequisite: CRIM 12000 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 47003  RESTORATIVE JUSTICE AND VICTIM ASSISTANCE  3 Credit Hours
(Slashed with CRIM 57003) An inquiry into the theories and research in restorative justice, as well as an assessment of victim assistance protocols and programs. Examines restorative justice and victim assistance initiatives that provide an alternative framework for dealing with crime that places victim needs in a primary position, while addressing legal concerns and interagency differences.
Prerequisite: CRIM 12000 and CRIM 27311; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 47004  LEGAL PERSPECTIVES AND RIGHTS IN VICTIMIZATION  3 Credit Hours
(Slashed with CRIM 57004) An analysis of the legal rights of victims of crime at state and federal levels as well as a review of how these laws relate to the treatment of victims within the criminal and juvenile justice systems, with particular focus on the courts and correctional institutions. Relevant legislative and Constitutional changes and challenges are also addressed.
Prerequisite: CRIM 12000 and CRIM 27311; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 47095  SPECIAL TOPICS IN CRIMINOLOGY AND JUSTICE STUDIES  3 Credit Hours
(Repeatable for credit) Intensive analysis of issues significant and current in the field which are not covered in regular courses.
Prerequisite: CRIM 12000 and 26704.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 47211  COURT FUNCTIONS  3 Credit Hours
Analysis of the structure, functions and critical role of incumbents in the criminal court.
Prerequisite: CRIM 12000 and 26704.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 47311  COMPARATIVE JUSTICE SYSTEMS  3 Credit Hours
A systematic comparison of the developmental backgrounds, structure and functioning of the major systems of justice in the modern world.
Prerequisite: CRIM 12000 and CRIM 26704.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 55093  VARIABLE TITLE WORKSHOP IN CRIMINOLOGY AND JUSTICE STUDIES  1-3 Credit Hours
(Repeatable for credit) Classroom presentations and field study focused on professional and disciplinary concerns. Specific content varies with workshop topic.
Prerequisite: Special approval and graduate standing.
Schedule Type: Workshop
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

CRIM 56701  CRIME, JUSTICE AND SUBSTANCE ABUSE  3 Credit Hours
(Slashed with CRIM 46701) Examination of the relationship between drug and alcohol abuse and criminal behavior. Efforts to regulate, control, prevent and treat chemical abuse offenders are considered.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 56705  COMMUNITY CORRECTIONS  3 Credit Hours
(Slashed with CRIM 46705) Study of community-based correctional supervision and treatment, examining probation, parole, and related residential programs. Topics covered include the history and organization of, and best practices in, community corrections.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 56708  TREATMENT METHODS  3 Credit Hours
(Slashed with CRIM 46708) Addresses institutional- and community-based treatment of offenders. Coverage includes the theoretical foundations of treatment and common intervention strategies, including evidence-based practices.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 56709  EMERGING TRENDS AND ISSUES IN CORRECTIONS  3 Credit Hours
Explores recent developments pertinent to the field of corrections, including sentencing trends, innovative practices, and legal developments. Analysis of emerging strategies for offender treatment, reentry, and institutional and community safety.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 56800  INTELLIGENCE AND NATIONAL SECURITY  3 Credit Hours
(Slashed with CRIM 46800) Addresses topics related to global security, including economic and industrial espionage, trade secret thefts, law and technology and cyber-crimes. Implications of industrial espionage and intellectual property theft for the global economy, national and international security, and the control and regulation of white collar crime. Foundational exploration of Intelligence and Counterintelligence (IC) as concepts, processes and careers.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CRIM 56801  HOMELAND SECURITY  3 Credit Hours  
(Slashed with CRIM 46801) Explores the nexus between terrorism and homeland security as it relates to homeland security strategy, assessment, evaluation, preparation, responses, and recovery actions and mechanisms relating to terrorism and homeland security. There is a focus on the importance of coordination of various assessments, plans, strategies and implementation of plans of action involving local, county, state, federal and international responses pertaining to terrorism and homeland security.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 56802  TERRORISM AND COUNTERTERRORISM  3 Credit Hours  
(Slashed with CRIM 46802) Examines the origins and evolution of modern terrorism, challenges posed by terrorist groups to states and to the international system, and strategies employed to confront and combat terrorism. Assesses a wide variety of terrorist organizations, and explores the psychological, socioeconomic, political, and religious causes of terrorist violence past and present. Also analyzes the strengths and weaknesses of various counterterrorism efforts.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 56803  INFORMATION AND CYBER SECURITY  3 Credit Hours  
(Slashed with CRIM 46803) Vulnerabilities of computer networks and techniques for protecting networks and data are discussed. Basic elements of symmetric and asymmetric cryptography, secure e-commerce, involving secure transmission, authentication, digital signatures, digital certificates and Public Key Infrastructure (PKI) are presented. Provides students with an introduction to the field of information security risk assessment. Incorporates cases in risk analysis derived from actual state and law enforcement agencies or private firms.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 56904  ISSUES IN POLICE WORK  3 Credit Hours  
(Slashed with CRIM 46904) Analysis of police practices and functions at the municipal, state and federal level. Examination of emerging trends and issues in policing. Review of changes in police department policies and research on problem-solving in policing.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 57002  HUMAN SERVICE AGENCIES AND THE LAW  3 Credit Hours  
(Slashed with CRIM 47002) An overview of the law as it pertains to human service agencies, as well as on the relationships between such agencies and the criminal and juvenile justice systems. Focused attention is given to agencies that closely connect with vulnerable populations (such as children and the poor) and those that work closely with policing and corrections (such as mental health agencies and halfway houses).  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 57003  RESTORATIVE JUSTICE AND VICTIM ASSISTANCE  3 Credit Hours  
(Slashed with CRIM 47003) An inquiry into the theories and research in restorative justice, as well as an assessment of victim assistance protocols and programs. Examines restorative justice and victim assistance initiatives that provide an alternative framework for dealing with crime that places victim needs in a primary position, while addressing legal concerns and interagency differences.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 57004  LEGAL PERSPECTIVES AND RIGHTS IN VICTIMIZATION  3 Credit Hours  
(Slashed with CRIM 47004) An analysis of the legal rights of victims of crime at state and federal levels as well as a review of how these laws relate to the treatment of victims within the criminal and juvenile justice systems, with particular focus on the courts and correctional institutions. Relevant legislative and Constitutional changes and challenges are also addressed.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  

CRIM 57095  SPECIAL TOPICS IN CRIMINOLOGY AND JUSTICE STUDIES  1-3 Credit Hours  
(Repeatable for credit) Intensive analysis of issues significant and current in the field which are not covered in regular courses.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Lecture  
Contact Hours: 1-3 lecture  
Grade Mode: Standard Letter  

CRIM 66199  THESIS I  2-6 Credit Hours  
(Repeatable for credit) Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.  
Prerequisite: Graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2-6 other  
Grade Mode: Satisfactory/ Unsatisfactory-IP  

CRIM 66299  THESIS II  2 Credit Hours  
Thesis students must continue to register for each semester until all degree requirements are met. Satisfactory/unsatisfactory (S/U) graded. In-progress (IP) mark permissible.  
Prerequisite: CRIM 66199 and graduate standing.  
Schedule Type: Masters Thesis  
Contact Hours: 2 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  

CRIM 66796  LAW, JUSTICE AND SOCIETY  3 Credit Hours  
Review of the origins, structure and functioning of law in relation to social context and process. Critical assessment of the use of law and legal institutions to address societal problems. Examination of the role that social inequality plays in crime and justice, nationally and internationally.  
Prerequisite: graduate standing.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter
CRIM 66763  THEORIES OF CRIME AND DELINQUENCY  3 Credit Hours
Study of the nature and causes of criminal and delinquent behavior, with an emphasis on major contemporary criminological theories. Includes critical analysis of relevant research and policy implications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66766  INSTITUTIONAL CORRECTIONS  3 Credit Hours
Explores the historical development and theoretical foundations of the correctional institution, including jails and prisons, the structure of institutions and operational challenges. Incorporates overview of contemporary issues and the correctional institution as a social system.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66767  JUSTICE ADMINISTRATION  3 Credit Hours
Introduces students to theories of organization and administration and their application to the administration of justice institutions. The course is divided into two sections: (1) theories of administration and organization and (2) application of theories to management of police functions. Includes use of theories to diagnose and reform justice institutions.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66768  RESEARCH METHODS IN CRIMINOLOGY AND CRIMINAL JUSTICE  3 Credit Hours
Examines the methodology of research designs and techniques used in criminology and criminal justice. Provides students with an overview of the logic of research in order to critically evaluate research in the field. Focuses on the specific skills needed to conduct basic and evaluation research.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66770  JUSTICE INSTITUTIONS  3 Credit Hours
Introduces students to the analysis of U.S. criminal justice institutions. Examines methods of institutional analysis, theories of administration, and the application of these theories to the understanding of police, courts and corrections.
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66772  VICTIMOLOGY  3 Credit Hours
Exploration of victimology, the scientific study of the physical, emotional, and financial harm people suffer because of criminal activities. Examination of the impact of crime on victims, measuring crime through victimization, patterns of victim-offender relationships, and the role of the victim within the criminal and juvenile justice systems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66773  CONTEMPORARY POLICING  3 Credit Hours
The fundamental question of this course is how to create the most effective police organization. This course examines the various theories and research on police service. Examines the nature of coercion in human interaction and the legitimate use of force by police. Study of the various philosophies and research on the Standard Model of policing, Community-Oriented Policing, and Problem-Oriented Policing. Reviews theories of police administration and the research corroborating or refuting the validity of those theories.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CRIM 66796  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) Intensive study of a subject which the student cannot normally pursue in a regularly scheduled course. Individual investigation topic must be approved by instructor and graduate coordinator.
Prerequisite: Special approval and graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter

CRIM 66875  PROSEMINAR CAPSTONE: ISSUES IN CONTEMPORARY JUSTICE  3 Credit Hours
Capstone experience required of all MA students. An analysis of current issues in the legislative, policing, judicial, and correctional components of the justice system. Students synthesize knowledge through the completion of an approved, written project that is analytical and research-based.
Prerequisite: CRIM 56705 or CRIM 66766; and CRIM 56800 and CRIM 66761 and CRIM 66763 and CRIM 66768 and CRIM 66770 and CRIM 66772 and Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

Sociology (SOC)
SOC 12050  INTRODUCTION TO SOCIOLOGY (DIVD) (KSS)  3 Credit Hours
Scientific approach to understanding social interaction, institutions and organization.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences
SOC 22100  SOCIOLOGICAL ANALYSIS  3 Credit Hours
Fundamental study of sociological analysis designed to provide awareness of theoretical and methodological concepts necessary in developing sociological perspective.
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 22570  UNDERSTANDING DIFFERENCES AND INEQUALITY  3 Credit Hours
An introduction to the cultural and structural factors creating and sustaining educational, economic and political inequality by race, ethnicity, gender, class and sexual orientation with an emphasis on issues of poverty and immigration.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Social and Behavioral Sciences

SOC 22778  SOCIAL PROBLEMS (DIVG) (KSS)  3 Credit Hours
Contemporary American and global social problems and issues are analyzed from sociological perspectives. Several cases are used to illustrate the emergence, development and decline of problems in social context.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Kent Core Social Sciences, TAG Social and Behavioral Sciences, Transfer Module Social Sciences

SOC 24011  INTERPERSONAL RELATIONSHIPS AND FAMILIES  3 Credit Hours
(Equivalent to HDFS 24011) Exploration of the sociological nature of families across the lifespan, focusing on structure, diversity and life course processes such as dating, mate selection, cohabitation, marriage, parenthood, divorce, remarriage, singlehood, widowhood, parent-child interactions, sexual orientation, inequality and difference.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Social and Behavioral Sciences

SOC 30152  PRACTICUM IN SOCIOLOGY (ELR)  1-3 Credit Hours
(Repeatable for credit) Individual research experience in sociology.
Prerequisite: SOC 32210 and junior standing.
Schedule Type: Practicum or Internship
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory-IP
Attributes: Experiential Learning Requirement

SOC 32210  RESEARCHING SOCIETY (ELR) (WIC)  3 Credit Hours
Survey of methods and techniques of research; research design and data gathering instruments; qualitative and quantitative analysis.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement, Writing Intensive Course

SOC 32220  DATA ANALYSIS  3 Credit Hours
The use of quantitative methods in the analysis of data from social research. Emphasis on descriptive statistics.
Prerequisite: SOC 12050.
Corequisite: SOC 32221.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 32221  DATA ANALYSIS LABORATORY  1 Credit Hour
Analysis of sociological data utilizing statistical and electronic data processing tools.
Corequisite: SOC 32220.
Schedule Type: Laboratory
Contact Hours: 3 lab
Grade Mode: Standard Letter

SOC 32400  INDIVIDUAL AND SOCIETY  3 Credit Hours
Foundations of social psychology; process of socialization; development of social and personal identities; small group and collective behavior; theories of deviance.
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 32510  SOCIOLOGY OF WORK  3 Credit Hours
Consideration of world of work across time and cultures with special emphasis on American society. Impact of work on individuals and other social institutions.
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 32560  SOCIOLOGY OF FAMILIES (DIVD)  3 Credit Hours
Social history of the American family. Examination of how race, ethnicity, sexual orientation, class, gender and age contribute to variation in the experience and structure of family life in the U.S.
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

SOC 32565  SOCIOLOGY OF SEXUALITIES (DIVD)  3 Credit Hours
Examination of the social production, meaning, and consequences of identities, practices, and inequalities related to sexualities, gender identity and gender expression.
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Grade Mode</th>
<th>Contact Hours</th>
<th>Schedule Type</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>SOC 32569</td>
<td>MINORITIES IN THE UNITED STATES (DIVD)</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 other</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td></td>
<td>Considers the nature and significance of minority groups and majority minority relations in the United States. Reviews experiences of racial and ethnic minorities, religious minorities, women, sexual minorities, the elderly and differently abled Americans.</td>
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<td>Prerequisite: SOC 12050.</td>
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<tr>
<td>SOC 32570</td>
<td>INEQUALITY IN SOCIETIES (DIVD)</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
<td>SOC 12050. Junior standing; and sociology (SOC) major and 2.500 grade point average and special approval.</td>
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<td></td>
<td>Sociological analysis of stratification and inequality in societies, and the social structures that produce and maintain them. Particular emphasis on the intersections of race, class and gender in American society.</td>
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<td>SOC 32673</td>
<td>URBAN SOCIOLOGY</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 lecture</td>
<td>Lecture</td>
<td>SOC 12050.</td>
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<td>Examination of the history and development of urban areas, urban sociological theories and selected topics such as poverty, immigration, race relations and urban planning.</td>
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<td>SOC 32762</td>
<td>DEVIANT BEHAVIOR</td>
<td>3</td>
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<td>3 lecture</td>
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<td>SOC 12050.</td>
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<td></td>
<td>Overview of classical and contemporary theories and perspectives on the nature, causes and societal management of deviant behavior. Application of theories and perspectives to modern and historical social problems, methods of punishment and policy trends in social control.</td>
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<td>Prerequisite: SOC 12050.</td>
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<tr>
<td>SOC 42010</td>
<td>DEATH AND DYING</td>
<td>3</td>
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<td>3 lecture</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td></td>
<td>Theoretical perspectives and research in human death and dying. Emphasis on applied concerns in medical and helping professions. Topics include social death, death as taboo, medicalization and rationalization of death and dying and disenfranchised grief.</td>
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<td>Prerequisite: SOC 12050 and junior standing.</td>
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<td>SOC 42093</td>
<td>VARIABLE TITLE WORKSHOP IN SOCIOLOGY</td>
<td>1-6</td>
<td>Standard Letter</td>
<td>1-6 other</td>
<td>Workshop</td>
<td>Permission.</td>
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<td>(Repeatable for credit) Concentrates on professional or disciplinary concerns. Specific content to vary according to needs of client groups. S u/graded.</td>
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<td>Prerequisite: Permission.</td>
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<td>Contact Hours: 1-6 other</td>
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<td>Grade Mode: Satisfactory/Unsatisfactory</td>
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<td>SOC 42095</td>
<td>SPECIAL TOPICS IN SOCIOLOGY</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 credit hours</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td>(Repeatable for credit) Offered irregularly when unusual resources and/or opportunities permit. Topic announced when scheduled. Repeatable for a total of 12 hours for majors.</td>
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<td>SOC 42126</td>
<td>SOCIOLOGICAL THEORIES</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 credit hours</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td></td>
<td>An examination of classical, modern and postmodern approaches to social theory.</td>
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<td>Prerequisite: SOC 12050 and junior standing.</td>
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<td>SOC 42224</td>
<td>INTERPRETING SOCIAL DATA</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 credit hours</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td>Emphasis on organizing, analyzing and interpreting actual sociological research data making use of basic descriptive and inferential statistics and computer programs.</td>
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<td>Prerequisite: SOC 32210 or SOC 32220; and special approval.</td>
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<td>Schedule Type: Combined Lecture and Lab</td>
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<td>Contact Hours: 3 other</td>
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<td>Grade Mode: Standard Letter</td>
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<td>SOC 42315</td>
<td>SOCIOLOGY OF GENDER (DIVD)</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 credit hours</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td>An examination of the institutions, institutional linkages, and social processes that contribute to the construction and maintenance of gender and gender inequality.</td>
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<td>Prerequisite: SOC 12050 and junior standing.</td>
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<td>Schedule Type: Lecture</td>
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<td>Attributes: Diversity Domestic</td>
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<tr>
<td>SOC 42359</td>
<td>SOCIAL MOVEMENTS</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 credit hours</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td>(Slashed with SOC 52359) Investigation of various movements for social change. Examines the origins, developmental characteristics and the purposes of classic and contemporary movements.</td>
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<td>Prerequisite: SOC 12050 and junior standing.</td>
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<td>Schedule Type: Lecture</td>
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<td>SOC 42400</td>
<td>SELF AND IDENTITY</td>
<td>3</td>
<td>Standard Letter</td>
<td>3 credit hours</td>
<td>Lecture</td>
<td>SOC 12050 and junior standing.</td>
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<td>Examines theories and research on the origin and behavioral consequences of identities, self-concept and self-esteem; also examines the relationships between identities and emotions and between self-concept and mental health.</td>
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<td>Prerequisite: SOC 12050 and junior standing.</td>
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SOC 42421 CHILDHOOD IN SOCIETY 3 Credit Hours
How socio-historical circumstances shape the perception and experience of childhood as a distinct life stage. The process of childhood socialization in Western societies particularly the U.S. An exploration of the distinct role of socializing agents-parents and siblings, school, peers and media.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42478 ADOLESCENCE IN SOCIETY 3 Credit Hours
Consideration of the social, cultural and historical forces that shape the experience of this period of the life cycle. Includes examination of gender, class, and race differences in adolescence the significance of youth movements with an emphasis on music as a dominant expression of youth culture.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42558 WEALTH, POVERTY AND POWER 3 Credit Hours
Sociological examination of economic stratification, focuses on the translation of class into power via politics, education and collective struggle.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42559 CULTURE AND SOCIETY 3 Credit Hours
Overview of the sociological analysis of culture, popular culture and the media. Includes examination of key theoretical perspectives, the production and consumption of culture, culture and inequality, and other current issues in the sociological study of culture.
Prerequisite: SOC 12050 and sophomore standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42560 SOCIOLOGY OF FOOD 3 Credit Hours
(Cross-listed with SOC 52560) Food is essential, but like every other aspect of our lives the meaning of food and the experience of its preparation and consumption are socially determined. In this course we'll explore the social dimensions of food consumption and production. We will consider the following questions and answer them by developing an understanding of sociological concepts and theories: What do our meals reveal about us — about our history, culture, our gender and race and ethnicity, socio-economic status, religious beliefs, and our family life? How does food consumption differ in different societies? How do the media and corporations influence our food choices? What do food mean symbolize and in what ways are these meanings manipulated and why? How is food production carried out in different contexts and what can we learn about the social organization of work from studying food production? How does what we eat contribute to local and global environmental problems?
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42561 SOCIOLOGY OF RELIGION 3 Credit Hours
Social context of religious ideologies and structures with special reference to religion in America.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42562 SOCIOLOGY OF MENTAL ILLNESS 3 Credit Hours
A sociology of mental health and illness; focuses on how social factors influence and are influenced by mental health status; topics include definition and measurement, social distribution, social control of mental illness, societal reaction and media coverage.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42563 SOCIOLOGY OF HEALTH AND HEALTH CARE 3 Credit Hours
Sociological analysis of health and illness behavior, utilization of health care professions and the organizational community and societal systems which deal with health and illness.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42564 BUREAUCRATIC ORGANIZATIONS 3 Credit Hours
Analysis of structure and functioning of complex organizations in their cultural context.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42565 RACE AND ETHNIC STUDIES (DIVD) 3 Credit Hours
Sociological principles underlying racial and ethnic relations in the United States; emphasis on social factors of prejudice, discrimination and assimilation affecting all groups.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 42566 FAMILIES IN A GLOBAL PERSPECTIVE (DIVG) 3 Credit Hours
Cultural variability with respect to courtship, family relationships, child rearing, and other family patterns in societies across different continents including Africa, Asia, and South America.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

SOC 42567 SOCIOLOGY OF FAMILY VIOLENCE 3 Credit Hours
Sociological analysis of theories, research and social policy concerning family violence, child abuse and neglect, spouse abuse, elderly abuse, marital rape, sexual abuse of children.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global
SOC 42879 AGING IN SOCIETY (DIVD) 3 Credit Hours
Analysis of demographic, sociological and socio-psychological dimensions of aging.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Domestic

SOC 43200 SOCIAL STRUCTURE AND INDIVIDUAL LIVES 3 Credit Hours
Examines conceptualizations for and evidence concerning the effects of social structure on various dimensions of individual lives.
Prerequisite: SOC 12050 and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 44010 SOCIOLOGICAL PERSPECTIVES IN MEDICINE 3 Credit Hours
(Slashed with SOC 54010) Sociological perspectives of medicine focusing on community health and public health prevention efforts, rather than traditional medical curricula. Students employ sociological theories and methods to develop community interventions directed at preventing contemporary health problems.
Prerequisite: SOC 12050.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-IP

SOC 52010 DEATH AND DYING 3 Credit Hours
Theoretical perspectives and research in human death and dying. Emphasis on applied concerns in medical and helping professions. Topics include social death, death as taboo, medicalization and rationalization of death and dying, and disenfranchised grief.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52126 SOCIOLOGICAL THEORIES 3 Credit Hours
An examination of classical, modern and post-modern approaches to social theory.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52315 SOCIOLOGY OF GENDER 3 Credit Hours
An examination of the institutions, institutional linkages, and social processes that contribute to the construction and maintenance of gender and gender inequality.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52558 WEALTH, POVERTY AND POWER 3 Credit Hours
Sociological examination of economic stratification in the United States; focuses on the translation of class into power via politics, education and collective struggle.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52560 SOCIOLOGY OF FOOD 3 Credit Hours
(Cross-listed with SOC 42560) Food is essential, but like every other aspect of our lives the meaning of food and the experience of its preparation and consumption are socially determined. In this course we’ll explore the social dimensions of food consumption and production. We will consider the following questions and answer them by developing an understanding of sociological concepts and theories: What do our meals reveal about us – about our history, culture, our gender and race-ethnicity, socio-economic status, religious beliefs, and our family life? How does food consumption differ in different societies? How do the media and corporations influence our food choices? What does food mean symbolize and in what ways are these meanings manipulated and why? How is food production carried out in different contexts and what can we learn about the social organization of work from studying food production? How does what we eat contribute to local and global environmental problems?
Prerequisite: graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52656 SOCIOLOGY OF RELIGION 3 Credit Hours
Social context of religions and their ideologies and structures with special reference to religion in America.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52421 CHILDHOOD IN SOCIETY 3 Credit Hours
How socio-historical circumstances shape the perception and experience of childhood as a distinct life stage. The process of childhood socialization in Western societies particularly the U.S. An exploration of the distinct role of socializing agents- parents and siblings, school, peers and media.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52478 ADOLESCENCE IN SOCIETY 3 Credit Hours
Consideration of the social, cultural and historical forces that shape the experience of this period of the life cycle. Includes examination of gender, class and race differences in adolescence, the significance of youth movements with an emphasis on music as a dominant expression of youth culture.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52559 SOCIAL MOVEMENTS 3 Credit Hours
(Slashed with SOC 42359) Investigation of various movements for social change. Examines the origins, developmental characteristics and the purposes of classic and contemporary movements.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 52563 SOCIOLOGY OF HEALTH AND HEALTH CARE  3 Credit Hours
Sociological analysis of health and illness behavior, utilization of health care, professions, and the organizational, community, and societal systems that deal with health and illness.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52564 BUREAUCRATIC ORGANIZATIONS  3 Credit Hours
Analysis of structure and functioning of complex organizations in their cultural context.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52568 RACE AND ETHNIC STUDIES  3 Credit Hours
Sociological principles underlying racial and ethnic relations in the United States; emphasis on social factors of prejudice, discrimination and assimilation affecting all groups.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52577 SOCIOLOGY OF FAMILY VIOLENCE  3 Credit Hours
Sociological analysis of theories, research and social policy concerning family violence, child abuse and neglect, spouse abuse, elderly abuse, marital rape, sexual abuse of children.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 52879 AGING IN SOCIETY  3 Credit Hours
Analysis of demographic, sociological and sociopsychological dimensions of aging.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 54010 SOCIOLOGICAL PERSPECTIVES IN MEDICINE  3 Credit Hours
(Slashed with SOC 44010) Sociological perspectives of medicine focusing on community health and public health prevention efforts, rather than traditional medical curricula. Students employ sociological theories and methods to develop community interventions directed at preventing contemporary health problems.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter-IP

SOC 61003 CRIMINOLOGICAL THEORY  3 Credit Hours
(Slashed with SOC 71003) Examines the major theories in criminology that have been used to explain criminal behavior. This course includes analysis of empirical tests, applications of the theories, and social policy implications.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 61004 SOCIOLOGY OF CORRECTIONS  3 Credit Hours
(Slashed with SOC 71004) Analyzes the correctional institution as a social system: formal structure and informal dynamics. It covers problems and programs found in community corrections as well as the institutional setting. It examines approaches to correctional supervision and treatment through probation, parole, and community residential treatment.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 61005 JUVENILE DELINQUENCY  3 Credit Hours
(Slashed with SOC 71005) Provides an analysis of the issues and current research related to juvenile delinquency and the juvenile justice process.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62002 PROFESSIONAL AND ETHICAL ISSUES IN SOCIOLOGY  3 Credit Hours
Introduction to professional and ethical issues in the field of sociology including the logic of inquiry, developing effective approaches to independent learning and research, the human subjects review process and plagiarism. Akron 3850:628.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62093 VARIABLE TITLE WORKSHOP IN SOCIOLOGY  1-6 Credit Hours
(Repeatable for credit) Concentrates on professional or disciplinary concerns. Specific content to vary according to needs of client groups.
Prerequisite: Graduate standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

SOC 62100 EARLY SOCIOLOGICAL THEORY  3 Credit Hours
An examination of the contributions by pre-1930 social thinkers to contemporary sociological theory. Akron 3850:722.
Prerequisite: SOC 4/52126 and graduate standing in sociology.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

SOC 62105 CONTEMPORARY SOCIOLOGICAL THOUGHT  3 Credit Hours
Covers major contemporary theories and theorists. Emphasis on functionalism, conflict, exchange, interactionalism and systems theory. Neofunctionalism, neo-Marxism, structuration theory and other recent trends are treated. Akron 3850:723.
Prerequisite: SOC 62100 or SOC 72100; and graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 62199 THESIS I 2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Graduate standing in sociology and special approval.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

SOC 62211 QUANTITATIVE METHODS IN SOCIOLOGY 4 Credit Hours
Introduction to the use of quantitative research methods for analyzing sociological issues. Includes instruction on each step in the process of empirically verifying a theoretical question, from conceptualization to analysis. Akron 3850:603.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 62217 MULTIVARIATE TECHNIQUES IN SOCIOLOGY 4 Credit Hours
Advanced multivariate techniques and methodological problems in the analysis of sociological data. Topics include non-experimental causal models and path analysis. Akron 3850:706.
Prerequisite: SOC 32220 and graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 62218 ADVANCED DATA ANALYSIS 4 Credit Hours
Critical examination of data analytic techniques having particular relevance to research problems in sociology with particular emphasis on multi-variate inferential statistics. Akron 3850:709.
Prerequisite: SOC 6/72217 and graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 62219 QUALITATIVE METHODS IN SOCIOLOGY 4 Credit Hours
Study of qualitative methods including interviewing, observation, use of personal documents, archival data and special problems of recording and analyzing qualitative data. Akron 3850:714.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 62220 SURVEY RESEARCH METHODS 3 Credit Hours
An in-depth study of the design and administration of social surveys. Akron 3850:711.
Prerequisite: Graduate standing in sociology.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

SOC 62221 ADVANCED QUALITATIVE METHODS IN SOCIOLOGY 3 Credit Hours
(Slashed with SOC 72221) Provides students the opportunity to conceive of, design, and carry out their own qualitative research projects. The course will also survey readings that are exemplars of high quality and rigorous qualitative research. Topics such as writing, analysis, and ethics will be covered as graduate students develop and move forward on their own original research. Students must be actively engaged in a qualitative research project to enroll in the course.
Prerequisite: SOC 62219; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62299 THESIS II 2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met.
Prerequisite: SOC 62199; and graduate standing in sociology; and special approval.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

SOC 62323 SOCIOLOGY OF HEALTH AND ILLNESS 3 Credit Hours
(Slashed with SOC 72323) Introduction to medical sociology. Topics include health care professions, patient-provider interaction, caregivers, the illness experience, race, ethnicity, gender, socio-economic status, and health, and global health.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62326 SOCIOLOGY OF MENTAL HEALTH AND MENTAL ILLNESS 3 Credit Hours
Sociological examination of the social processes that affect mental health, frame cultural ideas of normality and illness, and define clinical pathology. Akron 3850: 728.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62328 STRATIFICATION AND HEALTH 3 Credit Hours
Race, social class and gender differences in physical and mental health status, help seeking behavior and health care. Race, class and gender stratification of health care workers. Akron 3850:726.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62330 COMPARATIVE HEALTH CARE SYSTEMS 3 Credit Hours
(Slashed with SOC 72330) Comparative analysis of health care systems across the globe. Covers historical development and political economy of health care systems, variation in delivery and access to care, and variation in health outcomes.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 62332 SOCIAL CONTROL OF MENTAL ILLNESS 3 Credit Hours
(Slashed with SOC 72332) Introduction to the sociological perspective regarding social control and mental illness. Topics include the history of mental illness and the asylum, the stratification of mental illness diagnosis and treatment by race, ethnicity, gender, and socio-economic status, and stigma and psychiatric labeling. Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62430 SOCIAL PSYCHOLOGY 3 Credit Hours
Examination of social psychological theory and research, both classic and contemporary. Provides students with background and working knowledge of social psychological aspects of social phenomena. Akron 3850:631.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62433 SOCIAL STRUCTURE AND PERSONALITY 3 Credit Hours
Examination of contemporary theory and research on linkages between personality and society. Emphasis will be on the dynamics of those linkages and their effects on both individuals and social structures. Akron 3850:634.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62435 SOCIOLOGY OF SENTIMENTS AND EMOTIONS 3 Credit Hours
A sociological perspective is employed to analyze and understand the production, distribution and utilization of socially created sentiments and emotions.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62437 STRUCTURAL SOCIAL PSYCHOLOGY 3 Credit Hours
(Slashed with SOC 72437) In-depth introduction to structural social psychology, a set of theoretical and methodological approaches and tools that focuses on the development and testing of multi-level, micro-macro accounts of human social interactions, often through the use of formal theorizing and mathematical modeling. The course will provide an overview of the theoretical and research empirical methods that are most associated with structural social psychology; cover the main substantive topics in the area; and then conclude with a brief overview of current issues, debates, and recent interdisciplinary advances.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62439 SELF AND IDENTITY 3 Credit Hours
(Slashed with SOC 72439) Examines theories and research on the origins of and on behavioral and social consequences of identities, self-concept, and self-esteem; also examines the relationships between identities and emotions and between self-concept and mental health and well-being.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62542 SOCIOLOGY OF WORK 3 Credit Hours
Examination of work as behavioral phenomenon in human societies; contrasts with nonwork and leisure significance of occupations, professions and work types in organization of work. Akron 3850:649.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62546 SOCIAL INEQUALITY 3 Credit Hours
An overview of social inequalities -definitions, causes, identities, structures and consequences. The focus is on social class with attention to intersecting dimensions of inequality. Akron 3850:646.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62566 SOCIOLOGY OF GENDER 3 Credit Hours
Examination of theories and research on gender origins, characteristics and changes. Emphasizes recent empirical research on gender role patterns and processes in various industrial societies. Akron 3850:639.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62760 DEVIANCE 3 Credit Hours
Examination of nature, types and controls of deviance; analysis of conceptual levels, theoretical contributions, processes in social labeling and self-labeling, case studies, social consequences and problems. Akron 3850: 663.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62870 SOCIOLOGY OF RACE AND ETHNICITY 3 Credit Hours
A study of the theories, models, research approaches and substantive areas that constitute the sociology of race and ethnic origins. Akron 3850:651.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62872 SOCIAL PSYCHOLOGY AND INEQUALITY 3 Credit Hours
(Slashed with SOC 72872) Introduces students to sociological social psychological work that examines the reproduction of inequality. Specifically, the class will focus on “generic social processes” in how individuals, through interaction, are complicit or resistant in the reproduction of inequality through processes such as: identity work, collective identity work, emotion work, othering, and boundary maintenance. Mechanisms for change will also be considered.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 6277  SOCIOLGY OF AGING AND THE LIFE COURSE  3 Credit Hours
(Slashed with SOC 7277) Study of the sociology of aging and the life course, covering the major stages of young adulthood, mid-life, and later life. Topics include demography of aging, transition to adulthood, educational attainment, romantic relationships and cohabitation, marriage, parenting, work and retirement, theories of aging, aging and social policy, neighborhoods and aging, later life living arrangements, and death and dying.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62894 COLLEGE TEACHING OF SOCIOLOGY  3 Credit Hours
(Repeatable for credit) Preparation for college teaching. Maximum of 3 hours applicable toward master's degree requirements (with departmental approval). Hours do not count toward the doctoral degree. Akron 3850:700.
Prerequisite: Graduate standing in sociology.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

SOC 62895 SPECIAL TOPICS  3 Credit Hours
(Repeatable for credit) Offered irregularly when unusual resources and/or opportunities permit. Topic will be announced when scheduled.
Prerequisite: Graduate standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 62896 INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Slashed with SOC 72896) (Repeatable for credit) Intensive pursuit of a subject matter beyond normal course coverage with the possibility of associated research. No more than 6 credits in total across Individual Investigation (SOC 62896) and Research (SOC 62898) count toward the doctoral Master's degree.
Prerequisite: Sociology (SOC) major and Graduate standing and special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

SOC 62898 RESEARCH  1-3 Credit Hours
(Slashed with SOC 72898) (Repeatable for credit) Pursuit of research interests which can include the student's project and or a faculty member's project. No more than 6 credits in total across Research (SOC 62898) and Individual Investigation (SOC 62896) count toward the doctoral Master's degree.
Prerequisite: Sociology (SOC) major and Graduate standing and special approval.
Schedule Type: Research
Contact Hours: 1-3 other
Grade Mode: Satisfactory/Unsatisfactory

SOC 71003 CRIMINOLOGICAL THEORY  3 Credit Hours
(Slashed with SOC 61003) Examines the major theories in criminology that have been used to explain criminal behavior. This course includes analysis of empirical tests, applications of the theories, and social policy implications.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 71004 SOCIOLGY OF CORRECTIONS  3 Credit Hours
(Slashed with SOC 61004) Analyzes the correctional institution as a social system: formal structure and informal dynamics. It covers problems and programs found in community corrections as well as the institutional setting. It examines approaches to correctional supervision and treatment through probation, parole, and community residential treatment.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 71005 JUVENILE DELINQUENCY  3 Credit Hours
(Slashed with SOC 61005) Provides an analysis of the issues and current research related to juvenile delinquency and the juvenile justice process.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72002 PROFESSIONAL AND ETHICAL ISSUES IN SOCIOLOGY  3 Credit Hours
Introduction to professional and ethical issues in the field of sociology including the logic of inquiry, developing effective approaches to independent learning and research, the human subjects review process and plagiarism. Akron 3850:628.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72093 VARIABLE TITLE WORKSHOP IN SOCIOLOGY  1-6 Credit Hours
(Repeatable for credit) Concentrates on professional or disciplinary concerns. Specific content to vary according to needs of client groups.
Prerequisite: Doctoral standing.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

SOC 72100 EARLY SOCIOLOGICAL THEORY  3 Credit Hours
An examination of the contributions by pre-1930 social thinkers to contemporary sociological theory. Akron 3850:722.
Prerequisite: SOC 4/52126 and doctoral standing in sociology.
Schedule Type: Seminar
Contact Hours: 3 other
Grade Mode: Standard Letter

SOC 72105 CONTEMPORARY SOCIOLOGICAL THOUGHT  3 Credit Hours
Covers major contemporary theories and theorists. Emphasis on functionalism, conflict, exchange, interactionalism and systems theory. Neofunctionalism, neo-Marxism, structuration theory and other recent trends are treated. Akron 3850:723.
Prerequisite: SOC 62100 or SOC 72100; and doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 72211 QUANTITATIVE METHODS IN SOCIOLOGY 4 Credit Hours
Introduction to the use of quantitative research methods for analyzing sociological issues. Includes instruction on each step in the process of empirically verifying a theoretical question, from conceptualization to analysis. Akron 3850:603.
Prerequisite: doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 72217 MULTIVARIATE TECHNIQUES IN SOCIOLOGY 4 Credit Hours
Advanced multivariate techniques and methodological problems in the analysis of sociological data. Topics include non-experimental causal models and path analysis. Akron 3850:706.
Prerequisite: SOC 62220 and doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 72219 QUALITATIVE METHODS IN SOCIOLOGY 4 Credit Hours
Study of qualitative methods including interviewing, observation, use of personal documents, archival data, and special problems of recording and analyzing qualitative data. Akron 3850:714.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

SOC 72220 SURVEY RESEARCH METHODS 3 Credit Hours
An in-depth study of the design and administration of social surveys. Akron 3850:711.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

SOC 72221 ADVANCED QUALITATIVE METHODS IN SOCIOLOGY 3 Credit Hours
(Slashed with SOC 62221) Provides students with the opportunity to conceive of, design and carry out their own qualitative research projects. The course will also survey readings that are exemplars of high quality and rigorous qualitative research. Topics such as writing, analysis, and ethics will be covered as students develop and move forward on their own original research. Students must be actively engaged in a qualitative research project to enroll in the course.
Prerequisite: SOC 72219; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 7223 SOCIOMETRY OF HEALTH AND ILLNESS 3 Credit Hours
(Slashed with SOC 62330) Introduction to medical sociology. Topics include health care professions, patient-provider interaction, caregivers, the illness experience, race, ethnicity, gender, socio-economic status and health, and global health.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 7231 SOCIAL PSYCHOLOGY 3 Credit Hours
(Slashed with SOC 62332) Introduction to the sociological perspective regarding social control and mental illness. Topics include the history of mental illness and the asylum, the stratification of mental illness diagnosis and treatment by race, ethnicity, gender, and socio-economic status, and stigma and psychiatric labeling.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 7232 STRATIFICATION AND HEALTH 3 Credit Hours
Race, social, class and gender differences in physical and mental health status, help seeking behavior and health care. Race, class and gender stratification of health care workers. Akron 3850:726.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 7233 COMPARATIVE HEALTH CARE SYSTEMS 3 Credit Hours
(Slashed with SOC 62330) Comparative analysis of health care systems across the globe. Covers historical development and political economy of health care systems, variation in delivery and access to care, and variation in health outcomes.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 7234 SOCIOLOGY OF HEALTH AND ILLNESS 3 Credit Hours
(Slashed with SOC 62340) Examination of social psychological theory and research, both classic and contemporary. Provides student with background and working knowledge of social psychological aspects of social phenomena. Akron 3850:631.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 7235 SOCIAL PSYCHOLOGY 3 Credit Hours
(Slashed with SOC 62332) Introduction to the sociological perspective regarding social control and mental illness. Topics include the history of mental illness and the asylum, the stratification of mental illness diagnosis and treatment by race, ethnicity, gender, and socio-economic status, and stigma and psychiatric labeling.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 72433 SOCIAL STRUCTURE AND PERSONALITY 3 Credit Hours
Examination of contemporary theory and research on linkages between personality and society. Emphasis will be on the dynamics of those linkages and their effects on both individuals and social structures. Akron 3850:634.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72435 SOCIOLOGY OF SENTIMENTS AND EMOTIONS 3 Credit Hours
A sociological perspective is employed to analyze and understand the production, distribution and utilization of socially created sentiments and emotions.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72437 STRUCTURAL SOCIAL PSYCHOLOGY 3 Credit Hours
(Slashed with SOC 62437) In-depth introduction to structural social psychology, a set of theoretical and methodological approaches and tools that focuses on the development and testing of multi-level, micro-macro accounts of human social interactions, often through the use of formal theorizing and mathematical modeling. The course will provide an overview of the theoretical and research empirical methods that are most associated with structural social psychology; cover the main substantive topics in the area; and then conclude with a brief overview of current issues, debates, and recent interdisciplinary advances.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72439 SELF AND IDENTITY 3 Credit Hours
(Slashed with SOC 62439) Examines theories and research on the origins of and on behavioral and social consequences of identities, self-concept, and self-esteem; also examines the relationships between identities and emotions and between self-concept and mental health and well-being.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72452 SOCIOLOGY OF WORK 3 Credit Hours
Examination of work as behavioral phenomenon in human societies; contrasts with nonwork and leisure; significance of occupations, professions and work types in organization of work. Akron 3850:649.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72546 SOCIAL INEQUALITY 3 Credit Hours
An overview of social inequalities - definitions, causes, identities, structures, and consequences. The focus is on social class with attention to intersecting dimensions of inequality. Akron 3850:646.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72566 SOCIOLOGY OF GENDER 3 Credit Hours
Examination of theories and research on gender origins, characteristics and changes. Emphasizes recent empirical research on gender role patterns and processes in various industrial societies. Akron 3850:639.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72760 DEVIANCE 3 Credit Hours
Examination of nature, types and controls of deviance; analysis of conceptual levels, theoretical contributions, processes in social labeling and self labeling, case studies, social consequences and problems. Akron 3850:663.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72870 SOCIOLOGY OF RACE AND ETHNICITY 3 Credit Hours
An in-depth study of the theories, models, research approaches, and substantive areas that constitute the sociology of race and ethnicity. Akron 3850:651.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72872 SOCIAL PSYCHOLOGY AND INEQUALITY 3 Credit Hours
(Slashed with SOC 62872) Introduces students to sociological social psychology that examines the reproduction of inequality. Specifically, the class will focus on “generic social processes” in how individuals, through interaction, are complicit or resistant in the reproduction of inequality through processes such as: identity work, collective identity work, emotion work, othering, and boundary maintenance. Mechanisms for change will also be considered.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72877 SOCIOLOGY OF AGING AND THE LIFE COURSE 3 Credit Hours
Impact of aging upon individuals and society. Reactions of individuals and society to aging. Akron 3850:678.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

SOC 72894 COLLEGE TEACHING OF SOCIOLOGY 3 Credit Hours
(Repeatable for credit)Preparation for college teaching. Hours do not count toward the doctoral degree. Akron 3850:700.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Combined Lecture and Lab
Contact Hours: 3 other
Grade Mode: Standard Letter

SOC 72895 SPECIAL TOPICS 3 Credit Hours
(Repeatable for credit)Offered irregularly when unusual resources and/or opportunities permit. Topic will be announced when scheduled.
Prerequisite: Doctoral standing in sociology.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
SOC 72896  INDIVIDUAL INVESTIGATION  1-3 Credit Hours  
(Repeated for credit) Intensive pursuit of a subject matter beyond normal course coverage with the possibility of associated research. No more than 6 credits in total across Individual Investigation (SOC 62896 or 72896) and Research (SOC 62898 or 72898) count towards the doctoral degree.  
Prerequisite: Sociology (SOC) major and Doctoral standing and special approval.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Satisfactory/Unsatisfactory

SOC 72898  RESEARCH  1-3 Credit Hours  
(Repeated for credit) Pursuit of research interests which can include the student's project and/or a faculty member's project. No more than 6 credits in total across Research (SOC 62898 or 72898) and Individual Investigation (SOC 62896 or 72896) count towards the doctoral degree.  
Prerequisite: Sociology (SOC) major and Doctoral standing and special approval.  
Schedule Type: Research  
Contact Hours: 1-3 other  
Grade Mode: Satisfactory/Unsatisfactory

SOC 82199  DISSERTATION I  15 Credit Hours  
(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required first of which will be semester in which dissertation is begun and continuing until 30 hours are completed. Akron 3850: 899.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Dissertation  
Contact Hours: 15 other  
Grade Mode: Satisfactory/Unsatisfactory-IP

SOC 82299  DISSERTATION II  15 Credit Hours  
(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.  
Prerequisite: Special approval and doctoral standing.  
Schedule Type: Dissertation  
Contact Hours: 15 other  
Grade Mode: Satisfactory/Unsatisfactory-IP

School of Biomedical Sciences

Biomedical Sciences (BMS)

BMS 40196  INDIVIDUAL INVESTIGATION IN BIOMEDICAL SCIENCES (ELR)  1-3 Credit Hours  
(May be repeated for up to 6 credit hours) Research study under the direction of a BMS faculty mentor. Students majoring in biology (BSCI), biotechnology (BTEC), chemistry (CHEM), integrated life sciences (ILS) and physics (PHY) majors are eligible to enroll in this course, but must have 18 credit hours in their major completed.  
Prerequisite: A minimum overall grade point average of 2.750; and departmental and faculty mentor approvals required.  
Schedule Type: Individual Investigation  
Contact Hours: 3-9 other  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement

BMS 50701  CLINICAL NEUROANATOMY  3 Credit Hours  
(Repeatable for a maximum of 6 credit hours) (Cross-listed with BMS 70701) Directed investigation under supervision of faculty member in biomedical sciences and with prior approval.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Standard Letter

BMS 50702  CURRENT TECHNIQUES IN BEHAVIORAL NEUROSCIENCE  3 Credit Hours  
(Repeatable for credit) This course details current and advanced techniques used in behavioral neuroscience research. Emphasis is placed on understanding the theory behind each technique, and its use in understanding the neural mechanisms of behavior. Detailed protocols for each technique will also be covered.  
Prerequisite: Graduate standing; and special approval.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BMS 50703  NEURAL MECHANISMS OF LEARNING AND MEMORY  3 Credit Hours  
(Repeatable for credit) This course examines the anatomical organization of the human brain, emphasizing functional aspects of various neural systems, neuroimaging, and topics of clinical relevance. A conceptual understanding of central nervous system organization and memorization of specific neural structures and pathways, as well as knowledge of the impact of structure and systems dysfunction is required.  
Prerequisite: Graduate standing; and special approval.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BMS 60120  LABORATORY TECHNIQUES IN BIOMEDICAL SCIENCES  2 Credit Hours  
(Repeatable once for credit) Minimum of two laboratory rotations per semester by arrangement with individual faculty members.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Research  
Contact Hours: 2 other  
Grade Mode: Satisfactory/Unsatisfactory

BMS 60196  INDIVIDUAL INVESTIGATION  1-3 Credit Hours  
(Repeatable for a maximum of 6 credit hours) (Cross-listed with BMS 70196) Directed investigation under supervision of faculty member in biomedical sciences and with prior approval.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Standard Letter-S/U-IP

BMS 70196  INDIVIDUAL INVESTIGATION  1-3 Credit Hours  
(Repeatable for credit) Directed investigation under supervision of faculty member.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Satisfactory/Unsatisfactory

BMS 70296  INDIVIDUAL INVESTIGATION  1-3 Credit Hours  
(Repeatable for credit) Directed investigation under supervision of faculty member.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Satisfactory/Unsatisfactory

BMS 70701  CLINICAL NEUROANATOMY  3 Credit Hours  
(Repeatable for a maximum of 6 credit hours) Directed investigation under supervision of faculty member in biomedical sciences and with prior approval.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Standard Letter

BMS 70702  CURRENT TECHNIQUES IN BEHAVIORAL NEUROSCIENCE  3 Credit Hours  
(Repeatable for credit) This course details current and advanced techniques used in behavioral neuroscience research. Emphasis is placed on understanding the theory behind each technique, and its use in understanding the neural mechanisms of behavior. Detailed protocols for each technique will also be covered.  
Prerequisite: Graduate standing; and special approval.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BMS 70703  NEURAL MECHANISMS OF LEARNING AND MEMORY  3 Credit Hours  
(Repeatable for credit) This course examines the anatomical organization of the human brain, emphasizing functional aspects of various neural systems, neuroimaging, and topics of clinical relevance. A conceptual understanding of central nervous system organization and memorization of specific neural structures and pathways, as well as knowledge of the impact of structure and systems dysfunction is required.  
Prerequisite: Graduate standing; and special approval.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter

BMS 80120  LABORATORY TECHNIQUES IN BIOMEDICAL SCIENCES  2 Credit Hours  
(Repeatable once for credit) Minimum of two laboratory rotations per semester by arrangement with individual faculty members.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Research  
Contact Hours: 2 other  
Grade Mode: Satisfactory/Unsatisfactory

BMS 80196  INDIVIDUAL INVESTIGATION  1-3 Credit Hours  
(Repeatable for a maximum of 6 credit hours) Directed investigation under supervision of faculty member in biomedical sciences and with prior approval.  
Prerequisite: Special approval and graduate standing.  
Schedule Type: Individual Investigation  
Contact Hours: 1-3 other  
Grade Mode: Standard Letter-S/U-IP
BMS 60198 RESEARCH 1-15 Credit Hours
(Repeatable for credit) Research for master's level graduate students. Credits earned may be applied toward degree requirements if department approves.
Prerequisite: Special approval of adviser and graduate standing.
Schedule Type: Research
Contact Hours: 1-15 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BMS 60199 THESIS I 2-6 Credit Hours
Thesis students must register for a minimum of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.
Prerequisite: Special approval of adviser and graduate standing.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BMS 60220 HUMAN MICROSCOPIC ANATOMY 5 Credit Hours
(Cross-listed with BMS 70220) Morphological basis for normal and disturbed functions; structure-function relationships in human microscopic anatomy. Lectures, special laboratory and learning techniques using human tissues. Graduate standing.
Prerequisite: BSCI 5/70517 or special approval of instructor.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

BMS 60251 THEORY AND PRACTICE OF CLONING AND GENETIC ENGINEERING 2 Credit Hours
(Cross-listed with BMS 70251) Recent advances in the development and understanding of genetic engineering, genomic DNA organization and gene therapy will be discussed. Graduate standing.
Prerequisite: BSCI 5/70158 and CHEM 5/70247 or BMS 6/70268.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60291 SEMINAR IN CELLULAR AND MOLECULAR BIOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 70291) Credits may be applied toward degree if department approves.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 60295 SPECIAL TOPICS IN CELLULAR AND MOLECULAR BIOLOGY 1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 70295) Study of subject or problem of current importance. Content dependent upon student requirements and on recent developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 60299 THESIS II 2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met. Graduate standing.
Prerequisite: 6 hours of BMS 60199.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

BMS 60440 CELLULAR AND MOLECULAR SIGNALING 3 Credit Hours
(Cross-listed with BSCI 60440 and BSCI 70440 and BMS 70440) The relevant and current topics associated with cellular signaling is covered. Topics include receptor pharmacology, classes, and regulation, transcription factors, cell cycle signaling, and cell-cell communication.
Prerequisite: BSCI 40143 or BSCI 50143 or BSCI 70143; and graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60441 MEDICAL PHYSIOLOGY 5 Credit Hours
(Slashed with BMS 70441) Investigation of how the integration of biophysics, biochemistry and structure induces organ function in the cardiovascular, renal, respiratory, endocrine and gastrointestinal systems. Limited discussion of how pathologies alter normal organ function.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

BMS 60442 NEUROBIOLOGY: SYSTEMS AND BEHAVIOR 4 Credit Hours
(Cross-listed with BMS 70442; Cross-listed with BSCI 60442 and BSCI 80442). Biophysical and biochemical concepts of integrative organ system physiology in the human: cardiovascular, pulmonary, exercise and temperature regulation physiology. Graduate standing.
Prerequisite: BSCI 40430 and special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 60449 MEDICAL PHYSIOLOGY I 4 Credit Hours
(Cross-listed with BMS 70449) Biophysical and biochemical concepts of integrative organ system physiology in the human: renal, gastrointestinal and endocrine physiology. Graduate standing.
Prerequisite: BSCI 40430 and special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 60460 MEDICAL PHYSIOLOGY II 3 Credit Hours
(Cross-listed with BMS 70460) Biophysical and biochemical concepts of integrative organ system physiology in the human: renal, gastrointestinal and endocrine physiology. Graduate standing.
Prerequisite: BSCI 40430 and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60462 NEUROBIOLOGY: SYSTEMS AND BEHAVIOR 4 Credit Hours
(Slashed with BSCI 60462; Cross-listed with BSCI 60462 and BSCI 80462). Provides broad coverage of the parts of the central nervous systems and how they integrate sensory information, drive motor function and regulate behavior.
Prerequisite: BMS 60729 or BMS 70729; and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 60465 BRAIN, MIND AND BEHAVIOR 6 Credit Hours
(Slashed with BMS 70465) Detailed examination of human neuroanatomy and nervous system function.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 lecture, 3 lab
Grade Mode: Standard Letter
BMS 60491 SEMINAR IN MEDICAL PHYSIOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 70491) Credits may be applied toward degree if department approves.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 60495 SPECIAL TOPICS IN PHYSIOLOGY 1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 70495) Study of subject or problem of current importance. Content dependent upon student requirements and on recent developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 60501 INTRODUCTION TO PHARMACOLOGY 1 Credit Hour
(Slashed with BMS 70501) Satisfactory/Unsatisfactory (S/U) graded. Basic aspects of pharmacology. Intended to provide a general understanding of fundamental concepts in pharmacology and opportunities for students to read and present peer-reviewed manuscripts covering introductory pharmaceutical concepts.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 60502 MOLECULAR PHARMACOLOGY 4 Credit Hours
(Slashed with BMS 70502) General principles of pharmacology including metabolism, action, interactions, side effects, toxicity and therapeutic use of select drug topics. Focus is placed on the molecular and cellular targets of drug action.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 60503 PHARMACOLOGY JOURNAL REVIEW 1 Credit Hour
(Repeatable maximum four times) (Slashed with BMS 70503) Satisfactory/Unsatisfactory (S/U) graded. Review and discussion of advanced pharmacology journal articles. Students will present and critique articles from peer-viewed publications and actively participate in discussions. Background in physiology and biochemistry required.
Prerequisite: Graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 60504 CHEMOTHERAPY AND TOXICOLOGY 2 Credit Hours
(Slashed with BMS 70504) Specialized topics in chemotherapy of microbial and neoplastic diseases as well as principles of toxicology.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60505 DRUG DISCOVERY AND CLINICAL PHARMACOLOGY 2 Credit Hours
(Slashed with BMS 70505) Basic concepts underlying drug discovery and clinical pharmacology including principles of pharmacokinetics, metabolism, pharmacogenomics and drug design.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60506 HERBAL S AND SUPPLEMENTS 2 Credit Hours
(Slashed with BMS 70506) Provides an understanding of the basic scientific, therapeutic and pharmacological principles underlying the use of medicinal plants, herbal medications, natural products, vitamins, minerals and supplements.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60510 HUMAN PHYSIOLOGY 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70510) Continuation of BMS 60510. Graduate standing.
Prerequisite: BMS 6/70510.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60511 MEDICAL PHARMACOLOGY II 3 Credit Hours
(Cross-listed with BMS 70511) Continuation of BMS 60550/70550. Graduate standing.
Prerequisite: BMS 6/70550.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60512 MEDICAL PHARMACOLOGY III 3 Credit Hours
(Cross-listed with BMS 70512) Continuation of BMS 60560/70560. Graduate standing.
Prerequisite: BMS 6/70560.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60513 MEDICAL PHARMACOLOGY IV 3 Credit Hours
(Cross-listed with BMS 70513) Continuation of BMS 60570/70570. Graduate standing.
Prerequisite: BMS 6/70570.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60520 NEUROPHARMACOLOGY 3 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70521) Continuation of BMS 60521. Graduate standing.
Prerequisite: BMS 6/70521.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60522 DEVELOPMENTAL BIOLOGY 3 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70522) Continuation of BMS 60521. Graduate standing.
Prerequisite: BMS 6/70521.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60523 BIOCHEMICAL TOXICOLOGY 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70523) Continuation of BMS 60523. Graduate standing.
Prerequisite: BMS 6/70523.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60524 NEUROPHARMACOLOGY II 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70524) Continuation of BMS 60524. Graduate standing.
Prerequisite: BMS 6/70524.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60525 NEUROPHARMACOLOGY III 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70525) Continuation of BMS 60525. Graduate standing.
Prerequisite: BMS 6/70525.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60526 NEUROPHARMACOLOGY IV 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70526) Continuation of BMS 60526. Graduate standing.
Prerequisite: BMS 6/70526.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60530 NEUROTOXICOLOGY 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70530) Continuation of BMS 60530. Graduate standing.
Prerequisite: BMS 6/70530.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60531 NEUROTOXICOLOGY II 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70531) Continuation of BMS 60531. Graduate standing.
Prerequisite: BMS 6/70531.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60540 NEUROTOXICOLOGY III 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70540) Continuation of BMS 60540. Graduate standing.
Prerequisite: BMS 6/70540.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60541 NEUROTOXICOLOGY IV 2 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70541) Continuation of BMS 60541. Graduate standing.
Prerequisite: BMS 6/70541.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 60550 MEDICAL PHARMACOLOGY I 3 Credit Hours
(Cross-listed with BMS 70550) General principles of pharmacology including metabolism, action, interactions, side effects, toxicity and therapeutic use of drugs.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60551 MEDICAL PHARMACOLOGY II 3 Credit Hours
(Cross-listed with BMS 70551) Continuation of BMS 60550/70550. Graduate standing.
Prerequisite: BMS 6/70550.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 60591 SEMINAR IN PHARMACOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 70591) Credits may be applied toward degree if department approves. Repeated registration permitted.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 60595 SPECIAL TOPICS IN PHARMACOLOGY 1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 70595) Study of subject or problem of current importance. Content dependent upon student requirements and on recent developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 60596 INDIVIDUAL INVESTIGATION IN PHARMACOLOGY 1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 70596) Experience with various laboratory techniques and procedures used in pharmacological research with application to experimental designs.
Prerequisite: Special approval and graduate standing.
Schedule Type: Individual Investigation
Contact Hours: 3 other
Grade Mode: Standard Letter-IP
BMS 60729  CELLULAR AND MOLECULAR NEUROSCIENCE  4 Credit Hours
(Slashed with BMS 70729) The relation of aspects of the neurosciences to the fundamental properties of nervous tissue, establishing a firm base in experimental neurobiology.
Prerequisite: Graduate standing; and special approval of instructor.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 60751  CURRENT RESEARCH IN AUDITORY NEUROBIOLOGY  1 Credit Hour
(Slashed with BMS 70751) (Repeatable for a maximum of four credit hours) Presentation-based by faculty in the Auditory Neuroscience Group. Topics will vary each semester. Each class presentation will highlight recent advances in auditory neurobiology, cover relevant background, and involve discussion of methodology, experimental design, and interpretive issues related to the research. Students will prepare a presentation on a topic chosen in conjunction with one of the faculty members. Assessment is based on presentation quality and active participation throughout the semester.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Seminar
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BMS 60791  SEMINAR IN NEUROBIOLOGY  1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 70791) Credits may be applied toward degree if department approves.
Prerequisite: Special approval and graduate standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/ Unsatisfactory

BMS 60795  SPECIAL TOPICS IN NEUROBIOLOGY  1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 70795) Study of problems of current importance. Content dependent on student requirements and on developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Graduate standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 61000  RESPONSIBLE CONDUCT OF RESEARCH  1 Credit Hour
(Slashed with BMS 71000; Cross-listed with PHIL 61000) Introduction to professional and ethical conduct of research. Topics include codes and laws governing research, identification of scientific misconduct, plagiarism, authorship and intellectual properties, ethical animal and human research.
Prerequisite: Graduate standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BMS 61001  INTRODUCTION TO BIOMEDICAL SCIENCES  1 Credit Hour
(Slashed with BMS 71001) Seminar for all students in Biomedical Sciences. Repeat registration permitted.
Prerequisite: Graduate Standing in the School of Biomedical Sciences; biological anthropology (BANT), biomedical mathematics (BMTH), cellular and molecular biology (CMBI), Neurosciences (NEUR), Pharmacology (PHRM), physiology interdisciplinary (PSII).
Schedule Type: Seminar
Contact Hours: 1 lecture
Grade Mode: Satisfactory/ Unsatisfactory

BMS 68610  HUMAN GROSS ANATOMY I  4 Credit Hours
(Cross-listed with BMS 78610) An intensive survey of human macromorphology. Lecture two hours per week. Laboratory six hours per week.
Prerequisite: Special approval and graduate standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 68611  HUMAN GROSS ANATOMY II  3 Credit Hours
(Cross-listed with BMS 78611) An intensive survey of human macromorphology; a 10 week course which continues BMS 6/78610. Lecture two hours per week. Laboratory six hours per week. Graduate standing.
Prerequisite: BMS 6/78610.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70120  LABORATORY TECHNIQUES IN BIOMEDICAL SCIENCES  2 Credit Hours
(Repeatable once for credit) (Cross-listed with BMS 60120) Minimum of two laboratory rotations per semester by arrangement with individual faculty members. May be repeated once.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Research
Contact Hours: 2 other
Grade Mode: Satisfactory/ Unsatisfactory

BMS 70196  INDIVIDUAL INVESTIGATION  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 60196) Minimum of two laboratory rotations per semester by arrangement with individual faculty members. May be repeated once.
Prerequisite: Doctoral standing and special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter-S/U-IP

BMS 70220  HUMAN MICROSCOPIC ANATOMY  5 Credit Hours
(Cross-listed with BMS 60220) Morphological basis for normal and disturbed functions; structure-function relationships in human microscopic anatomy. Lectures, special laboratory and learning techniques using human tissues. Doctoral standing.
Prerequisite: BSCI 5/70517 or special approval of instructor.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
BMS 70251 THEORY AND PRACTICE OF CLONING AND GENETIC ENGINEERING  2 Credit Hours
(Cross-listed with BMS 60251) Recent advances in the development and understanding of genetic engineering, genomic DNA organization and gene therapy will be discussed. Doctoral standing.
Prerequisite: BSCI 5/70158 and CHEM 5/70247 or BMS 6/70268.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 70291 SEMINAR IN CELLULAR AND MOLECULAR BIOLOGY  1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 60291) Credits may be applied toward degree if department approves. Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 70295 SPECIAL TOPICS IN CELLULAR AND MOLECULAR BIOLOGY 1-5 Credit Hours
(Repeatable maximum ten times for credit) (Slashed with BMS 60295) Study of subject or problem of current importance. Content dependent upon student requirements and on recent developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 70440 CELLULAR AND MOLECULAR SIGNALING  3 Credit Hours
(Cross-listed with BSCI 60440 and BSCI 70440 and BMS 60440) The relevant and current topics associated with cellular signaling will be covered. Topics include receptor pharmacology, classes and regulation, transcription factors, cell cycle signaling and cell-cell communication.
Prerequisite: BSCI 40143 or BSCI 50143 or BSCI 70143; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70441 MEDICAL PHYSIOLOGY  5 Credit Hours
(Slashed with BMS 60441) Investigation of how the integration of biophysics, biochemistry and structure induces organ function in the cardiovascular, renal, respiratory, endocrine and gastrointestinal systems. Limited discussion of how pathologies alter normal organ function.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter

BMS 70449 MEDICAL PHYSIOLOGY I  4 Credit Hours
Prerequisite: BSCI 40430 and special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 70450 MEDICAL PHYSIOLOGY II  3 Credit Hours
(Cross-listed with BMS 60450) Biophysical and biochemical concepts of integrative organ system physiology in the human: renal, gastrointestinal and endocrine physiology. Doctoral standing.
Prerequisite: BSCI 40430; one year college physics and college chemistry (including organic) and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70462 NEUROBIOLOGY: SYSTEMS AND BEHAVIOR  4 Credit Hours
(Slashed with BMS 60462; Cross-listed with BSCI 60462 and BSCI 80462) Provides broad coverage of the parts of the central nervous systems and how they integrate sensory information, drive motor function and regulate behavior.
Prerequisite: BMS 60729 or BMS 70729; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 70465 BRAIN, MIND AND BEHAVIOR  6 Credit Hours
(Slashed with BMS 60465) Detailed examination of human neuroanatomy and nervous system function.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 lecture, 3 lab
Grade Mode: Standard Letter

BMS 70491 SEMINAR IN MEDICAL PHYSIOLOGY  1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 60491) Credits may be applied toward degree if department approves. Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 70495 SPECIAL TOPICS IN PHYSIOLOGY  1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 60495) Study of subject or problem of current importance. Content dependent upon student requirements and on recent developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 70501 INTRODUCTION TO PHARMACOLOGY  1 Credit Hour
(Slashed with BMS 60501) Satisfactory/Unsatisfactory (S/U) graded. Basic aspects of pharmacology. Intended to provide a general understanding of fundamental concepts in pharmacology and opportunities for students to read and present peer-reviewed manuscripts covering introductory pharmacological concepts.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory-IP
BMS 70502  MOLECULAR PHARMACOLOGY  4 Credit Hours
(Slashed with BMS 60502) General principles of pharmacology including metabolism, action, interactions, side effects, toxicity and therapeutic use of select drug topics. Focus is placed on the molecular and cellular targets of drug action.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 70503 PHARMACOLOGY JOURNAL REVIEW  1 Credit Hour
(Repeatable maximum four times) (Slashed with BMS 60503) Review and discussion of advanced pharmacology journal articles. Students will present and critique articles from peer-reviewed publications and actively participate in discussions. Background in physiology and biochemistry required. Satisfactory/Unsatisfactory (S/U) graded.
Prerequisite: Doctoral standing.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 70504 CHEMOTHERAPY AND TOXICOLOGY  2 Credit Hours
(Slashed with BMS 60504) Specialized topics in chemotherapy of microbial and neoplastic diseases as well as principles of toxicity.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 70505 DRUG DISCOVERY AND CLINICAL PHARMACOLOGY  2 Credit Hours
(Slashed with BMS 60505) Basic concepts underlying drug discovery and clinical pharmacology including principles of pharmacokinetics, metabolism, pharmacogenomics and drug design.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 70506 HERBALS AND SUPPLEMENTS  2 Credit Hours
(Slashed with BMS 60506) Provides an understanding of the basic scientific, therapeutic and pharmacological principles underlying the use of medicinal plants, herbal medications, natural products, vitamins, minerals and supplements.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

BMS 70550 MEDICAL PHARMACOLOGY I  3 Credit Hours
(Cross-listed with BMS 60550) General principles of pharmacology including metabolism, action, interactions, side effects, toxicity and therapeutic use of drugs.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70551 MEDICAL PHARMACOLOGY II  3 Credit Hours
(Cross-listed with BMS 60551) Continuation of BMS 60550/70550. Doctoral standing.
Prerequisite: BMS 6/70550.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70591 SEMINAR IN PHARMACOLOGY  1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 60591) Credits may be applied toward degree if department approves. Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 70595 SPECIAL TOPICS IN PHARMACOLOGY  1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 60595) Study of subject or problem of current importance. Content dependent upon student requirements and on recent developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 70596 INDIVIDUAL INVESTIGATION IN PHARMACOLOGY  1-3 Credit Hours
(Repeatable for credit) (Cross-listed with BMS 60596) Experience with various laboratory techniques and procedures used in pharmacological research with application to experimental designs. Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Individual Investigation
Contact Hours: 1-3 other
Grade Mode: Standard Letter

BMS 70701 CLINICAL NEUROANATOMY  3 Credit Hours
(Slashed with BMS 50701; Cross-listed with PSYC 43001, PSYC 53001, and PSYC 73001). This course examines the anatomical organization of the human brain, emphasizing functional aspects of various neural systems, neuroimaging, and topics of clinical relevance. A conceptual understanding of central nervous system organization and memorization of specific neural structures and pathways, as well as knowledge of the impact of structure and systems dysfunction is required.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70702 CURRENT TECHNIQUES IN BEHAVIORAL NEUROSCIENCE  3 Credit Hours
(Slashed with BMS 50702; Cross-listed with PSYC 43002, PSYC 53002, and PSYC 73002) This course details current and advanced techniques used in behavioral neuroscience research. Emphasis is placed on understanding the theory behind each technique, and its use in understanding the neural mechanisms of behavior. Detailed protocols for each technique will also be covered.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
BMS 70703 NEURAL MECHANISMS OF LEARNING AND MEMORY 3 Credit Hours
(Slashed with BMS 50703; Cross-listed with PSYC 43003, PSYC 53003, and PSYC 73003) Examines the neural and molecular mechanisms underlying learning and memory formation. Cellular mechanisms of learning, including long-term potentiation and basic electrophysiology in invertebrate and mammalian preps are covered. Transcriptional and post-translational modifications required for learning and memory formation, genomic signaling and protein synthesis. The course covers structural changes of neurons associated with memory formation, and the different behavioral methods for studying memory.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 70729 CELLULAR AND MOLECULAR NEUROSCIENCE 4 Credit Hours
(Slashed with BMS 60729) The relation of aspects of the neurosciences to the fundamental properties of nervous tissue, establishing a firm base in experimental neurobiology.
Prerequisite: Doctoral standing; and special approval of instructor.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 70751 CURRENT RESEARCH IN AUDITORY NEUROBIOLOGY 1 Credit Hour
(Slashed with BMS 60751) (Repeatable for a maximum of four credit hours) Presentation-based by faculty in the Auditory Neuroscience Group. Topics will vary each semester. Each class presentation will highlight recent advances in auditory neurobiology, cover relevant background, and involve discussion of methodology, experimental design, and interpretive issues related to the research. Students will prepare a presentation on a topic chosen in conjunction with one of the faculty members. Assessment is based on presentation quality and active participation throughout the semester.
Prerequisite: Doctoral standing; and special approval.
Schedule Type: Seminar
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BMS 70791 SEMINAR IN NEUROBIOLOGY 1 Credit Hour
(Repeatable for credit) (Cross-listed with BMS 60791) Credits may be applied toward degree if department approves. Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Seminar
Contact Hours: 1 other
Grade Mode: Satisfactory/Unsatisfactory

BMS 70795 SPECIAL TOPICS IN NEUROBIOLOGY 1-5 Credit Hours
(Repeatable for credit) (Slashed with BMS 60795) Study of problems of current importance. Content dependent on student requirements and on developments in field. Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 1-5 lecture
Grade Mode: Standard Letter-S/U

BMS 71000 RESPONSIBLE CONDUCT OF RESEARCH 1 Credit Hour
(Slashed with BMS 61000; Cross-listed with PHIL 61000) Introduction to professional and ethical conduct of research. Topics include codes and laws governing research, identification of scientific misconduct, plagiarism, authorship and intellectual properties, ethical animal and human research.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

BMS 71001 INTRODUCTION TO BIOMEDICAL SCIENCES 1 Credit Hour
(Slashed with BMS 61001) Introductory seminar for new students in Biomedical Sciences graduate programs. This seminar will expose students to the different faculty research programs available in the program.
Prerequisite: Doctoral standing in Biomedical Sciences.
Schedule Type: Seminar
Contact Hours: 1 lecture
Grade Mode: Satisfactory/Unsatisfactory

BMS 78610 HUMAN GROSS ANATOMY I 4 Credit Hours
(Cross-listed with BMS 68610) An intensive survey of human macromorphology. Lecture two hours per week. Laboratory six hours per week. Doctoral standing.
Prerequisite: BMS 6/78610.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

BMS 78611 HUMAN GROSS ANATOMY II 3 Credit Hours
(Cross-listed with BMS 68611) An intensive survey of human macromorphology; a 10 week course which continues BMS 6/78610. Lecture two hours per week. Laboratory six hours per week. Doctoral standing.
Prerequisite: BMS 6/78610.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 78624 PRIMATE ETHOLOGY 3 Credit Hours
Detailed examination of the principles of primate ethology, including evolutionary trends in ecology, dominance, locomotion and social behavior. Doctoral standing.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

BMS 78637 BIOANTHROPOLOGICAL DATA ANALYSIS I 5 Credit Hours
(Cross-listed with ANTH 68637) Examination of methods of univariate and bivariate experimental design. This survey emphasizes tests of hypothesis and estimation techniques with both classical and nonparametric procedures.
Prerequisite: Doctoral standing.
Schedule Type: Lecture
Contact Hours: 5 lecture
Grade Mode: Standard Letter
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS 78638</td>
<td>BIOANTHROPOLOGICAL DATA ANALYSIS II</td>
<td>3</td>
<td>Lecture</td>
<td>(Cross-listed with ANTH 68638) This survey of multivariate analysis in</td>
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<td>anthropology includes one-sample data exploration, multiple sample problems</td>
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<td>and regression methods. It also includes computer applications. Doctoral</td>
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<td></td>
<td>standing.</td>
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<td>Prerequisite:</td>
<td>BMS 78637.</td>
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<tr>
<td>BMS 78691</td>
<td>SEMINAR IN BIOLOGICAL ANTHROPOLOGY</td>
<td>1</td>
<td>Lecture</td>
<td>(Repeatable for credit)Credits may be applied toward degree if department</td>
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<td>approves. Doctoral standing.</td>
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<td>Prerequisite:</td>
<td>Special approval.</td>
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<td>Schedule Type:</td>
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<td>Contact Hours:</td>
<td>1 other</td>
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<td>Grade Mode:</td>
<td>Satisfactory/Unsatisfactory</td>
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<tr>
<td>BMS 78692</td>
<td>FIELD WORK IN PALEOANTHROPOLOGY</td>
<td>1-5</td>
<td>Lecture</td>
<td>(Repeatable for credit)Excavation and/or field survey of miocene and/or</td>
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<td>plio-pleistocene hominid localities. Doctoral standing.</td>
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<td>Prerequisite:</td>
<td>Special approval.</td>
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<tr>
<td>Schedule Type:</td>
<td>Field Experience</td>
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<td>Contact Hours:</td>
<td>1-5 other</td>
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<td>Grade Mode:</td>
<td>Standard Letter</td>
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<tr>
<td>BMS 78695</td>
<td>SPECIAL TOPICS IN BIOLOGICAL ANTHROPOLOGY</td>
<td>1-5</td>
<td>Lecture</td>
<td>(Repeatable for credit)Study of subject or problem of current importance.</td>
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<td>Content dependent upon student requirements and on recent developments in field.</td>
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<td>Sections may be standard letter or satisfactory/unsatisfactory (S/U) graded.</td>
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<tr>
<td>Prerequisite:</td>
<td>Doctoral standing; and special approval.</td>
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<td>Schedule Type:</td>
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<td>Contact Hours:</td>
<td>1-5 lecture</td>
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<tr>
<td>BMS 80198</td>
<td>RESEARCH</td>
<td>1-15</td>
<td>Lecture</td>
<td>(Repeatable for credit)Research for doctoral students who have not yet</td>
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<td>passed candidacy examination. Doctoral standing.</td>
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<td>Prerequisite:</td>
<td>Special approval of adviser.</td>
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<tr>
<td>Schedule Type:</td>
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<td>Contact Hours:</td>
<td>1-15 other</td>
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<td>Grade Mode:</td>
<td>Satisfactory/Unsatisfactory-IP</td>
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<tr>
<td>BMS 80199</td>
<td>DISSERTATION II</td>
<td>15</td>
<td>Lecture</td>
<td>(Repeatable for credit)Continuing registration of doctoral students who</td>
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<td>have completed the initial 30 hours of dissertation and continuing until all</td>
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<td>degree requirements are met.</td>
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<td>Prerequisite:</td>
<td>30 hours of BMS 80199 and doctoral standing.</td>
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<td>Schedule Type:</td>
<td>Dissertation</td>
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<tr>
<td>Contact Hours:</td>
<td>15 other</td>
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<td>Grade Mode:</td>
<td>Satisfactory/Unsatisfactory-IP</td>
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<tr>
<td>CACM 11001</td>
<td>INTRODUCTION TO CONFLICT MANAGEMENT (DIVD)</td>
<td>3</td>
<td>Lecture</td>
<td>Introduces key elements of conflict management theory and practice such as</td>
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<td>active listening, assertion, collaborative problem solving, principled</td>
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<td>negotiation, mediation and nonviolent conflict intervention. These are</td>
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<td>essential &quot;life skills&quot; useful in personal, social and professional</td>
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<td>contexts. Includes conflict communication skills development and practice.</td>
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<tr>
<td>Prerequisite:</td>
<td>None.</td>
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<td>Standard Letter</td>
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<tr>
<td>Attributes:</td>
<td>Diversity Domestic, Kent Core Social Sciences, Transfer Module Social</td>
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<td>Sciences</td>
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<tr>
<td>CACM 30000</td>
<td>MAY 4 1970 AND ITS AFTERMATH</td>
<td>3</td>
<td>Lecture</td>
<td>Study of the events of the 1960s in the US leading up to May 4, 1970 when the</td>
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<td>Ohio National Guard killed and wounded KSU students protesting the US war in</td>
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<td>Vietnam and Cambodia. Topics are considered within their cultural, historical,</td>
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<td>social and political contexts. Also examines the aftermath of May 4th,</td>
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<td>including the controversy over constructing the Gym Annex on the May 4th site,</td>
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<td>the legal trials, the role of commemorations and memorials and the politics</td>
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<td>of remembering May 4, 1970.</td>
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<tr>
<td>Prerequisite:</td>
<td>None.</td>
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<td>Schedule Type:</td>
<td>Lecture</td>
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<tr>
<td>Contact Hours:</td>
<td>3 lecture</td>
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<tr>
<td>CACM 31002</td>
<td>GENDER, POWER AND CONFLICT</td>
<td>3</td>
<td>Lecture</td>
<td>Examines gender roles and power imbalances in interpersonal relationships,</td>
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<td>group settings, and on the structural level and the various manifestations of</td>
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<td>violence that may result, considering some of the ways in which these</td>
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<td>imbalances are developed, maintained and constructively addressed and</td>
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<td>potentially redressed.</td>
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<td>Prerequisite:</td>
<td>None.</td>
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C ACM 31003 NONVIOLENCE: THEORY AND PRACTICE  3 Credit Hours
Social conflicts can be intensified and waged in a constructive manner through nonviolent action. Examines how nonviolent action methods bring about social and political change. Explores the theory and philosophy underlying strategies of nonviolent action. Utilizes a wide variety of historical and contemporary case examples of nonviolent struggles from across the globe.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

C ACM 31010 CONFLICT THEORY  3 Credit Hours
Explores the theoretical foundations of conflict and conflict management to provide a greater understanding of the nature, sources and dynamics of various types of conflict, the special challenges faced in addressing those conflicts, and the theory underlying various approaches to conflict management and resolution.
Prerequisite: C ACM 11001.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

C ACM 32020 STRATEGIC PLANNING  3 Credit Hours
Provides training in the principles and tactics of strategic planning for individuals, organizations, agencies and institutions. Students learn to apply the principles of conflict management to strategic planning, including assessing the current environment, developing goals and objectives and establishing a timeline for acting on a strategic plan.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

C ACM 32030 INTERNATIONAL CONFLICT RESOLUTION (DIVG)  3 Credit Hours
Examines causes, expressions and consequences of international conflicts, exploring mechanisms of their prevention, management and resolution. Includes the appearance and development of these conflicts and early warning, negotiation, and peacekeeping and peacebuilding. Covers international and civil wars and topics such as international terrorism.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

C ACM 32040 CROSS-CULTURAL CONFLICT MANAGEMENT (DIVG)  3 Credit Hours
Examines cultural components of conflicts in diverse, multi-cultural settings with special emphases on the nature and sources of cross-cultural conflicts, conflict escalation and de-escalation, and the roles of power disparities. Students examine their own cultural assumptions in order to better understand the multiple effects that cultural dynamics have in conflicts. Case analyses will include conflict resolution techniques respectful of the cultural values of the parties in conflict.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global

C ACM 33030 CONFlict IN THE WORKPLACE  3 Credit Hours
Explores the causes, impact and dynamics of conflict in the workplace. Issues explored include personality conflict, incivility, ethics, teams, management style, diversity, legal issues, alternative dispute resolution, union environments and workplace violence.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

C ACM 34010 CAREER PATHWAYS IN CONFLICT MANAGEMENT  3 Credit Hours
So what does one do with a major or minor in conflict management or peace and conflict studies? How does one find a job or internship in the field? This course encourages students to explore and critically examine how the skills and knowledge learned in Applied Conflict Management courses can be utilized and applied in real-world settings. Students will interact with alumni and professionals working in a variety of careers that utilize conflict management skills. They will learn how to do professional networking, create a career plan, develop job search strategies, and learn how to market their skills and knowledge. Students will complete the course with a career plan, a detailed identification and exploration of options, or another career-related project.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

C ACM 34040 NEGOTIATION  3 Credit Hours
Effective negotiation skills are essential for success in both our professional and personal lives. This course explores in an engaging and interactive way negotiation theories, strategies and techniques. Students will enhance their negotiation skills by learning to plan for an effective negotiation, to elicit information effectively, to build relationships, to improve their communication and persuasive abilities and to deal with a variety of situations and circumstances. There will be several opportunities to practice negotiation skills in class, to experiment with different approaches, and to develop the skills and confidence to be able to negotiate effectively and constructively.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

C ACM 35050 ENVIRONMENTAL CONFLICT RESOLUTION  3 Credit Hours
Examines alternative dispute resolution principles applicable to complex, multi-party public sector disputes, especially environmental and land use disputes. Students learn about deliberative democracy, a variety of circle processes, consensus decision-making, collaborative problem-solving, digital dialogue processes, and town hall meeting structures among others. Case studies of environmental conflicts and multi-party mediation simulations are used.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
CACM 35092  INTERNSHIP IN CONFLICT MANAGEMENT (ELR)  1-9
Credit Hours
(Repeatable for a total of 12 hours). Students work as interns with an organization, group, or business, utilizing and enhancing their skills in conflict management.
Prerequisite: junior standing; completion of two upper-division CACM courses; and special approval.
Schedule Type: Practicum or Internship
Contact Hours: 3-27 other
Grade Mode: Standard Letter-IP
Attributes: Experiential Learning Requirement

CACM 35095  SPECIAL TOPICS IN CONFLICT MANAGEMENT  3 Credit Hours
(Repeatable for credit) Designed to provide an in-depth examination of topics and issues of interest to faculty and students. Specific topics are announced in the Schedule of Classes and on the School of Peace and Conflict Studies's web site.
Prerequisite: none.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CACM 36096  INDIVIDUAL INVESTIGATION IN CONFLICT MANAGEMENT  3 Credit Hours
(Repeatable for credit) Individualized program of study and literature review in area of particular interest to the student.
Prerequisite: junior standing, two upper-division CACM courses, and special approval.
Schedule Type: Individual Investigation
Contact Hours: 3 other
Grade Mode: Standard Letter-IP

CACM 41010  RECONCILIATION VERSUS REVENGE: TRANSITIONAL JUSTICE (DIVG) (WIC)  3 Credit Hours
"Transitional justice" refers to civil and political processes used to move from violence and tyranny to peace and democracy. War crimes tribunals, truth and reconciliation commissions, apologies, forgiveness, reparations and memorials will be examined.
Prerequisite: CACM 32030 and 1 upper-division CACM course; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Diversity Global, Writing Intensive Course

CACM 42020  QUALITATIVE RESEARCH IN CONFLICT MANAGEMENT (WIC)  3 Credit Hours
An overview of qualitative research methods used to gather and analyze data in conflict management. Gives students experience in collecting and analyzing data and writing a major research paper.
Prerequisite: CACM 11001 and two upper-division CACM courses; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

CACM 45093  VARIABLE TOPIC WORKSHOP IN CONFLICT MANAGEMENT  1-6 Credit Hours
(Repeatable for a total of 6 credit hours) Variable topic offered as need arises. Specific topics will be announced in the schedule of classes.
Prerequisite: special approval.
Schedule Type: Workshop
Contact Hours: 1-6 other
Grade Mode: Satisfactory/Unsatisfactory

CACM 48080  MEDIATION: THEORY AND TRAINING  3 Credit Hours
Provides training in mediation skills, principles and methods in an interactive way. Students examine the historical development of mediation and the uses of mediation in various contexts including family, business, labor-management, civil, community, and workplace disputes.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

CACM 49091  VARIABLE TITLE SEMINAR IN CONFLICT MANAGEMENT  1-3 Credit Hours
(Repeatable for a total of 3 credit hours) Seminar devoted to detailed study of various topics in the field of conflict management. Specific topics are announced in Schedule of Classes and on the School of Peace and Conflict Studies's website.
Prerequisite: Junior standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

CACM 58080  MEDIATION: THEORY AND TRAINING  3 Credit Hours
Provides training in mediation skills, principles and methods through cooperative, participatory, interactive, skills-building pedagogies. Students examine the historical development of mediation and the uses of mediation in various contexts including family, business, labor-management, civil, community, and workplace disputes.
Prerequisite: Graduate Standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter