

SCHOOL OF EMERGING MEDIA AND TECHNOLOGY

College of Communication and Information

School of Emerging Media and Technology
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Kent State University's School of Emerging Media and Technology is a cutting-edge new interdisciplinary school designed to train tomorrow's digital leaders. Integrating elements of computer science, computer information systems, computer technology, library information science, visual communication design, journalism, communication studies, and instructional technology, it fosters a broad exposure to digital technologies as used by a wide range of professions and organizations.

Undergraduate Programs

- Emerging Media and Technology - B.S.

Minors

- Web Design and Development

Graduate Programs

- Emerging Media and Technology - M.S.

Emerging Media and Technology (EMAT)

EMAT 10010 INTRODUCTION TO EMERGING MEDIA AND TECHNOLOGY 3 Credit Hours

Through this course students will explore the emerging media and technology industries, receive an introduction to basic programming concepts, and develop their own emerging media project plan. Additionally, students will learn about the impact of emerging media and technology on culture and society. Topics include an introduction to ethical technology design, emerging media and globalization, and how technology relates to relationship and identity formation and maintenance.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 10310 MY STORY ON THE WEB 3 Credit Hours

A first course in understanding the web's impact on our private and public lives. Introductory course that enables students to establish a web presence and persona by the end of the semester. Through the storytelling initiative and creating these sites, students investigate web site design, storytelling, multimedia, intellectual property, ethical considerations and social media.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 13210 DESIGN PROCESSES AND PRINCIPLES 3 Credit Hours

Introduction to the discipline of design, including general design models and procedures, rational and creative models of design, and design as problem solving. Specific design contexts are introduced including information design, graphics and visual design, architectural design and educational design.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 15310 CREATIVE CODING 3 Credit Hours

In this course students will be given a hands-on introduction to computational thinking and object-oriented programming through the framework of creative coding. Students will learn how to use variables, loops, functions, classes and API's (Application Programming Interfaces) to make original works of creative code for screen-based media that move, interact and unfold over time. Emphasis will be placed on play and experimentation as critical facets of creative problem solving.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 19995 SPECIAL TOPICS IN EMERGING MEDIA AND TECHNOLOGY 1-4 Credit Hours

(Repeatable for credit) Analysis of significant and current issues in emerging media and technology not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

EMAT 22110 DATA IN EMERGING MEDIA AND TECHNOLOGY 3 Credit Hours

Students will work through all levels of data analysis including accessing data, combining and cleaning datasets, describing data through report-writing and visualization, inferential statistics, and finally making data-based decisions and conveying those decisions to a lay audience.

This course uses Python 3 and R to process data and will introduce students to report writing, sharing, and documentation using LaTeX and RMarkdown. The focus of this course is to convey the strengths and limitations of both "big" and "small" data with an overarching goal of instilling ethical data practices for research and application.

Prerequisite: EMAT 15310 or CS 13001 or CS 13012 or IT 11002.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 23410 COGNITION IN TECHNOLOGY 3 Credit Hours

Introduction to the basics in human cognition as they affect technology and as technology affects human cognition. Addresses designing technologies to fit and enhance cognition, augmenting cognition with technology, and cognitive tools, as well as the impact of technology on various cognitive processes.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 26010 TELECOMMUNICATION INFRASTRUCTURE 3 Credit Hours

Provides an overview of communications infrastructure for public switched telephone networks, wireless networks, and local area networks. Other topics covered include network routing, LAN concepts and technologies, VoIP, and PBX.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 29995 SPECIAL TOPICS IN EMERGING MEDIA AND TECHNOLOGY 1-4 Credit Hours

(Repeatable for credit) Analysis of significant and current issues in emerging media and technology not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

EMAT 30410 INFORMATION ETHICS AND SOCIAL RESPONSIBILITY 3 Credit Hours

Investigates ethical and social responsibility issues related to information technology including the application of ethical theories to information technology; potential tensions between ethical and legal norms as well as those between competing ethical values; professional codes of ethics; access and control of intellectual property; issues of privacy including those raised by the US Patriot Act; network security and user protections (e.g. viruses, protecting minors, cyberbullying); and the digital divide, outsourcing and green computing.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 31010 ENTERPRISE ARCHITECTURE 3 Credit Hours

Enterprise architecture facilitates the alignment of IT and IS investment decisions with business goals. Enterprise architecture is increasingly used in the industry as a result of the continued emergence of new technologies and ongoing pressures to reengineer business processes to achieve improved efficiency and greater customer focus. Enterprise architecture identifies the main components of an organization and the ways in which these components work together. The components include performance and strategy, people, business capabilities, applications, technology, knowledge and information, as well as financial and other resources.

Prerequisite: Sophomore standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 32110 MODERN WEB APPLICATION DEVELOPMENT 3 Credit Hours

In this hands-on, project-based course students will be introduced to leading industry tools and frameworks being used to create commercial web applications today, including CSS frameworks, front-end frameworks, and command line tools. Lectures, coding demonstrations, and weekly assignments will culminate in a collaborative final project in which students will be asked to conceptualize, design and implement a web application in a collaborative, team setting.

Prerequisite: EMAT 22110 and VCD 21000.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 33310 HUMAN-COMPUTER INTERACTION 3 Credit Hours

A survey course intended to provide a broad foundation of HCI principles and perspectives relevant across multiple emerging media technologies. Focuses on both understanding HCI through the presentation of major concepts, issues and principles in HCI across the full spectrum of user-centered design processes (conceptualizing, research, prototyping, evaluation, etc.) and doing HCI, with a focus on the user, needs and task analysis, and evaluation.

Prerequisite: Sophomore standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 34410 DIGITAL INFORMATION MANAGEMENT AND PROCESSING 3 Credit Hours

Introduces students to the discipline of information management and processing methods and tools that are available to support effective management of information within organizations. Aims to provide a pragmatic foundation of principles, practices and technologies that can be applied within commercial and government organizations to help improve information management.

Prerequisite: Sophomore standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 35091 SEMINAR IN EMERGING MEDIA AND TECHNOLOGY 3 Credit Hours

(Repeatable for credit) Society is driven, in part, by digital technology. The skills and techniques used in these fast-paced digital systems requires nimble and up-to-date skill sets. This course will cover a rotating list of timely topics including but not limited to mobile applications, content management systems, data visualizations, and cutting edge development frameworks. The student experience will vary based on the topics from the rotation.

Prerequisite: EMAT 15310 or CS 13001 or CS 13012 or IT 11002.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 39995 SPECIAL TOPICS IN EMERGING MEDIA AND TECHNOLOGY 1-4 Credit Hours

(Repeatable for credit) Analysis of significant and current issues in emerging media and technology not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

EMAT 40999 INTERDISCIPLINARY PROJECTS (ELR) 3 Credit Hours
(Repeatable for credit) In this hands-on course, students work in collaborative, interdisciplinary teams to complete a technology-based project that provides an innovative solution to a real-world problem. Whenever possible, connections will be made to project-based courses in emerging media and technology and beyond.

Prerequisite: Junior standing.

Schedule Type: Project or Capstone

Contact Hours: 3 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

EMAT 41510 PROJECT MANAGEMENT AND TEAM DYNAMICS (WIC) 3 Credit Hours

(Slashed with EMAT 51510) Introduces students to the basic elements of project management as it relates to software development and the corporate environment. Although not formally endorsed by The Project Management Institute, the course aligns with the project management lifecycle approach endorsed in The Project Management Book of Knowledge.

Prerequisite: EMAT 15310 or CS 13001 or CS 13012 or CIS 24065; and junior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Writing Intensive Course

EMAT 41610 DIGITAL SYSTEMS SECURITY 3 Credit Hours

(Slashed with EMAT 51610) Provides students with an understanding of the techniques, approaches, strategies, and computer security tactics that are used to ensure computer-related assets are protected from potential cyber compromise and are integrated with the business function. This course does not focus on the technical aspects of security (e.g., details of the operating system, data structures, or networks) but instead focuses more on computer security in a business context.

Prerequisite: EMAT 15310 or CS 13001 or CS 13012 or CIS 24065; and junior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 49991 SEMINAR IN EMERGING TECHNOLOGIES 1-3 Credit Hours

(Slashed with EMAT 59991) Explores new and emerging technologies, examining each technology from multiple viewpoints representative of the interdisciplinary nature of emerging media and technology.

Prerequisite: Junior standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EMAT 49992 INTERNSHIP IN EMERGING MEDIA AND TECHNOLOGY (ELR) 1-6 Credit Hours

(Repeatable for a maximum of 6 credit hours) A credit-bearing work experience with educational outcomes, utilizing and enhancing a student's academic learning in practical occupational situations. The student is expected to complete pre-determined assignments, which may include a weekly journal, final paper, or experience report.

Prerequisite: Junior standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

EMAT 49995 SPECIAL TOPICS IN EMERGING MEDIA AND TECHNOLOGY 1-4 Credit Hours

(Repeatable for credit) Analysis of significant and current issues in emerging media and technology not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

EMAT 49996 INDIVIDUAL INVESTIGATION IN EMERGING MEDIA AND TECHNOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Independent study carried out by a student under the supervision of a faculty member. Subject content, objectives, assignments and evaluation methods may vary.

Prerequisite: Junior standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

EMAT 51510 PROJECT MANAGEMENT AND TEAM DYNAMICS 3 Credit Hours

(Slashed with EMAT 41510) This course introduces students to the basic elements of project management as it relates to software development and the corporate environment. Although not formally endorsed by The Project Management Institute (www.PMI.org), the course will align with the project management lifecycle approach endorsed in The Project Management Book of Knowledge.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 51610 DIGITAL SYSTEMS SECURITY 3 Credit Hours

(Slashed with EMAT 41610) Provides students with an advanced understanding of the techniques, approaches, strategies, and computer security tactics that are used to ensure computer-related assets are protected from potential cyber compromise and are integrated with the business function. This course does not focus on the technical aspects of security (e.g., details of the operating system, data structures, or networks) but instead focuses more on computer security in a business context.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 59991 SEMINAR IN EMERGING TECHNOLOGIES 1-3 Credit Hours

(Slashed with EMAT 49991) Explores new and emerging technologies, examining each technology from multiple viewpoints representative of the interdisciplinary nature of the emerging media and technology.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1-3 other

Grade Mode: Standard Letter

EMAT 59995 SPECIAL TOPICS IN EMERGING MEDIA AND TECHNOLOGIES 1-3 Credit Hours

(Repeatable for credit) Analysis of significant and current issues in emerging media and technology not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EMAT 60010 FOUNDATIONS OF EMERGING MEDIA AND TECHNOLOGY 3 Credit Hours

Course provides an overview of foundational theories applied in the interdisciplinary emerging media and technology industries through case studies and interdisciplinary discussions. Covers issues related to technology and society; developing interdisciplinary thinking skills; examining the industry structure; and developing data-based writing, reporting and presentation skills.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 60310 CREATIVE CODING FUNDAMENTALS 3 Credit Hours

Course provides students hands-on experience, from applying foundational concepts in computational thinking and object-oriented programming to creating screen-based applications that move, interact and unfold over time. Specific topics covered include variables, loops, functions, classes and API's (Application Programming Interfaces). Particular emphasis is placed on play and experimentation as critical facets of creative problem solving, and on computation as both an interdisciplinary and cross-disciplinary practice.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 60999 CAPSTONE PROJECT IN EMERGING MEDIA AND TECHNOLOGY 3 Credit Hours

(Repeatable for credit) Provides an integrative experience, bringing together components of the required coursework in the major and concentration. Students perform individual work on a project, research paper, or practicum under the supervision of faculty from programs affiliated with the School of Emerging Media and Technology. Students must be in their final semester in the master's program to enroll in this course.

Prerequisite: Minimum overall GPA of 3.00; and graduate standing; and special approval.

Schedule Type: Project or Capstone

Contact Hours: 3 other

Grade Mode: Standard Letter

EMAT 61010 ENTERPRISE ARCHITECTURE 3 Credit Hours

Explores the alignment of IT and IS investment decisions with business goals. Enterprise architecture is increasingly used in industry as a result of the continued emergence of new technologies and ongoing pressures to reengineer business processes to achieve improved efficiency and greater customer focus. Enterprise architecture identifies the main components of an organization and the ways in which these components work together. The components include performance and strategy, people, business capabilities, applications, technology, knowledge and information, as well as financial and other resources.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 61310 ENTERPRISE ARCHITECTURE: ENTERPRISE ARCHITECTURE CENTER OF EXCELLENCE METHODOLOGY 2 Credit Hours

Provides an introduction to the Enterprise Architecture Center of Excellence (EACOE) methodology for enterprise architecture and practical experience using that methodology. Students learn to model a business' current or desired future state using architectural models of goals, processes, materials, roles, locations and events. Implementation models are then developed to show relationships between architectural models, and the models are analyzed to identify move-ahead initiatives that include projects, gaps, overlaps and opportunities. These initiatives are prioritized to move the business to a desired future state. At the conclusion of the course, students have the option of submitting their course enterprise architecture artifacts to EACOE for certification. Pre/

Prerequisite: Graduate standing.

Corequisite: EMAT 61010.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EMAT 61510 PROJECT MANAGEMENT LEADERSHIP 3 Credit Hours

This course introduces advanced project management and project management leadership as it relates to software development and the corporate environment. The course focuses on the project management principles of effective planning, communication and motivation throughout the project lifecycle, and one key project management deliverable such as the project management plan. Although not formally endorsed by The Project Management Institute (www.PMI.org), the course will align with the project management lifecycle approach endorsed in The Project Management Book of Knowledge.

Prerequisite: EMAT 51510; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 62010 BUSINESS ARCHITECTURE 3 Credit Hours

Exploration of the concept of business architecture as the critical component of enterprise architecture. Students learn how to develop an enterprise business architecture, to apply business architecture principles, methods and artifacts to support business IT alignment and to support change management needed to implement roadmaps and initiatives based on the business architecture. Students learn how different enterprise architecture frameworks approach the business layer.

Prerequisite: EMAT 61010; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 62110 INTERACTIVE DATA 3 Credit Hours

Course applies students' prior experience in computational thinking and object-oriented programming to analytic, creative and interactive data experiences built in Python and R. Students address real-world data sets with computational, predictive and visual methods to draw insights and make decisions. Students move beyond deploying "solutions" to engaging and communicating data to constituents, user, and decision makers alike. Concurrently, students discuss critical questions of modern data access, power, bias and privacy.

Prerequisite: EMAT 60310; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 62210 WEB DEVELOPMENT 3 Credit Hours

Beginning with basic coverage of HTML, CSS, PHP, this course continues to explore those topics along with MySQL, jQuery, JavaScript and others. The course will also explore other topics relevant to web development in digital sciences, including security principles, hierarchy and visual design, responsive design, accessibility issues, interaction design, social media, and legal issues.

Prerequisite: CS 61002 or CS 61003 or ENGR 56330; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 64010 DATA ARCHITECTURE 3 Credit Hours

Exploration of data modeling at the conceptual and logical level of abstraction within the context of enterprise architecture. Students learn to identify business needs in terms of data to gain a holistic view of organizational data. Students use Master Data Management (MDM) and approaches to define various data sources.

Prerequisite: EMAT 61010; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 64210 DATA SCIENCE 3 Credit Hours

Overview of the concept of data mining, machine learning, big data, and data analytics, including the business challenges of working with data to solve real-world business problems. Students become familiar with the Cross Industry Standard Process for Data Mining (CRISP-DM). Fundamental concepts include Business Problem Understanding, Data Understanding, Data Preparation, Modeling, Evaluation, and Deployment. Data analytics in industry verticals are discussed, including science, intelligence and law enforcement, health, retail and financial services.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 65010 APPLICATION AND TECHNOLOGY ARCHITECTURE 3 Credit Hours

Introduction to the concept of application and technology architectures in the context of enterprise architecture. Students learn how to define application and technology architecture principles and standards to support business performance, and to evaluate existing architectures in relation to performance goals. Students learn to work with application and technology artifacts and matrices, prepare a technology dictionary and develop an application architecture blueprint.

Prerequisite: EMAT 61010; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EMAT 69199 THESIS I 2-6 Credit Hours

(Repeatable for a maximum of 6 credits hours) Thesis students must register for a total of 6 hours and may take 2 to 6 hours per semester distributed over several semesters if desired.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Masters Thesis

Contact Hours: 2-6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EMAT 69299 THESIS II 2 Credit Hours

(Repeatable for credit) Thesis students must continue registration each semester until all degree requirements are met.

Prerequisite: EMAT 69199; and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 2 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EMAT 69992 INTERNSHIP IN EMERGING MEDIA AND TECHNOLOGY 1-3 Credit Hours

(Repeatable for credit) A credit bearing work experience with educational outcomes, utilizing and enhancing a student's academic learning in practical occupational situations. The student is expected to complete pre-determined assignments, which may include a weekly journal, final paper or experience report.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-9 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EMAT 69995 SPECIAL TOPICS IN EMERGING MEDIA AND TECHNOLOGY 1-4 Credit Hours

(Repeatable for credit) Analysis of significant and current issues in digital sciences not covered in regular courses. Offered when opportunities and resources permit; the topic is announced when the course is scheduled.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

EMAT 69996 INDIVIDUAL INVESTIGATION IN EMERGING MEDIA AND TECHNOLOGY 1-3 Credit Hours

(Repeatable for credit) Independent study carried out by a student under the supervision of a faculty member. Subject content, objectives, assignments, and evaluation methods may vary.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP