

# PHYSICAL EDUCATION AND ATHLETICS

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Veale Center

<http://athletics.case.edu/landing/index> (<http://athletics.case.edu/landing/index/>)

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The Department of Physical Education and Athletics (<http://studentaffairs.case.edu/athletics/default.html>) offers the student a variety of opportunities from challenging academic classes to vigorous recreational activities.

Case Western Reserve University sponsors 19 NCAA Division III varsity sports. Men's sports include football, soccer, cross country, basketball, wrestling, swimming, baseball, tennis and indoor/outdoor track & field. Women's sports include volleyball, basketball, swimming, indoor/outdoor track & field, tennis, cross country, soccer, and softball. Students must be on the roster of the varsity sport to enroll (PHED170-190).

CWRU is a charter member of the University Athletic Association (UAA), sharing in the belief that academic excellence and athletic excellence are not mutually exclusive. The Spartans are joined in the UAA by Brandeis University, Carnegie Mellon University, Emory University, New York University, University of Chicago, University of Rochester and Washington University in St. Louis.

The Spartan football team also maintains affiliate membership in the Presidents' Athletic Conference (PAC).

The department sponsors a variety of intramural and club sport activities, including archery, cheerleading, crew, cycling, fencing, ice hockey, lacrosse, kendo, kung fu, table tennis, tae kwon do, ultimate frisbee, volleyball, and water polo. Sport clubs are available to all students, faculty, and staff. Intramural competition is available in more than 40 activities, and more than one-half of undergraduates participate for relaxation, physical fitness, and a chance to improve skills.

## Lifetime Sports Program

The department has designed an instructional program of modern activities and lifetime sports. Each semester, fifteen to twenty-five co-educational lifetime sports classes are offered.

Undergraduates have a one-year physical education requirement to be completed in the first year. Required classes, for zero credits, are offered for either half-semester or full-semester. Others who have completed the requirement may audit classes.

A number of popular, advanced lifetime sports activities are also offered for one hour of academic credit. Advanced skills, strategy, and coaching are taught (PHED 200-299).

## Recreational Activities and Intercollegiate Athletics

The intramural program provides a continuous schedule of activities throughout the year. Individual and team sports are available to students in several divisions: university housing, fraternity, women, coed, graduate, and open. Intercollegiate varsity athletic competition is available in ten sports for men and nine sports for women.

## Reserve Officers' Training Corps (Army ROTC)

An Army Reserve Officers' Training Corps (ROTC) program is available to Case Western Reserve University students through a partnership agreement with the US Army and a cooperative arrangement with John Carroll University. Some of the first- and second-year ROTC classes are offered on the Case Western Reserve University campus through the Department of Physical Education and Athletics. Participating students may be exempt from the undergraduate physical education requirement. For courses offered at Case Western Reserve (MLSC 101, MLSC 102, MLSC 201, and MLSC 202), students register in the ordinary way. For other Army ROTC classes, students enroll through cross-registration in the Department of Military Science at John Carroll University, which is approximately five miles from Case Western Reserve. For additional information on ROTC programs, see the Undergraduate Collaborative Programs (<http://bulletin.case.edu/undergraduatestudies/collaborativeprograms/>) section of the Bulletin.

## Department Faculty

Amy Backus, MEd  
(Loyola University Chicago)  
*Professor*

James C. Wyant Director of Athletics & Chair, Department of Physical Education and Athletics

Tianna Cobb, MS, AT, ATC  
(West Virginia Wesleyan College)  
*Instructor*  
Assistant Athletic Trainer

Greg Debeljak, MA  
(John Carroll University)  
*Associate Professor*  
Head Football Coach

Matthew Englander, BA  
(The College of Wooster)  
*Instructor*  
Head Baseball Coach

Karen Farrell, MS  
(University of Massachusetts at Amherst)  
*Associate Professor Isabel Wetmore Lowman Chair for Health Education*  
Head Women's Volleyball Coach; Associate Athletic Director; Senior Woman Administrator

Brian Ferguson, MA, Business & Organizational Security Management  
(Webster University)  
*Professor of Military Science*  
Lieutenant Colonel, US Army

Michael Fitzpatrick, BS  
(Arcadia University)  
*Instructor*  
Assistant Men's Basketball Coach

James Garfield, MS  
(California University of Pennsylvania)  
*Instructor*  
Athletic Trainer

Hannah Hagy, MA  
(Trinity College)  
*Instructor*  
Assistant Coach Swim and Dive

Captain Nathan Hanners, BS  
(University of Texas at Dallas)  
*Asst. Prof. Military Science*

Josie Henry, MA  
(Minnesota State University)  
*Assistant Professor*  
Head Fast Pitch Softball Coach

Taylor Jurczynski, MS, AT, ATC  
(Indiana Wesleyan University)  
*Instructor*  
Assistant Athletic Trainer

Patrick Kennedy, MS  
(University of Maryland)  
*Professor*  
Associate Athletic Director & Intramural and Club Sports Director

Kathy Lanese, BS  
(Ohio University)  
*Instructor*  
Head Women's Cross Country Coach and Assistant Men's Track and Field Coach

Ben Lolli, MA  
(Walsh University)  
*Instructor*  
Assistant Football Coach

Josh Malave, ME  
(University of Findlay)  
*Instructor*  
Head Wrestling Coach

Todd McGuinness, BA  
(Bethany College)  
*Instructor*  
Head Men's Basketball Coach

Kirsten G. McMahan, MBA  
(Berry College)  
*Assistant Professor*  
Head Women's Tennis Coach

Warren Miller, BA  
(Baldwin Wallace University)  
*Instructor*  
Defensive Coordinator, Football

Doug Milliken, MS  
(Indiana State University)  
*Assistant Professor*  
Head Men's and Women's Swimming & Diving Coach/Assistant Athletic Director

Thomas Monagan, MS Physical Education, AT, ATC  
(Eastern Illinois University)  
*Head Athletic Trainer/Instructor*  
Sports Administration/Exercise Physiology

Carter Poe, M.A.  
(University of Mt Union)  
*Instructor*  
Head Men Soccer Coach

Julie Pratt, BA  
(University of Akron)  
*Instructor*  
Assistant Softball Coach

Jennifer Reimer, MEd  
(Bowling Green State University)  
*Associate Professor*  
Head Women's Basketball Coach

Eric Schmuhl, MEd  
(Muskingum College)  
*Assistant Professor*  
Head Men's and Women's Track Coach

Jennifer Simonetti, BS PT & Exercise Science  
(University of Dayton)  
*Instructor*  
Head Coach Women Soccer

Dereck Slesh, MBA  
(Cleveland State University)  
*Associate Professor*  
Offensive Coordinator, Football

Todd Wojtkowski, MBA  
(The Citadel)  
*Associate Professor*  
Head Men's Tennis Coach

### Sports Medicine Minor

PHED 332	Introduction to Sports Medicine	3
PHED 334	Orthopedic Assessment of the Upper Extremity	3
PHED 339	Orthopedic Assessment of the Lower Extremity	3
PHED 341	Physiology of Exercise	3
PHED 342	Kinesiology	3
PHED 350	Therapeutic Rehabilitation and Modalities	3

**Total Units** **18**

Contact Thomas Monagan, Head Athletic Trainer, for more information at Veale Center, 216.368.2863.

### MLSC Courses

#### MLSC 101. Leadership and Personal Development. 1 Unit.

This course establishes a framework for understanding officership, leadership, and Army values. Also addresses personal development skills, including physical fitness and time management. Note: Enrollment in this course by a non-contracted student does not obligate the student to the military or the Army ROTC program.

**MLSC 102. Introduction to Tactical Leadership. 1 Unit.**

This course focuses on communications, leadership, and problem solving. Introduces students to the duties and responsibilities of an Army lieutenant as well as examining current pay and benefits. Note: Enrollment in this course by a non-contracted student does not obligate the student to the military or the Army ROTC program. Recommended preparation: MLSC 101.

**MLSC 201. Innovative Team Leadership. 2 Units.**

Use of ethics-based leadership skills to develop individual abilities and contribute to effective team-building. Focus on skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Learn the fundamentals of ROTC's Leadership Development Program. Participation in a weekend field training exercise is optional but encouraged. Note: Enrollment in this course by a non-contracted student does not obligate the student to the military or the Army ROTC program. Recommended preparation: MLSC 101, 102.

**MLSC 202. Foundations of Tactical Leadership. 2 Units.**

Introduction to individual and team aspects of military tactics in small-unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Techniques for training others as an aspect of continued leadership development. Participation in a weekend exercise is optional but encouraged. Note: Enrollment in this course by a non-contracted student does not obligate the student to the military or the Army ROTC program. Recommended preparation: MLSC 101, 102, 201.

**PHED Courses****PHED 10A. Cardio Games (First Half). 0 Unit.**

Cardio Games emphasizes conditioning of the aerobic and anaerobic systems through fun and energetic games such as Ultimate Frisbee, Tag, Dodge Ball, Flicker Ball and more. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 10B. Cardio Games (Second Half). 0 Unit.**

Cardio Games emphasizes conditioning of the aerobic and anaerobic systems through fun and energetic games such as Ultimate Frisbee, Tag, Dodge Ball, Flicker Ball and more. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 11A. Jump Rope Training (First Half). 0 Unit.**

This class is designed to help students develop quickness, agility, balance, strength, power, and endurance through jump rope training. Students will learn rope-handling skills, jumping techniques and training routines to help supplement training for fitness and performance. Workouts and progressions are included for warm-up, cool-down, fitness components and sport-specific training. Prereq: Undergraduate degree seeking student.

**PHED 12A. Badminton (First Half). 0 Unit.**

This class provides the student with the basic skills, footwork and strategies necessary to play the sport of badminton. Emphasis is placed on skill development through instruction and drills as well as singles and doubles match play. This class is appropriate for all students. Students with special needs can be accommodated. Prereq: Undergraduate degree seeking student.

**PHED 12B. Badminton (Second Half). 0 Unit.**

This class provides the student with the basic skills, footwork and strategies necessary to play the sport of badminton. Emphasis is placed on skill development through instruction and drills as well as singles and doubles match play. This class is appropriate for all students. Students with special needs can be accommodated. Prereq: Undergraduate degree seeking student.

**PHED 13A. Rock Wall Climbing (First Half). 0 Unit.**

This course is designed to give students a comprehensive introduction to the skills, safely, terminology and equipment used in the sport of recreational activity of rock climbing. Prereq: Undergraduate degree seeking student.

**PHED 13B. Rock Wall Climbing (Second Half). 0 Unit.**

This course is designed to give students a comprehensive introduction to the skills, safely, terminology and equipment used in the sport of recreational activity of rock climbing. Prereq: Undergraduate degree seeking student.

**PHED 14B. Indoor Rowing (Second Half). 0 Unit.**

This course introduces the student to basic indoor rowing techniques, skills, and equipment. Students will learn conditioning programs to prepare the student to continue in recreational, fitness or competitive rowing programs. Prereq: Undergraduate degree seeking student.

**PHED 21A. Hatha Yoga (First Half). 0 Unit.**

This course provides an introduction to Hatha Yoga, presenting body awareness, basic philosophy, breathwork, postures and meditation techniques. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 21B. Hatha Yoga (Second Half). 0 Unit.**

This course provides an introduction to Hatha Yoga, presenting body awareness, basic philosophy, breathwork, postures and meditation techniques. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 22A. Intermediate Hatha Yoga (First Half). 0 Unit.**

This course utilizes the basics of Hatha Yoga including body awareness, philosophy, breathwork, and postures with emphasis on increased strengthening, increased aerobic segments, and more challenging postures. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 22B. Intermediate Hatha Yoga (Second Half). 0 Unit.**

This course utilizes the basics of Hatha Yoga including body awareness, philosophy, breathwork, and postures with emphasis on increased strengthening, increased aerobic segments, and more challenging postures. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 24B. Jogging (Second Half). 0 Unit.**

Prereq: Undergraduate degree seeking student.

**PHED 25A. Power Volleyball (First Half). 0 Unit.**

This class introduces volleyball skills, techniques, strategies, rules and scoring. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 25B. Power Volleyball (Second Half). 0 Unit.**

This class introduces volleyball skills, techniques, strategies, rules and scoring. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 26A. Racquetball (First Half). 0 Unit.**

This course teaches racquetball skills and strategies for team and individual play. Course content includes terminology, skill development, scoring, etiquette and safety. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 26B. Racquetball (Second Half). 0 Unit.**

This course teaches racquetball skills and strategies for team and individual play. Course content includes terminology, skill development, scoring, etiquette and safety. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 27A. Indoor Group Cycling (First Half). 0 Unit.**

A stationary cycling program set to motivational music. Students will learn how to use and set up the bike and how to create a challenging workout using sprints, jumps and climbs. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 27B. Indoor Group Cycling (Second Half). 0 Unit.**

A stationary cycling program set to motivational music. Students will learn how to use and set up the bike and how to create a challenging workout using sprints, jumps and climbs. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 29A. Swimming - Beginning and Intermediate (First Half). 0 Unit.**

This class focuses on basic swimming skills and safety. This class is appropriate for non-swimmers to those students with mid-range swimming skills. Students with disabilities may be accommodated. Prereq: Undergraduate degree seeking student.

**PHED 29B. Swimming - Beginning and Intermediate (Second Half). 0 Unit.**

This class focuses on basic swimming skills and safety. This class is appropriate for non-swimmers to those students with mid-range swimming skills. Students with disabilities may be accommodated. Prereq: Undergraduate degree seeking student.

**PHED 30A. Swimming - Endurance (First Half). 0 Unit.**

This class is for individuals who have mastered intermediate swimming skills and wish to develop advanced swimming skills and greater swimming endurance. Prereq: Undergraduate degree seeking student.

**PHED 30B. Swimming - Endurance (Second Half). 0 Unit.**

This class is for individuals who have mastered intermediate swimming skills and wish to develop advanced swimming skills and greater swimming endurance. Prereq: Undergraduate degree seeking student.

**PHED 31A. Tennis (First Half). 0 Unit.**

Students will learn the tennis skills and strategies necessary for both singles and doubles play. Emphasis is placed on stroke development, rules, scoring and etiquette. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 31B. Tennis (Second Half). 0 Unit.**

Students will learn the tennis skills and strategies necessary for both singles and doubles play. Emphasis is placed on stroke development, rules, scoring and etiquette. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 34A. Weight Training (First Half). 0 Unit.**

This class focuses on muscular strength and endurance training through individualized weight training programs. Emphasis is placed on appropriate use of equipment and safety procedures. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 34B. Weight Training (Second Half). 0 Unit.**

This class focuses on muscular strength and endurance training through individualized weight training programs. Emphasis is placed on appropriate use of equipment and safety procedures. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 39A. Bowling (First Half). 0 Unit.**

This class introduces bowling skills, techniques, strategies, rules and scoring. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 39B. Bowling (Second Half). 0 Unit.**

This class introduces bowling skills, techniques, strategies, rules and scoring. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 40A. Basketball (First Half). 0 Unit.**

This class introduces basketball skills, techniques, rules and basic offense and defense. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 40B. Basketball (Second Half). 0 Unit.**

This class introduces basketball skills, techniques, rules and basic offense and defense. This class is appropriate for most students.

**PHED 41A. Softball (First Half). 0 Unit.**

This class introduces softball skills, techniques, rules and basic offense and defense strategies. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 41B. Softball (Second Half). 0 Unit.**

This class introduces softball skills, techniques, rules and basic offense and defense strategies. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 42B. Indoor Soccer (Second Half). 0 Unit.**

Students will learn the skills, techniques and strategies to play the sport of indoor soccer. This class is appropriate for most students. Prereq: Undergraduate degree seeking student.

**PHED 44A. Core Yoga (1st Half). 0 Unit.**

This course combines Hatha Yoga postures, Pilates exercises, body awareness and breathwork while focusing on deep stabilizing abdominal muscles. Students will combine stretching and strengthening to improve posture and flexibility and create balance in the physical body. Students will learn slow, controlled movements to help tone and condition. Prereq: Undergraduate degree seeking student.

**PHED 44B. Core Yoga (2nd Half). 0 Unit.**

This course combines Hatha Yoga postures, Pilates exercises, body awareness and breathwork while focusing on deep stabilizing abdominal muscles. Students will combine stretching and strengthening to improve posture and flexibility and create balance in the physical body. Students will learn slow, controlled movements to help tone and condition. Prereq: Undergraduate degree seeking student.

**PHED 45A. Introduction to Speed and Agility Training. 0 Unit.**

This introductory course is intended for the student with an interest in training of speed and agility specific to their sport interest. The course will focus on the aspects of physical training necessary for the development of speed and agility and improved athletic performance. Prereq: Undergraduate degree seeking student.

**PHED 45B. Introduction to Speed and Agility Training. 0 Unit.**

This introductory course is intended for the student with an interest in training of speed and agility specific to their sport interest. The course will focus on the aspects of physical training necessary for the development of speed and agility and improved athletic performance. Prereq: Undergraduate degree seeking student.

**PHED 50A. Personal Safety Awareness (First Half). 0 Unit.**

This class focuses on safety and preventative techniques. Emphasis is placed on self-protection. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 50B. Personal Safety Awareness (Second Half). 0 Unit.**

This class focuses on safety and preventative techniques. Emphasis is placed on self-protection. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 55A. Cardio-Fitness (First Half). 0 Unit.**

This class presents the components of physical fitness through conditioning activities utilizing equipment such as stairclimbers, treadmills, and elliptical trainers. Students will evaluate their fitness levels and learn how to put together an individualized workout program. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 55B. Cardio-Fitness (Second Half). 0 Unit.**

This class presents the components of physical fitness through conditioning activities utilizing equipment such as stairclimbers, treadmills, and elliptical trainers. Students will evaluate their fitness levels and learn how to put together an individualized workout program. This class is appropriate for all students. Prereq: Undergraduate degree seeking student.

**PHED 60A. CPR/First Aid (1st half). 0 Unit.**

Students will learn the basic first aid and CPR skills necessary to act in an emergency. Automated external defibrillation training is included. This class involves both lecture and hands-on work. Students will have the opportunity to achieve Basic Rescuer certification at the completion of the class.

**PHED 60B. CPR/First Aid (2nd half). 0 Unit.**

Students will learn the basic first aid and CPR skills necessary to act in an emergency. Automated external defibrillation training is included. This class involves both lecture and hands-on work. Students will have the opportunity to achieve Basic Rescuer certification at the completion of this class.

**PHED 65B. Team Building, Leadership, and Creative Movement (2nd half). 0 Unit.**

The primary purpose of this course is to provide an opportunity for Orientation leaders to: work as a team and build transferable skills for collaboration, active listening, communication, and motivation; learn dance movement as a form of communication and stress reduction; create the Orientation Leader Boogie Dance (performed at Welcome Days tradition and football game halftime show); understand the value in personal decision making and awareness (stress reduction, drug/alcohol awareness, sexual assault, etc.); learn campus resources; build Orientation Leader esprit de corps and enhance school spirit. This course will develop more effective and competent university ambassadors. In addition, the course will facilitate the development of leadership skills.

**PHED 66A. Advanced Rowing (First Half). 0 Unit.**

This course is designed to enhance the rowing technique of the experienced rower. Prereq: Undergraduate degree seeking student.

**PHED 66B. Advanced Rowing (Second Half). 0 Unit.**

This course is designed to enhance the rowing technique of the experienced rower. Prereq: Undergraduate degree seeking student.

**PHED 100. Independent Activity. 0 - 10 Units.**

This course is designed to allow the student to write individual fitness goals, compose an individual fitness program specific to the goals and execute the individual program. Students are required to participate in a pre- and post-testing program and must achieve a minimum of 75% for each test component (national norms) in order to participate in Independent Activity. The course instructor must approve all programs. The student will be required to maintain a detailed activity log.

**PHED 108. Fencing. 0 Unit.**

Fencing is the art of swordsmanship. Students will learn fencing skills such as on guard, lunge, attack, parry and touch. Students will learn the rules of competition and have the opportunity to compete during class time.

**PHED 130. Wellness. 0 Unit.**

This lecture class teaches the components of physical fitness as well as evaluation techniques, fitness assessment, body composition, nutrition and weight control information. This class is appropriate for all students.

**PHED 131. Personal Fitness. 0 Unit.**

Personal Fitness is a full semester class that teaches the components of physical fitness through both lecture and activity. Students will assess their fitness levels and learn conditioning activities to improve flexibility, cardiovascular endurance, muscular strength and endurance. Nutrition, weight control and concepts of wellness are covered in this class. This class is appropriate for most students.

**PHED 141. Dance. 0 Unit.**

This course is designed to introduce the student to dance. Students will be exposed to a variety of dances including contemporary, jazz, folk and formal dancing. Students will learn how choreography is mounted and how dancers remember it. The class is appropriate for beginners as well as students with dance experience.

**PHED 170. Varsity Baseball. 0 Unit.**

**PHED 171. Varsity Basketball (Men). 0 Unit.**

**PHED 172. Varsity Basketball (Women). 0 Unit.**

**PHED 174. Varsity Cross Country (Men). 0 Unit.**

**PHED 175. Varsity Cross Country (Women). 0 Unit.**

**PHED 178. Varsity Football. 0 Unit.**

**PHED 180. Varsity Soccer (Men). 0 Unit.**

**PHED 181. Varsity Soccer (Women). 0 Unit.**

**PHED 182. Varsity Swimming (Men). 0 Unit.**

**PHED 183. Varsity Swimming (Women). 0 Unit.**

**PHED 184. Varsity Tennis (Men). 0 Unit.**

**PHED 185. Varsity Tennis (Women). 0 Unit.**

**PHED 186. Varsity Track and Field (Men). 0 Unit.**

**PHED 187. Varsity Track and Field (Women). 0 Unit.**

**PHED 188. Varsity Volleyball. 0 Unit.**

**PHED 189. Varsity Wrestling. 0 Unit.**

**PHED 190. Varsity Softball (Women). 0 Unit.**

**PHED 218. Wellness. 1 Unit.**

**PHED 300. Sports Medicine Independent Study. 3 Units.**

This independent studies course will provide sports medicine minors who experience scheduling conflicts with flexibility to complete the minor requirements. This course may be used to complete any of the current minor requirements.

**PHED 325. Officiating Basketball. 2 Units.**

Administrative procedures, promotion, managerial relationships, scheduling, tournaments, budgeting, scoring systems, and officiating.

**PHED 332. Introduction to Sports Medicine. 3 Units.**

This class provides a detailed introduction to the foundation of Sports Medicine. Students will understand the complexities of sports medicine and athletic training through classroom lecture, structured laboratory and clinical hours. Topics covered in this class include roles and responsibilities of the sports medicine team, injury pathology, injury prevention, evaluation and management of injury.

**PHED 334. Orthopedic Assessment of the Upper Extremity. 3 Units.**

This class provides students with hands on experience that prepares them to perform orthopedic assessments within the field of athletic training. Students learn to take medical histories, palpate bony and soft structures, perform range of motion, neurological and circulatory tests. Students will learn to perform orthopedic tests of the upper extremities, head, cervical spine and abdomen. This class involves lectures, laboratory and clinical hours. Prereq: PHED 332 and PHED 342.

**PHED 339. Orthopedic Assessment of the Lower Extremity. 3 Units.**

This class provides students with hands on experience that prepares them to perform orthopedic assessments within the field of athletic training. Students learn to take medical histories, palpate bony and soft structures, perform range of motion, neurological and circulatory tests; and perform orthopedic special test of the lower extremities, pelvis, and lumbar spine. This class involves lectures, labs, and clinical hours. Prereq: PHED 332 and PHED 342.

**PHED 341. Physiology of Exercise. 3 Units.**

The classroom and laboratory experiences in this class are intended to provide an understanding of physiological adaptations of the human body to acute and chronic exercise. The classroom portion will focus mainly on the response and adaptation of bodily systems to exercise and the relationship of physiology to sport, health and exercise programs. The laboratory portion will focus on evaluation of the physiological response to exercise. Prereq: PHED 332, PHED 342, PHED 334, PHED 339.

**PHED 342. Kinesiology. 3 Units.**

The purpose of this course is to present the conceptual ideas and general principles of the science of human movement. It reviews and applies the pertinent aspects of anatomy, physiology and mechanics. Subject matter is drawn from research and clinical findings of widely dispersed kinesiological subdisciplines and professional specializations. Prereq: PHED 332.

**PHED 350. Therapeutic Rehabilitation and Modalities. 3 Units.**

Topics covered in this class include concepts and practices associated with the conditioning and reconditioning (rehabilitation) of athletic injuries. Principles and practical skills associated with therapeutic modalities used in the treatment and rehabilitation of athletic injuries are also covered. This class involves lectures, labs and clinical hours. Prereq: PHED 332, PHED 334, PHED 339, and PHED 342.