Exercise Science

Associate in Science Degree

This program prepares students to transfer to baccalaureate programs in Exercise Science, Exercise Physiology, Adult Fitness, Personal Training, Physical Therapy, Cardiac Rehabilitation, Kinesiology, Athletic Training, Physical Education and similar curricula. Graduates of such baccalaureate programs find employment in health and wellness management, health center and fitness center program management, corporate health and wellness programs, health and physical education teaching, exercise physiology teaching and research, medical exercise rehabilitation programs, adult fitness programs and related fields. The curriculum includes general education requirements, a basic science and math foundation and a broad base in discipline-related courses such as exercise physiology, nutrition, kinesiology and exercise measurement and prescription.

If you are considering a career in Health/Physical Education teaching, please read about the County College of Morris Teacher Education Specialization in Health/Physical Education (http://catalog.ccm.edu/credit/areasofstudy/teachereducation/#exercise).

For more information, visit the Exercise Science (http://www.ccm.edu/academics/divdep/health-professions-natural-sciences/department-of-health-and-exercise-science/exercise-science) website.

Degrees

AS Exercise Science
(P2960)

General Education Foundation

<table>
<thead>
<tr>
<th>Communication</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-111</td>
<td>English Composition I</td>
</tr>
<tr>
<td>ENG-112</td>
<td>English Composition II</td>
</tr>
</tbody>
</table>

Math-Science-Technology

<table>
<thead>
<tr>
<th>MAT-110</th>
<th>College Algebra</th>
</tr>
</thead>
<tbody>
<tr>
<td>or MAT-124</td>
<td>Statistics</td>
</tr>
<tr>
<td>CMP-135</td>
<td>Computer Concepts With Applications</td>
</tr>
</tbody>
</table>

Chemistry

<table>
<thead>
<tr>
<th>CHM-117</th>
<th>Introductory Chemistry Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>or CHM-125</td>
<td>General Chemistry I - Lecture</td>
</tr>
<tr>
<td>CHM-118</td>
<td>Introductory Chemistry Laboratory</td>
</tr>
<tr>
<td>or CHM-126</td>
<td>General Chemistry I - Laboratory</td>
</tr>
</tbody>
</table>

Social Science

<table>
<thead>
<tr>
<th>PSY-113</th>
<th>General Psychology</th>
</tr>
</thead>
</table>

Humanities

Choose from General Education Course List (Humanities)

Social Science or Humanities (3 credits)

Choose from General Education course list (Social Science or Humanities)

General Education Electives

<table>
<thead>
<tr>
<th>COM-109</th>
<th>Speech Fundamentals</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-101</td>
<td>Anatomy and Physiology I</td>
</tr>
</tbody>
</table>

Exercise Science Core

<table>
<thead>
<tr>
<th>HES-111</th>
<th>Introduction to Exercise Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-102</td>
<td>Anatomy and Physiology II</td>
</tr>
<tr>
<td>HES-211</td>
<td>Kinesiology</td>
</tr>
<tr>
<td>HED-295</td>
<td>First Aid and Emergency Care</td>
</tr>
<tr>
<td>HES-212</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>HED-115</td>
<td>Personal and Family Nutrition</td>
</tr>
<tr>
<td>HED-286</td>
<td>Personal Health and Wellness</td>
</tr>
<tr>
<td>HES-213</td>
<td>Exercise Measurement and Prescription</td>
</tr>
</tbody>
</table>

Exercise Science Restricted Electives

3

Exercise Science Core Credits

28

Total Credits

60

Faculty

Dr. Michael Paul  
Chairperson, Health and Exercise Science  
Associate Professor, Health and Exercise Science  
Ph.D., University of Toledo  
M.S., East Stroudsburg University  
B.A., Rutgers University  
HPE 225  973-328-5327  mpaul@ccm.edu

Bryan Lemme  
Assistant Professor, Health and Exercise Science  
M.S., East Stroudsburg University  
B.S., William Paterson University  
HPE 225B  973-328-5393  blemme@ccm.edu

William McHugh  
Instructor, Health Exercise Science Department  
M.S. United States Sports Academy Mobile, AL  
B.S. SUNY, Oneonta, NY  
CPT Certified Personal Trainer  
HPE 225B  973-328-2488  wmchugh@ccm.edu

Kelly Miniter  
Assistant Professor, Health and Exercise Science  
M.S., East Stroudsburg University  
B.S., University of Maryland  
HPE 225B  973-328-5335  kminiter@ccm.edu

Courses

| HED-112. Drugs, Society and Human Behavior. 3 Credits.  
LECT 3 hrs |
This course examines the effects drugs have on the individual and society, taking a critical look at the most recent scientific data drawn from medical, sociological and student research. Topics include, but are not limited to, neurophysiology, pharmacology and the demographics of drug use, legal issues, and treatment and prevention programs. Different types of drugs are examined.  
Additional Fees: Course fee applies.
HED-115. Personal and Family Nutrition. 3 Credits.
LECT 3 hrs
In this course, students study the relationships of nutrition and eating patterns to one's health, nutritive value and composition of foods, metabolism, functions and requirements of nutrients throughout life, and essentials of an adequate diet. Emphasis is placed on the practical application of nutrition concepts in everyday life.

Additional Fees: Course fee applies.

HED-128. Lifetime Wellness. 2 Credits.
LECT 1 hr, LAB 2 hrs
This course is designed to provide students with the knowledge and skills necessary to make intelligent decisions about health and wellness. Topics include nutrition and weight management, substance abuse, stress management, fitness, cardiovascular disease and sexually transmitted diseases. Students engage in personally selected programs to improve wellness.

Additional Fees: Course fee applies.

HED-130. Mind-Body Health. 3 Credits.
LECT 3 hrs
This course explores the relationship between the mind and the body. Emphasis is placed on relaxation, meditation, and yoga to enable students to reach a state of peace, calmness and self-awareness. Students explore the integration of the entire self in order to achieve an understanding and an awareness of their own selves and take control of their wellness.

Additional Fees: Course fee applies.

HED-132. Stress Management. 1 Credit.
LECT 1 hr
This course provides students with an understanding of the basic principles of the stress response, the General Adaptation Syndrome, stressors and stress management. Students participate in physical and cognitive exercises designed to reduce stress.

Additional Fees: Course fee applies.

HED-133. Weight Management. 1 Credit.
LECT 1 hr
This course covers information about lifetime weight management. The role of diet, exercise, behavior modification and stress management and their relationship to weight management are emphasized. Students analyze diets, set goals and apply a weight management program to themselves throughout the course.

HED-283. Cardiopulmonary Resuscitation. 1 Credit.
LAB 2 hrs
This course is taught according to American Heart Association (AHA) guidelines. Students learn about heart disease prevention, early recognition of heart attack and stroke, early access to Emergency Medical Services, and recognition and treatment for respiratory arrest, cardiac arrest and obstructed airway emergencies. Students who successfully complete the requirements will receive an AHA CPR card (BLS for Healthcare Provider CPR). This course is available through the Division of Corporate and Community Programs. Students enrolled in the majors of Nursing, Radiography, Respiratory Therapy, Exercise Science, and Early Childhood Education may request that they receive 1 credit toward their HED/HES requirement. Students must present a valid American Heart Association CPR card (BLS for Healthcare Provider CPR) to the Office of Records and Registration to receive credit. Course fees do not represent income to the AHA or any of its components.

Additional Fees: Course fee applies.

HED-286. Personal Health and Wellness. 3 Credits.
LECT 3 hrs
This course examines current health and wellness topics that have an impact on the individual in today's society. Emphasis is on a wellness approach, examining the physical, emotional, intellectual, social and spiritual dimensions of health. Students engage in evaluations of their own wellness behaviors and investigate in detail at least one health issue of personal significance. (There is no substitution for this course in programs that require it for degree completion.)

Additional Fees: Course fee applies.

HED-293. Special Topics in Health Education. 3 Credits.
LECT 3 hrs
An examination of selected topics or issues in Health Education. Topics may differ each time the course is offered. Students should consult the department chair for further information.

Prerequisites: A three-credit introductory course in Health Education.

HED-294. Special Topics in Health Education. 3 Credits.
LECT 3 hrs
An examination of selected topics or issues in Health Education. Topics may differ each time the course is offered. Students should consult the department chair for further information.

Prerequisites: A three-credit introductory course in Health Education.

HED-295. First Aid and Emergency Care. 3 Credits.
LECT 3 hrs
A basic course in first aid which acquaints students with information about prevention of accident and injury and about emergency assessment, recognition and treatment of trauma and sudden illnesses. Upon successful completion of the requirements, the student will receive First Aid certification.

Additional Fees: Course fee applies.

HED-ELE. Health and Wellness Elective for Cutk. 3 Credits.
LECT 3 hrs
Pseudo course to hold a place in student planner.
HES-104. Foundations of Personal Training. 3 Credits.
LECT 3 hrs
This comprehensive class is ideal for anyone preparing for the ACSM, NASM or ACE Personal Trainer exam and those who want to pursue a career in personal training. Course content includes anatomy, applied exercise science, kinesiology, professional roles and responsibilities. ACSM course curriculum is followed. Open to Personal Trainer Certificate of Achievement (Curriculum 0950) students only.
Prerequisites: Permission of department chair
Additional Fees: Course fee applies.

HES-106. Personal Trainer Field Experience. 1 Credit.
COOP 1 hr
This course provides Personal Trainer Certificate of Achievement students with the opportunity to work with clients in the field. Students are linked with professionals in health clubs and commercial and corporate fitness centers who mentor their progress. Arrangements for this field experience must be coordinated through the field experience instructor. Students must accomplish a minimum of 45 hours in one semester in their field experience and write a report of the experience.
Prerequisites: HES-104, open to Personal Trainer Certificate of Achievement students only.

HES-107. Program Design and Implementation. 3 Credits.
LECT 3 hrs
This course provides students with the practical application of current testing procedures and instrumentation used in exercise testing. Students learn to perform and interpret the basic measurement protocols for cardiorespiratory endurance, muscular strength and endurance, flexibility, body composition, and blood pressure. Students learn the principles related to exercise prescription, develop the necessary skills to design and implement training programs as they relate to the components of fitness. Safeguards and effectiveness for all fitness levels are addressed.
Prerequisites: HES-104, open to Personal Trainer Certificate of Achievement students only
Additional Fees: Course fee applies.

HES-111. Introduction to Exercise Science. 3 Credits.
LECT 3 hrs
This course is recommended in the first semester. This is an introductory course to acquaint students with the development and structure of the field of exercise science. The current scientific development of the field is stressed, with emphasis on basic exercise physiology, health and fitness. Open to Exercise Science majors only.
Prerequisites: Permission of department chair
Additional Fees: Course fee applies.

HES-125. Stretching and Strengthening. 1 Credit.
LAB 2 hrs
This course provides a thorough presentation of exercises for improving strength and flexibility without the need for special equipment. Emphasis is on exercising safely and learning the importance of strength and flexibility in conditioning, injury prevention and rehabilitation. It is designed to give students the tools with which to create a personal exercise program. Students need to supply their own exercise mats.
Additional Fees: Course fee applies.

HES-126. Personal Fitness. 1 Credit.
LAB 2 hrs
Students design and practice an exercise program that develops selected components of physical fitness. Each student undertakes assessments of various components of fitness.
Additional Fees: Course fee applies.

HES-127. Weight Training. 1 Credit.
LAB 2 hrs
Basic principles of resistance (weight) training are taught, emphasizing training for general conditioning. Training programs for major muscle groups are developed and practiced. Equipment used includes free weights and some machines.
Additional Fees: Course fee applies.

HES-128. Yoga. 1 Credit.
LAB 2 hrs
This is an introductory course in yoga covering basic hatha yoga postures and exercises. Breathing techniques, flexibility and muscular endurance are enhanced. The course helps relieve stress and develop a sense of peacefulness and tranquility while improving fitness. Students need to supply their own exercise mats.
Additional Fees: Course fee applies.

HES-129. Self-Defense. 1 Credit.
LAB 2 hrs
This course provides students with the knowledge and skills to judge potential threats and react swiftly to defend themselves. Social and psychological effects of violence are discussed, along with legal issues of self defense. The basic techniques of Tae Kwon-Do, Jujitsu and Aikido are introduced for everyday usage. A martial arts attitude is developed.
Additional Fees: Course fee applies.

HES-130. Tai Chi. 1 Credit.
LAB 2 hrs
Tai Chi is a low-impact form of oriental exercise that increases energy, balance and overall health. Total mind-body interaction is emphasized. This course is a gentle means to contribute to overall health and fitness.
Additional Fees: Course fee applies.

HES-131. Pilates. 1 Credit.
LAB 2 hrs
Pilates is a form of exercise that conditions the muscles through specific strength exercises without creating bulk. Based on the system introduced by Joseph Pilates over 70 years ago, exercises are done on both the mat and machines. Emphasis is on the core strength and flexibility of the abdomen and back, as well as other major body areas. Pilates is an exercise system that also concentrates on mind-body connection and correct postural alignment to gain optimal health and fitness. Students need to supply their own exercise mats.
Additional Fees: Course fee applies.

HES-132. Cardio Conditioning. 1 Credit.
LAB 2 hrs
This course provides the student with the underlying principles of cardiovascular fitness and the opportunity to participate in activities designed to improve cardiovascular fitness, firm muscles, reduce fat and cope with stress.
Additional Fees: Course fee applies.
HES-141. Personal Challenge I. 1 Credit.
LAB 2 hrs
This activity course focuses on the importance of reaching beyond the individual and utilizing group resources to solve problems through trust, teamwork, communications, self-esteem building, group problem-solving skills, decision making and fun. Students execute safely a series of adventure activities involving wall climbing, rope hanging, game playing and cable walking in order to enable the group to cross real and imaginary boundaries. All activities are individualized so that any student may successfully participate. Taught off-campus.
Additional Fees: Course fee applies.

HES-162. Basic Swimming. 1 Credit.
LAB 2 hrs
This course is designed for the non-swimmer or beginner swimmer who has had little or no instructional experience and who may feel uncomfortable in the water. Through this course, one gains basic swimming and diving skills progressing from shallow to deepwater swimming. The National American Red Cross Swimming Levels I-III is covered.
Additional Fees: Course fee applies.

HES-182. Golf I. 1 Credit.
LAB 2 hrs
A beginner’s study and practice of the fundamental skills and basic rules of the game of golf. Topics include the make-up of the course, the grip, swing and stance, the equipment, and the rules. A portion of the course is held off campus at local golf facilities.

HES-186. Badminton. 1 Credit.
LAB 2 hrs
A beginning course which introduces the student to the basic strokes, rules and fundamental strategies of the game of badminton. Emphasis is placed on the utilization of newly acquired skills in game situations.
Additional Fees: Course fee applies.

HES-187. Volleyball. 1 Credit.
LAB 2 hrs
This course develops techniques, skills and strategies of volleyball. Emphasis is on the development of the basic skills essential for success and enjoyment.

HES-211. Kinesiology. 3 Credits.
LECT 2 hrs, LAB 3 hrs
This course emphasizes the analysis of the principles of movement through human anatomical design. Major joints of the body, their actions and the muscles that do those actions are stressed. Application to physical exercise is stressed in lab work on strength, endurance and potential motion of major joints.
Prerequisites: BIO-101
Additional Fees: Course fee applies.

HES-212. Exercise Physiology. 3 Credits.
LECT 2 hrs, LAB 3 hrs
This course includes the study of human responses and adaptations to exercise of varying levels of stress and intensity. Major topics include bioenergetics, the physiology of the circulatory, respiratory, muscular and nervous systems as they apply to exercise, and the underlying physiological basis of fitness. Laboratory experiences illustrate practical application of theoretical content with hands-on experiences to measure and apply what is learned in the lecture component of the course.
Prerequisites: BIO-101, BIO-102 and HES-111, open to Exercise Science majors only
Additional Fees: Course fee applies.

HES-213. Exercise Measurement and Prescription. 3 Credits.
LECT 2 hrs, LAB 3 hrs
This course stresses the appropriate measurement of various aspects of human exercise. Measurement of body composition, cardiovascular efficiency, muscular strength and endurance and other physiological parameters are taught and practiced. Students learn how to develop individualized and properly designed exercise prescriptions for adults, including special populations.
Prerequisites: HES-212 (minimum grade of C) Open to Exercise Science majors only
Additional Fees: Course fee applies.

HES-291. Special Topics in Exercise Science. 1 Credit.
LAB 2 hrs
An examination of selected topics or issues in Exercise Science. Topics may differ each time the course is offered. Students should consult the department chair for further information.
Prerequisites: An introductory course in Exercise Science.

HES-292. Special Topics in Exercise Science. 1 Credit.
LAB 2 hrs
An examination of selected topics or issues in Exercise Science. Topics may differ each time the course is offered. Students should consult the department chair for further information.
Prerequisites: HES-111.

HES-ELE. Exercise Science Restricted Elective. 1-3 Credits.
LECT 10 hrs
Pseudo course holder for student planner.