# Exercise Science (EXSC)

<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>EXSC 15010</td>
<td>Introduction to Exercise Science</td>
<td>2</td>
<td>Introduction to the discipline of exercise science, including the history of the field, current position stands of the American College of Sports Medicine, the responsibilities and roles of the exercise physiologist and the current trends in exercise science.</td>
</tr>
<tr>
<td>EXSC 23093</td>
<td>Variable Title Workshop in Exercise Science</td>
<td>1-3</td>
<td>(Repeatable for credit) Workshop to develop mastery and application of knowledge and skills that address issues in exercise science; topics vary. Satisfactory/unsatisfactory (S/U) graded.</td>
</tr>
<tr>
<td>EXSC 25057</td>
<td>Human Anatomy and Physiology I (KBS) (KLAB)</td>
<td>3</td>
<td>Comprehensive examination of anatomy and physiology related to the organization of the body and basic cell and tissue types. Specific structure and function of the muscular, skeletal, cardiovascular, nervous and respiratory systems are addressed.</td>
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<tr>
<td>EXSC 25058</td>
<td>Human Anatomy and Physiology II (KBS) (KLAB)</td>
<td>3</td>
<td>Comprehensive examination of anatomy and physiology related to the human body under rest and exercise conditions. Specific structure and function of the metabolic, endocrine, lymphatic, digestive, urinary and reproductive systems are addressed. Advanced coverage of neurological, cardiovascular and respiratory systems are also addressed.</td>
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<tr>
<td>EXSC 3022</td>
<td>Exercise Leadership</td>
<td>3</td>
<td>Designed to provide the students with the knowledge base in exercise leadership. Topic areas and competencies using a variety of techniques in leading and demonstrating safe and effective methods of applying the fundamental principles of exercise science. The exercise leader will demonstrate all forms of group exercise, flexibility and balance training.</td>
</tr>
<tr>
<td>EXSC 35023</td>
<td>Professional Certificate Preparation</td>
<td>2</td>
<td>Introductory course in personal training. Covers basic exercise science, fitness evaluation risk management, health appraisal, safety and legal issues for the personal trainer. Prepares the student to take the national certification examination for personal training.</td>
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<tr>
<td>EXSC 35048</td>
<td>Biomechanics</td>
<td>3</td>
<td>Measurement and statistics applied to physical education and exercise/sport sciences; laboratory experiences in statistics test construction and administration and evaluation.</td>
</tr>
<tr>
<td>EXSC 40612</td>
<td>Exercise Leadership for the Older Adult</td>
<td>3</td>
<td>Designed to provide students with a knowledge base in exercise leadership in the older adult population, including special populations. Students participate in the leading, supervision and evaluation of participants within the exercise program. The also assist in the collection of functional fitness data.</td>
</tr>
<tr>
<td>EXSC 35075</td>
<td>Exercise Programming</td>
<td>3</td>
<td>Problems and issues in developing exercise programs in institutional and commercial settings.</td>
</tr>
<tr>
<td>EXSC 45080</td>
<td>Exercise Implementation: An Exercise Intervention Program</td>
<td>1-3</td>
<td>(Repeatable for credit) Students will participate in leading, supervising and developing plans for individuals who want to reduce cardiovascular risk factors through structured exercise.</td>
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**Attributes:** Kent Core Basic Sciences, Kent Core Basic Sciences Lab

**Schedule Type:** Lecture

**Contact Hours:** 2 lecture, 2 lab

**Grade Mode:** Standard Letter

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**EXSC 35023** PROFESSIONAL CERTIFICATE PREPARATION 2 Credit Hours

**Prerequisite:** EXSC 25057 or ATTR 25057 or BSCI 11010; and EXSC 25058 or ATTR 25058 or BSCI 11020 or BSCI 20020.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 1 lecture, 2 lab

**Grade Mode:** Standard Letter

**EXSC 35054** BIOMECHANICS 3 Credit Hours

(Cross-listed with ATTR 35054) Anatomical and mechanical bases of human movement. Emphasis is placed on tools and techniques for motion analysis, mechanical concepts, forces and performance analysis. Lecture and laboratory.

**Prerequisite:** None.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 2 lecture, 2 lab

**Grade Mode:** Standard Letter

**EXSC 35068** STATISTICS FOR EXERCISE SCIENTIST 3 Credit Hours

Measurement and statistics applied to physical education and exercise/sport sciences; laboratory experiences in statistics test construction and administration and evaluation.

**Prerequisite:** None.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 2 lecture, 2 lab

**Grade Mode:** Standard Letter

**EXSC 40612** EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours

(Cross-listed with EXPH 50612) Designed to provide students with a knowledge base in exercise leadership in the older adult population, including special populations. Students participate in the leading, supervision and evaluation of participants within the exercise program. The also assist in the collection of functional fitness data.

**Prerequisite:** None.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 2 lecture, 2 lab

**Grade Mode:** Standard Letter

**EXSC 35075** EXERCISE PROGRAMMING 3 Credit Hours

Problems and issues in developing exercise programs in institutional and commercial settings.

**Prerequisite:** ATTR 25057 or EXSC 25057 or BSCI 11010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 20020.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 2 lecture, 2 lab

**Grade Mode:** Standard Letter

**EXSC 45080** EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours

(Cross-listed with EXPH 50612) Designed to provide students with a knowledge base in exercise leadership in the older adult population, including special populations. Students participate in the leading, supervision and evaluation of participants within the exercise program. The also assist in the collection of functional fitness data.

**Prerequisite:** None.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 2 lecture, 2 lab

**Grade Mode:** Standard Letter

**EXSC 45080** EXERCISE IMPLEMENTATION: AN EXERCISE INTERVENTION PROGRAM 1-3 Credit Hours

(Repeatable for credit) Students will participate in leading, supervising and developing plans for individuals who want to reduce cardiovascular risk factors through structured exercise.

**Prerequisite:** EXSC 45080.

**Schedule Type:** Laboratory

**Contact Hours:** 3-9 other

**Grade Mode:** Standard Letter
EXSC 43093 VARIABLE TITLED WORKSHOP IN EXERCISE SCIENCE AND EXERCISE PHYSIOLOGY 1-3 Credit Hours  
(Repeatable for credit) (Cross-listed with EXPH 53093) Workshop in exercise science, topics vary.  
Prerequisite: none.  
Schedule Type: Workshop  
Contact Hours: 1-3 lecture  
Grade Mode: Satisfactory/Unsatisfactory  
EXSC 43098 RESEARCH IN EXERCISE SCIENCE (ELR) 1-3 Credit Hours  
(Repeatable for a maximum of 12 credit hours) Research project completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.  
Prerequisite: special approval.  
Schedule Type: Research  
Contact Hours: 3-9 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  
Attributes: Experiential Learning Requirement  
EXSC 45065 EXERCISE TESTING 3 Credit Hours  
(Cross-listed with EXPH 55065) Lecture and laboratory experiences dealing with the administration and interpretation of exercise tests.  
Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 20020.  
Schedule Type: Combined Lecture and Lab  
Contact Hours: 2 lecture, 2 lab  
Grade Mode: Standard Letter  
EXSC 45070 ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST 3 Credit Hours  
(Cross-listed with EXPH 55070) Designed to provide students with the knowledge base in electrocardiography. Students work on interpreting the 12-lead electrocardiogram with clinical case studies to enhance the knowledge base of the exercise specialist.  
Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 20020.  
Schedule Type: Lecture  
Contact Hours: 3 lecture  
Grade Mode: Standard Letter  
EXSC 45080 PHYSIOLOGY OF EXERCISE (WIC) 3 Credit Hours  
(Cross-listed with EXPH 55080) Response of the human to acute and chronic exercise with emphasis on the underlying physiological mechanisms.  
Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 20020.  
Schedule Type: Combined Lecture and Lab  
Contact Hours: 2 lecture, 2 lab  
Grade Mode: Standard Letter  
Attributes: Writing Intensive Course  
EXSC 45096 INDIVIDUAL INVESTIGATION IN EXERCISE SCIENCE (ELR) 1-3 Credit Hours  
(Repeatable for a maximum of 6 credit hours) Independent study completed under the supervision of a faculty member. Written approval of supervising faculty member and school director required prior to registration.  
Prerequisite: special approval.  
Schedule Type: Individual Investigation  
Contact Hours: 3-9 other  
Grade Mode: Standard Letter  
Attributes: Experiential Learning Requirement  
EXSC 45480 INTERNSHIP SEMINAR IN EXERCISE SCIENCE 1 Credit Hour  
Overview of the internship possibilities that are available for the exercise science major. The American College of Sports Medicine (ACSM) certification workshops and the scope of the practice for the exercises specialist is discussed in detail.  
Prerequisite: special approval.  
Schedule Type: Lecture  
Contact Hours: 1 lecture  
Grade Mode: Standard Letter  
EXSC 45481 SEMINAR IN EXERCISE PHYSIOLOGY 1 Credit Hour  
Provides an overview of the research possibilities available for the exercise science major. The Institutional Review Board, research methodology and the risks and benefits of research in the area of exercise science are discussed in detail.  
Prerequisite: special approval.  
Schedule Type: Lecture  
Contact Hours: 1 lecture  
Grade Mode: Standard Letter  
EXSC 45492 INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR) 1-8 Credit Hours  
(Repeatable for a maximum of 8 credit hours) Supervised experience providing practical experience in administration and operation of programs in physical fitness, health enhancement and/or cardiac rehabilitation. 45 clock hours per credit hour.  
Prerequisite: special approval.  
Schedule Type: Practicum or Internship  
Contact Hours: 3-24 other  
Grade Mode: Satisfactory/Unsatisfactory-IP  
Attributes: Experiential Learning Requirement  
EXSC 46095 SPECIAL TOPICS IN EXERCISE SCIENCE 1-3 Credit Hours  
(Repeatable for credit) Selected topics in exercise science dependent upon interest.  
Prerequisite: none.  
Schedule Type: Lecture  
Contact Hours: 1-3 lecture  
Grade Mode: Standard Letter