HEALTH, EXERCISE AND SPORT SCIENCES

Lara Killick, Director of Graduate Studies, (email: lkillick@pacific.edu)

The graduate program in Health, Exercise and Sport Sciences provides for scholarly study in the areas of Health & Exercise Science, Coaching Science, Sport Pedagogy (PE Single Subject Credential) and Intercollegiate Sport & Campus Recreation Administration (Sport Management). Each concentration contains a blend of core and elective courses, enabling graduate students to design their program of study to meet their personal research and educational goals. These elective courses may be selected from other departments, including but not limited to Biology, Business, Chemistry, Communications, Education and Psychology. Each graduate student is provided with the choice between comprehensive exams or a thesis project as their capstone experience. All graduate students are encouraged to include experiential learning, collaborative research, internships and overseas experiences in their program of study.

Programs Offered

Master of Arts

• Health & Exercise Science
• Coaching Science & Sport Performance
• Sport Pedagogy (PE single subject teacher credential)
• Intercollegiate Sport & Campus Recreation Administration (Sport Management)

Master of Science in Athletic Training

Admission Requirements

1. Undergraduate degree in health, exercise and sport sciences, a related discipline, or completion of essential undergraduate prerequisites, as determined by the Graduate Studies Committee.
2. Completion of the Graduate Records Examination (GRE)
3. Minimum 3.0 GPA (Cumulative and Major)
4. 3 Letters of Recommendation
5. Personal Essay/Statement
6. Official copies of Transcripts
7. Resume/CV

Master of Arts in Health, Exercise and Sport Sciences

Candidates have the choice of completing the Thesis Route or the Comprehensive Exam Route:

Thesis Route

Students must complete a minimum of 32 units with a Pacific cumulative and major/program grade point average of 3.0 in order to earn the master of arts degree in health, exercise and sport sciences. Twenty (20) of these units must be completed in health, exercise and sport sciences courses. Twelve (12) units may be completed in other departments.

Courses must be graded B- (2.7) or higher to be counted toward the degree program.

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<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<tr>
<td>HESP 279</td>
<td>Research Methods in Sport Sciences</td>
<td>4</td>
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<tr>
<td>HESP 299</td>
<td>Thesis</td>
<td>4</td>
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| Four HESP required classes (dependent on area of emphasis) | 16 |

Thesis Notes:

1) Fulfillment of the prerequisite requirement for HESP 279: i.e., completion of a course in statistics or an introduction to research course involving statistical analysis of data, with a B- or better.

2) Units received for meeting this prerequisite requirement may not be included among the minimum units required for the master's degree.

3) Courses may be taken concurrently.

Comprehensive Exam Route

Students must complete a minimum of 32 units with a Pacific cumulative and major/program grade point average of 3.0 in order to earn the master of arts degree in health, exercise and sport sciences. Twenty (20) of these units must be completed in health, exercise and sport sciences courses. Twelve (12) units may be completed in other departments. Candidates must successfully pass a written comprehensive exam in all classes that contribute towards graduation.

Courses must be graded B- (2.7) or higher to be counted toward the degree program.

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<tr>
<td>Three HESP approved electives (Units must all be at the 200 level)</td>
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Total Hours 32

Notes:

1) Fulfillment of the prerequisite requirement for HESP 279: i.e., completion of a course in statistics or an introduction to research course involving statistical analysis of data, with a B- or better.
2) Units received for meeting this prerequisite requirement may not be included among the minimum units required for the master’s degree.

3) Courses may be taken concurrently.

Comprehensive Exam Notes:

1) Candidates will sit comprehensive exams at the end of each academic year they are enrolled at Pacific.

2) Comprehensive Exam questions are completed for each graduate class the candidate takes in that academic year. Candidates are provided with the questions a minimum of 5 weeks in advance of the scheduled exam date. In consultation with the relevant graduate faculty member, candidates are permitted to prepare outlines for each question set. These outlines are not permitted in the exam itself. A one-page bibliography is permitted for each scheduled exam session. The bibliography will be surrendered to the Graduate Director at the completion of the exam.

3) Candidates are permitted 1 opportunity to re-sit any failed exam questions.

4) In the event that the candidate fails the re-sit, they must complete an additional 1 unit Independent Study class (in the content area of the failed question) and pass a comprehensive exam in this class.

5) The results are transmitted to the candidate in writing.

6) The Graduate Director serves as the coordinator of the Comprehensive Exams.

Additional information:

1. All graduate students are assigned the Graduate Director as their faculty advisor.

2. Candidates meet with their faculty advisor twice a year to create their individual plan of study.

3. All independent studies and/or independent research must be reviewed and approved by the Graduate Director prior to registration.

4. Dates for open colloquiums, written comprehensive examinations, and final oral examinations are coordinated through the Graduate Director.

Master of Science in Athletic Training

Students must complete 60 semester units with a Pacific cumulative grade point average of 3.0 to earn the master of science in athletic training degree. Students must maintain a cumulative GPA of at least a 3.0. Any grade below a B- will not count towards the degree.

Year 1

Summer
HESP 211 Human Anatomy for Athletic Trainers 4
HESP 228 Research Methods in Athletic Training 4

Fall
HESP 201A Clinical Integration Proficiencies I 1
HESP 202A Clinical Practicum I 1
HESP 212 Advanced Musculoskeletal Assessment (LE) 4
HESP 214 Applied Therapeutic Exercise (LE) 4
HESP 223 Advanced Therapeutic Modalities 4

Spring
HESP 201B Clinical Integration Proficiencies II 1
HESP 202B Clinical Practicum II 1
HESP 213 Advanced Musculoskeletal Assessment (UE) 4

Year 2

Summer
HESP 202C Clinical Practicum III 1
HESP 235 Graduate Nutrition/Exercise Metabolism 4

Fall
HESP 201C Clinical Integration Proficiencies III 1
HESP 202D Clinical Practicum IV 1
HESP 203A Applied Research I 1
HESP 220 Pathomechanics of Musculoskeletal Injury 3
HESP 224 Clinical Pharmacology 1
HESP 227 Healthcare Administration and Management 4

Spring
HESP 201D Clinical Integration Proficiencies IV 1
HESP 202E Clinical Practicum V 1
HESP 203B Applied Research II 1
HESP 205 Athletic Training Capstone 2
HESP 221 Assessment of General Medical Conditions 3
HESP 222 Head, Neck, and Spine Injuries 3
HESP 229 Psychosocial Aspects of Athletic Training 3

Hlth, Exercise Sprt Sci Courses

HESP 100. Introduction to Research in Health, Exercise and Sport Sciences. 3 Units.
This class is designed to develop research skills specific to the fields within health, exercise and sport sciences. Students learn to collect, review, synthesize and critically analyze scholarly research. Students are also able to create research questions and establish hypotheses, and they are supposed to a variety of data collection methods. In addition, students learn to apply appropriate techniques to interpret data and apply the results in health, exercise, and sport settings. The intention of this course is to develop analytical skills to enable the student to conduct and evaluate ethical research in your chosen field.

HESP 101. Sport Data and Analytics. 4 Units.
Sport analytics refers to the use of data and quantitative methods to measure performance and make decisions to gain advantage in the sport industry. This course aims to explore recent trends in sport analytics from a practical point of view, offering students the skills and ideas to create analytics of potential value to sport organizations. The course content will cover topics such as data management, statistic data analysis, modeling, and decision making in various sport settings.

HESP 120. Instructional Strategies and Methods of Teaching and Coaching. 4 Units.
This course is designed for the future physical educator or coach to deliver an effective, meaningful physical education curriculum to a diverse population of students. Emphasis is on physical education pedagogy; the skills and techniques that successful teachers use to ensure student learning. Students engage in guided teaching and systematic observation experiences at the primary and secondary school levels in an effort to introduce them to effective teaching and coaching behaviors.
HESP 121. Analysis of Team and Individual Sports. 3 Units.
This is an applied motor learning approach to skill acquisition for team and individual sports. In addition to personal skill development, students learn to prepare the introduction, explanation and demonstration of sports skills; develop and maintain skill levels through practice and reinforcement; analyze movement by systematically observing performance; utilize biomechanical concepts to analyze, correct and enhance performance and cognitive processes to improve performance. Ten to 15 different team and individual sports are presented and instruction time per sport varies. Lab fee required.

HESP 123. Analysis of Nontraditional Games and Sports. 3 Units.
This is an applied motor learning approach to skill acquisition for nontraditional games and sports. A variety of nontraditional games and outdoor activities embedded in the CA curriculum framework for physical education. Clinical experience is provided for secondary students in the community. Eight to 10 different nontraditional games and sports are presented and instruction time per sport varies. Lab fee required.

HESP 129. Principles of Exercise Physiology. 4 Units.
A course designed to meet the broad needs of Sports Sciences majors, utilizing a practical approach based on underlying physiological principles as guidelines for exercise practices, as found in physical education, athletics, adult exercise prescription and other settings. Outside laboratory assignments are carried out for the purpose of demonstrating basic physiological responses and the resulting principles that are drawn from them for application in exercise and testing settings. Lab fee required.

HESP 131. Assessment and Evaluation. 4 Units.
This course is the development of competencies of Health, Exercise and Sport Sciences majors for the design and implementation of procedures to appropriately measure and evaluate students, clients and/or programs. Basic data acquisition methods and statistical analysis techniques are presented. A Lab fee is required.

HESP 133. Kinesiology. 4 Units.
This course is a functional study of musculoskeletal anatomy and its relationship to human movement, posture, exercise prescription, and rehabilitation. Prerequisite: BIOL 011 or BIOL 051 or BIOL 061 or permission of instructor, and lab fee required.

HESP 135. Exercise Metabolism. 4 Units.
This course provides a thorough study of the principles of nutrition as they relate to health of individuals who participate in sports or physical activity. Topics include calculating energy balance and the role of carbohydrates, lipid, protein, vitamins, minerals and water in sports performance. The application of these topics for optimal metabolic functioning to a variety of physical activities is also presented. Prerequisites: HESP 129; BIOL 011 or BIOL 061.

HESP 137. Psycho-Social Aspects of Health Care. 4 Units.
Students study comprehensive, integrated coverage of psychosocial topics in healthcare involving clients, families, and other caregivers affected by pathology, impairment, functional limitations, and/or disability. This course will have a broad coverage of topics in healthcare including multicultural issues, spirituality, chronic condition, abuse/ neglect, and PTSD. Emphasis will be placed on current, evidence-based literature, connecting theory to practice.

HESP 139. Exercise Psychology. 4 Units.
This course employs the theories and methods of psychology to examine the related fields of competitive sports, fitness, exercise, and rehabilitation from injury. Major questions addressed in the course include: How do psychological factors influence participation in physical activity and performance of the individual? How does participation in physical activity or incapacity due to an injury affect the psychological make-up of the individual? These questions are explored from educational, coaching, research, and clinical perspectives.

HESP 141. Sport, Culture and U.S. Society. 4 Units.
This course is designed to explore the relationship between sport, culture and society in both the USA and the broader global world. Students learn to critically examine a wide range of topics that include, but not limited to, sport and gender, sport and race, global sports worlds, drugs and violence in sport, sport and politics and the crime-sport nexus. The intention of this course is to develop the student's sociological imagination and encourage the student to think critically about the role sport plays in the development of societies, ideologies and everyday life. (DVSY, ETHC, GE1B, GEND)

HESP 142. Sport and Globalization. 3 Units.
This course examines the interaction between sport and globalization. Globalization and its underlying forces are explored as well as the manner in which sport and these global forces interact. The course then explores the structure, governance, and politics of global sport. Special attention is given to the processes that facilitate and impede globalization and the role sport plays in both. The course also extensively covers the consequences resulting from the reciprocal relationship between sport and globalization.

HESP 143. Prevention and Acute Care of Injury and Illness. 4 Units.
This course provides an overview of the field of Athletic Training, its organization, and the responsibilities of a Certified Athletic Trainer (AT) as part of the sports medicine team. Instruction emphasizes prevention, recognition, and immediate care of injuries and illnesses associated with physical activity. This course is recommended for freshmen.

HESP 145. Therapeutic Modalities. 4 Units.
This course is a lecture and laboratory experience designed to expose the student to the theory, principles, techniques and application of therapeutic modalities pertaining to the treatment of athletic or activity related injuries. Topics include discussions of the physiological effects, indications, contra indications, dosage and maintenance of each modality. Recommended: BIOL 081. Lab fee is required. Junior standing.

HESP 146. Health, Disease, and Pharmacology. 4 Units.
This course is an in-depth exploration of physical, mental, and social health with specific emphasis on recognizing the signs, symptoms, and predisposing conditions associated with the progression of specific illnesses and diseases as they relate to the physically active individual. Students also develop an awareness of the indications, contraindications, precautions, and interactions of medications used to treat those illnesses and diseases.
HESP 147. Exercise Physiology I. 4 Units.  
This course is primarily designed to familiarize students with the theoretical background and hands-on skills to competently assess levels of wellness/fitness in a healthy, active, adult population. The topics and skills in the class encompass the latest information on the structure and function of body systems, training adaptations, testing and evaluation, exercise techniques, and program design. These skills are used to prescribe lifestyle and/or exercise modifications that result in individual progress toward a desired goal. The content of this course is highly focused toward the knowledge and skills required for successfully completing the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist (CSCS) examination. Prerequisite: HESP 129 and upper-division class standing. Lab fee required.

HESP 149. Clinical Evaluation and Diagnosis I. 3 Units.  
This course presents an in-depth study of musculoskeletal assessment of the lower extremity, thoracic and lumbar spine for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students receive instruction in obtaining a medical history, performing a visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the foot, ankle, lower leg, knee, thigh, hip, pelvis, lumbar and thoracic spine. This course is directed toward students who pursue athletic training and/or physical therapy professions. Prerequisite: HESP 133 or BIOL 071, and a lab fee is required.

HESP 150. Clinical Evaluation and Diagnosis II. 3 Units.  
This course presents an in-depth study of musculoskeletal assessment of the upper extremity, cervical spine, head and face for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students receive instruction in obtaining a medical history, performing a visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the shoulder, upper arm, elbow, forearm, wrist, hand, fingers, thumb, cervical spine, head, and face. This course is directed toward students who pursue athletic training and/or physical therapy professions. Prerequisites: HESP 149; HESP 133 or BIOL 071. Lab fee is required.

HESP 151. Elementary Physical Education. 3 Units.  
This course is designed to prepare students for employment in an elementary school setting and provide them with the tools necessary to formulate and implement a comprehensive elementary PE experience for all students. Participants learn a wide range of teaching skills that facilitate the ability to create a quality active learning environment in elementary PE. Students explore effective teaching and assessment strategies, classroom management skills, the use of constructive feedback, the negotiation of diverse classrooms and the development of appropriate student learning outcomes. Students also are introduced to the subject matter of elementary PE and will undertake several teaching episodes. This course encourages students to engage in reflexive teaching practices, develop physically educated young people, maximize student involvement and enjoyment in PE and integrate core curriculum subject matter into PE lessons.

HESP 152. Secondary Physical Education. 4 Units.  
This course is designed for junior/senior level students in the Sport Sciences/Sport Pedagogy concentration to deliver an effective, meaningful physical education curriculum to diverse students. This course covers curriculum components that include content, content organization, distinctive curriculum models and aspects of curriculum application. Students learn how to sustain a positive learning experience, conceive and plan meaningful curricula for school based instruction, and link the school program to opportunities for adolescents outside of school. Prerequisites: HESP 121, HESP 123, HESP 151.

HESP 153. Adapted Physical Education and Sport. 4 Units.  
This course is designed to provide students with the theoretical and practical tools necessary to teach Physical Education (PE) and Sport across diverse settings. Students learn a wide range of teaching skills that facilitate their ability to create an inclusive learning environment in PE and Sport. Students explore a variety of adapted motor skills activities, federal/state legislative mandates and related polices, effective pedagogical and assessment strategies, classroom management skills, the use of constructive feedback and the development of appropriate student learning outcomes within diverse classrooms. Students undertake a number of peer-to-peer teaching episodes and apply principles learned in the classroom setting to real-world contexts. The course also encourages the students to engage in reflexive teaching practices, develop inclusive motor skill instruction lessons sensitive to diversity issues and maximize student involvement and enjoyment in PE and Sport. Fieldwork requires clearance for local school districts (clear LiveScan fingerprint screening and negative TB test results).

HESP 154. Human Movement. 3 Units.  
This course examines aspects of skilled performance and motor learning from a developmental perspective. It is concerned with the major principles of human performance and skill learning, the progressive development of a conceptual model of human actions and the development of skill through training and practice. Topics include human information processing, decision-making and movement planning, perceptual processes relevant to human movement, production of movement skills, measurement of learning, practice design, preparation, organization, and scheduling; use of feedback, in addition to the application of motor learning principles to sport, physical education, industrial and physical therapy settings. Fieldwork requires clearance for local school districts (clear LiveScan fingerprint screening and negative TB test results).

HESP 155. Motor Development and Learning. 3 Units.  
This course integrates theory and practice and requires students to develop a research topic, consistent with an explicitly and narrowly defined area of interest. Permission of the instructor is required.

HESP 157. The Clinician in Health and Exercise Science. 4 Units.  
This course integrates theory and practice and requires students to develop a research topic, consistent with an explicitly and narrowly defined area of interest. Permission of the instructor is required.

HESP 159. Health Optimizing Physical Education. 3 Units.  
This course introduces prospective physical education teachers to the principles and components of health-related fitness, appropriate curriculum for K-12 programming, comprehensive school and community-based physical activity planning, effective teaching principles, behavior change strategies, and advocacy approaches of physical activity and fitness. Prerequisites: HESP 131 and HESP 151.

HESP 160. Principles of Coaching. 3 Units.  
This course is designed as an introduction to the principles of athletic coaching for modern day athletes. Emphasis is on a holistic approach to the theories, knowledge, and practices of coaching sport as prescribed by the National Standards for Sport Coaches. This course will explore coaching at various levels. Topics will include developing a coaching philosophy, evaluating theories in student-athlete motivation, understanding team dynamics, leadership, administration responsibilities, and improving player performance.
HESP 161. Biomechanics of Human Movement. 4 Units.
This course is an introduction to the biomechanics of human movement and the analytic procedures and techniques for subsequent application in the sport sciences and related fields. The course includes a review of basic functional/mechanical human anatomy and kinesiology. Outcome objectives are an understanding of mechanical principles governing human movement, skill in use of a variety of measurement techniques commonly applied in biomechanics, an ability to analyze motor skill performance via cinematographic/computer methodologies and skill in prescriptively communicating results of analysis. Prerequisite: BIOL 011 or BIOL 051 or BIOL 061 or permission of instructor, and a lab fee is required.

HESP 163. Therapeutic Exercise and Rehabilitation. 4 Units.
This course is an application of the theory and principles associated with therapeutic exercise and the application of various rehabilitation techniques and procedures during the course of an athlete’s rehabilitation to attain normal range of motion, strength, flexibility, and endurance. Prerequisite: BIOL 071; HESP 133 or permission of instructor, and a lab fee is required.

HESP 165. Legal Aspects of Health, Exercise and Sport. 4 Units.
This course addresses legal issues and responsibilities relevant to professionals in the areas of health and exercise science, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered. (PLAW)

HESP 167. Introduction to Sport Management. 4 Units.
This course is for beginning sport management students and students interested in sport business. Students study general academic, managerial, and business concepts related to sport and explore the variety of sport and fitness-related businesses and organizations within the public and private sectors. Potential career opportunities are considered.

HESP 169. Managing Sport Enterprises. 4 Units.
The purpose of this class is to introduce students to management and leadership in the sport industry. The unique attributes and structures of sport organizations will be explained. The course then covers multiple frames of organizational analysis and applies these to sport settings. In addition, students learn managerial and leadership skills and develop a management philosophy suited to the sport industry. Prerequisites: HESP 167 and HESP 187A.

HESP 171. Sport Economics and Finance. 4 Units.
This course is designed to address the respective areas of sport economics, finance, and labor relations. Both theoretical and practical aspects are explored. Students examine sport as a multi-billion dollar industry and analyze the role of sport within the larger socio-economic structure within the United States and internationally. Prerequisites: ECON 053 and BUSI 031. Junior standing.

HESP 172. Case Analysis in Sport and Fitness Management. 4 Units.
This course addresses the principles and practices pertinent to the development and operation of the private and commercial sport or fitness enterprise. The case study method focuses on designing and implementing the prospectus, feasibility studies, and the analysis of organizational effectiveness. Topics of special interest include the planning and controlling of resources, facility operations, and strategies for production and operations management.

HESP 173. Health Care Management and Professional Development. 4 Units.
This course is an in-depth study of the management of health care organizations related to finances, facilities, equipment, organizations structures, medical/insurance records, risk management, human relations, and personnel. Practical and conceptual skills are taught to help students focus on more efficient health care delivery. Also covered is the development of leadership skills, future trends in health care management, guidelines for designing effective work groups and managing conflict.

HESP 174. Sport Marketing and Promotions. 4 Units.
This course focuses on three main aspects of sports marketing. First, students gain the knowledge necessary to market sport products. Second, the course covers the manner in which sport is used as a marketing tool. Finally, students learn about the variety of forms of public relations that are used by sport organizations. In the process, students become familiar with the role of technology in sport marketing and public relations. Sophomore standing.

HESP 175. Sport Event and Facility Management. 4 Units.
This course is a comprehensive investigation into the principles needed to design, implement, and manage all types of sport events and facilities. Planning, logistics, risk management, human resource management, and marketing of events and facilities are given special attention. Opportunities for the application of these principles are also provided. Prerequisites: BUSI 107 and HESP 174. Junior standing.

HESP 176. Sport Management Capstone. 4 Units.
This class is designed as the integrative pinnacle of the sport management curriculum at Pacific. This integration will occur in several ways. Students will assess critical issues in the sport management field drawing on the expertise gained throughout their Pacific educations. They will also complete comprehensive, immersive assignments that assist local underserved sport organizations. Practitioners from multiple sub-disciplines within the field will also complement instruction in the course. Finally, the course will cover practical skills for career preparation, maintenance, and development.

HESP 177. Exercise Physiology II. 4 Units.
This course seeks to fulfill two main objectives: 1) To establish a foundational understanding of clinical exercise testing to examine cardiac, metabolic and respiratory pathology. 2) To provide a more in-depth examination of several basic exercise physiology concepts introduced in HESP 129. These include lactate kinetics, oxygen dynamics, pulmonary function and cardiovascular function during exercise and in response to training. Prerequisite: HESP 129 and upper division class standing. Lab fee required.

HESP 179. Introduction to Research. 4 Units.
This course covers the rationale for and status of professional research; research designs and their applicability to students’ disciplines; review, critique and synthesis of selected literature; development of research proposal and pretest of instrument.

HESP 180. Epidemiology. 4 Units.
This course is an introduction to the principles and practice of epidemiology. It explores the history, concepts, and methods of epidemiologic investigation. The statistical models taught in this class include the receiver operating characteristic curve, chi-square test, t-test, binary logistic regression, and linear regression. Students will learn to develop research designs that employ these tests and will be able to conduct them to evaluate patient care, quantify risk, and understand the patterns of illness and disease in populations.
HESP 182. Exercise Testing and Prescription. 4 Units.
This course is primarily designed to provide students with the hands-on training and theoretical background to competently assess levels of wellness/fitness in an "apparently healthy" (i.e. low risk) adult population. The topics and skills addressed include health screening protocols/risk stratification, use of informed Consent documents, as well as measurement protocols for the health-related components of fitness (i.e. cardiorespiratory fitness, muscular fitness, flexibility, body composition). These skills are then used to prescribe lifestyle and/or exercise modifications that result in individual progress toward a desired goal. The content of this course is highly focused toward the knowledge and skills required for taking the ACSM Fitness Specialist (HFS) certification exam. Prerequisite: HESP 147.

HESP 187. Internship in Health and Exercise Science. 4 Units.
This course provides an opportunity for qualifying students to work in an area of Health and Exercise Science that interests them. Prerequisites: HESP 157, GPA 2.0, no grade below "C-" in major, and approval of course supervisor.

HESP 187D. Sport Pedagogy Internship I. 2 Units.
This class involves the student completing a semester-long internship connected to their chosen field of sport pedagogy. This internship develops their evaluation skills and encourage the student to engage in reflective teaching practices to better prepare themselves for the challenges and terrain of their post-graduation employment. Prerequisite: HESP 131.

HESP 187E. Sport Pedagogy Internship II. 4 Units.
This class involves the student completing a semester-long internship connected to their chosen field of sport pedagogy. This internship develops their evaluation skills and encourage the student to engage in reflective teaching practices to better prepare themselves for the challenges and terrain of their post-graduation employment. Prerequisite: HESP 187D.

HESP 187F. Internship. 1-4 Units.

HESP 187G. Internship. 1-4 Units.

HESP 189. Practicum: Coaching. 1 or 2 Unit.
The practicum offers non-classroom experiences in activities related to Sports Sciences, under conditions determined by the appropriate faculty member. HESP 189 represents advanced practicum work involving increased independence and responsibility. Enrollment is limited to eight units maximum of HESP 089/189A, B, C, D, H, J, K offerings and no category within a course may be repeated for credit. A list of specific courses follows. Grading option is Pass/No Credit only.

HESP 189A. Practicum: Adapted Physical Education. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Prerequisite: HESP 169 with a "C-" or better.

HESP 189B. Practicum: Athletic Training III. 2 Units.
This is a clinical education course in the field of athletic training. It incorporates an experiential learning environment designed to prepare students for a career in athletic training. Advanced skills are introduced within the daily operations of the athletic training room and in the care of the athletes. Criteria for progression must be met before enrolling in subsequent practicum course. Prerequisite: HESP 089K.

HESP 189C. Practicum: Biomechanics. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Grading option is Pass/No Credit only.

HESP 189D. Practicum: Exercise Physiology. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Grading option is Pass/No Credit only.

HESP 189E. Practicum: Sport Pedagogy. 2 Units.
This course offers a supervised leadership experience in the elementary or secondary school setting. The student works as a physical education specialist and develops as well as conducts appropriate physical activity programs. Prerequisites: HESP 151 or HESP 159 and permission of instructor.

HESP 189F. Practicum: Coaching. 2 Units.
Students are assigned to an intercollegiate or interscholastic sports team for the semester and participate in practice sessions throughout the specific sport season. Written guidelines are developed cooperatively by the supervisor, coach and student. Prerequisites: HESP 139 and HESP 155.

HESP 189G. Practicum: Coaching. 2 Units.
Students will be assigned to an intercollegiate or interscholastic sports team for the semester and will participate in practice sessions throughout the specific sport season. Written guidelines will be developed cooperatively by the supervisor, coach and student. Prerequisites: HESP 139 and HESP 155.

HESP 189H. Practicum: Sports Law. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Grading option is Pass/No Credit only.

HESP 189J. Practicum: Kinesiology. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Prerequisite: HESP 133 with a "C-" or better. Grading option is Pass/No Credit only.

HESP 189K. Practicum: Athletic Training IV. 2 Units.
This is the fourth in a series of four consecutive clinical education courses in the field of Athletic Training. The course incorporates an experiential learning environment designed to prepare students for a career in Athletic Training. Advanced Athletic Training knowledge and skills will also be introduced within the daily operations of the Athletic Training Facility and your Clinical Assignment and in the care of patients. Prerequisite: HESP 189B.

HESP 191. Independent Study. 1-4 Units.

HESP 193. Special Topics. 1-4 Units.

HESP 195. Ethical Issues in Sport. 3 Units.
The primary goal of this course is to enhance student awareness regarding their values, their evolving moral and ethical codes, and the ways of addressing moral problems. Students examine various ethical theories and questions encountered in the field of Sport Sciences. As part of this course, students need to identify necessary information from various sub-disciplines in order to make professional and ethical decisions. Senior standing.

HESP 197. Independent Research. 1-4 Units.

HESP 201A. Clinical Integration Proficiencies I. 1 Unit.
This course will teach, review, and assess the proficiencies needed to become a Certified Athletic Trainer. The focus will be on use of athletic training equipment, first aid skills and therapeutic modalities. Discussion and review of National Athletic Training Association competencies will also be covered.
HESP 201B. Clinical Integration Proficiencies II. 1 Unit.
This course will teach, review, and assess the proficiencies needed to become a Certified Athletic Trainer. The focus will be on use of assessment, evaluation, and rehabilitation of lower extremities. Discussion and review of National Athletic Training Association competencies will also be covered. Prerequisite: HESP 201A with a B- or better.

HESP 201C. Clinical Integration Proficiencies III. 1 Unit.
This course will teach, review, and assess the proficiencies needed to become a Certified Athletic Trainer. The focus will be on use of assessment, evaluation, and rehabilitation of upper extremities. Discussion and review of National Athletic Training Association competencies will also be covered. Prerequisite: HESP 201B with a B- or better.

HESP 201D. Clinical Integration Proficiencies IV. 1 Unit.
This course will teach, review, and assess the proficiencies needed to become a Certified Athletic Trainer. The focus will be on use of assessment, evaluation, and rehabilitation of general medical conditions, head, neck, and spine injuries. Discussion and review of National Athletic Training Association competencies will also be covered. Prerequisite: HESP 201C with B- or better.

HESP 202A. Clinical Practicum I. 1 Unit.
This class is a sequence of CAATE required courses designed to immerse students in a clinical athletic training setting. Students are exposed to an athletic training setting and are introduced within the daily operations of the athletic training room and in the care of athletes. Discussion and reflection of sites and preceptors will also occur. Various medical and health care professionals will contribute to the course.

HESP 202B. Clinical Practicum II. 1 Unit.
This class is the second in a sequence of CAATE required courses designed to immerse students in a clinical athletic training setting. Students are introduced to intermediate skills within the daily operations of the athletic training room and in the care of the athletes. Discussion and reflection of sites and preceptors will also occur. Various medical and healthcare professionals will contribute to the course. Prerequisite: HESP 202A with a B- or better.

HESP 202C. Clinical Practicum III. 1 Unit.
This class is the third in a sequence of CAATE required courses designed to immerse students in a clinical athletic training setting. Students develop advanced skills within the daily operations of the athletic training room and in the care of the athletes. Discussion and reflection of sites and preceptors will also occur. Various medical and healthcare professionals will contribute to the course. Prerequisite: HESP 202B with a B- or better.

HESP 202D. Clinical Practicum IV. 1 Unit.
This class is the fourth in a sequence of CAATE required courses designed to immerse students in a clinical athletic training setting. Students develop mastery skills within the daily operations of the athletic training room and in the care of the athletes. Discussion and reflection of sites and preceptors will also occur. Various medical and healthcare professionals will contribute to the course. Prerequisite: HESP 202C with a B- or better.

HESP 202E. Clinical Practicum V. 1 Unit.
This class is the fifth in a sequence of CAATE required courses designed to immerse students in a clinical athletic training setting. Students integrate all mastery skills within the context of daily operations of the athletic training room and in the care of the athletes. Students will focus on professional development and go through final preparations for the NATA BOC examination. Discussion and reflection of sites and preceptors will also occur. Various medical and healthcare professionals will contribute to the course. Prerequisite: HESP 202D with a B- or better.

HESP 203A. Applied Research I. 1 Unit.
This course applies the research process to clinical practice. Students will develop research questions in a manner that supports evidence-based practice. Prerequisite: HESP 228 with a B- or better.

HESP 203B. Applied Research II. 1 Unit.
This course applies the research process to clinical practice. Building on information from previous courses, students will collect data and present results to answer research questions in a manner that improves evidence-based practice. Prerequisite: HESP 203A with a B- or better.

HESP 203C. Clinical Integration Proficiencies V. 1 Unit.
This course will provide students with the opportunity to integrate theoretical and practical aspects of athletic training education. Using a case study approach students will work in teams to address a variety of issue that arise in the athletic training field. Various medical and health care professionals will contribute to the course.

HESP 204. Human Anatomy for Athletic Trainers. 4 Units.
This course investigates the structure and functional roles of the major body systems. The relationships of the musculoskeletal systems to athletic training related pathological and clinical issues will be given special attention.

HESP 205. Athletic Training Capstone. 2 Units.
This course presents an in-depth study of musculoskeletal assessment of the lower extremity for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students receive instruction in obtaining a medical history, performing visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the foot, ankle, lower leg, thigh, hip, and pelvis. Prerequisite: HESP 211 with a B- or better or permission of instructor.

HESP 206. Advanced Musculoskeletal Assessment (LE). 4 Units.
This course applies the research process to clinical practice. Students will develop research questions in a manner that supports evidence-based practice. Prerequisite: HESP 206 with a B- or better.

HESP 207. Applied Therapeutic Exercise (LE). 4 Units.
This course is an application of the theory and principles associated with therapeutic exercise for the lower extremity. Focus is on the application of various rehabilitation techniques and procedures during the course of an athlete’s rehabilitation to attain normal range of motion, strength, and flexibility of the foot, ankle, lower leg, knee, thigh, hip, and pelvis. Prerequisite: HESP 211 with B- or better or permission of instructor.
HESP 215. Applied Therapeutic Exercise (UE). 4 Units.
This course is an application of the theory and principles associated with therapeutic exercise for the upper extremity, and face. Focus is on the application of various rehabilitation techniques and procedures during the course of an athlete's rehabilitation to attain normal range of motion, strength, and flexibility of the shoulder, upper arm, elbow, forearm, wrist, hand, fingers, thumb, and face. Prerequisite: HESP 211 with B- or better or permission of instructor.

HESP 220. Pathomechanics of Musculoskeletal Injury. 3 Units.
This course explores the structure, function, biomechanics, and dysfunction of the musculoskeletal system. Students will improve orthopedic evaluation. Attention will be given to correcting muscular imbalances and faulty movement patterns as well as developing functional movement patterns for athletes and active populations. Prerequisite: HESP 211 with B- or better or permission of instructor.

HESP 221. Assessment of General Medical Conditions. 3 Units.
This course provides a detailed knowledge of the non-orthopedic pathologies that can affect athletes. Maladies in the respiratory, cardiovascular, gastrointestinal, neurological, and dermatological systems will be presented. Students will become familiar with examination procedures and diagnostic equipment used to assess these conditions.

HESP 222. Head, Neck, and Spine Injuries. 3 Units.
This course provides a detailed investigation into the pathology and clinical diagnosis of musculoskeletal and neurological injuries of the head, cervical, thoracic, and lumbar spine. Focus will be on the acute management of concussions and spine injuries as well as treatment options. Best practices for minimizing risks of catastrophic injury and uses of protective equipment will be provided. Prerequisite: HESP 211 with B- or better.

HESP 223. Advanced Therapeutic Modalities. 4 Units.
This course is a lecture and laboratory experience designed to expose students to the theory, principles, techniques, and application of therapeutic modalities pertaining to the treatment of athletic or activity related injuries. Course will include investigation, discussion, and observation of the physiological effects, indications, contraindications, dosage and maintenance of each modality. Prerequisite: HESP 211 with B- or better or permission of instructor.

HESP 224. Clinical Pharmacology. 1 Unit.
This course introduces the medications and supplements used by and prescribed for active populations. Students also develop an awareness of the indications, contraindications, precautions, and interactions of medications used to treat illnesses and diseases.

HESP 227. Healthcare Administration and Management. 4 Units.
This course addresses the organizational and administrative aspects of providing health care to athletes and the physically active. The course will include in-depth study of finances, facilities, equipment, organizations, structures, medical/insurance records, risk management, human relations and personnel in health care organizations. Practical and conceptual skills are taught to help students focus on more efficient health care delivery. Development of leadership skills, future trends in health care management, guidelines for designing effective work groups and managing conflict is also covered.

HESP 228. Research Methods in Athletic Training. 4 Units.
This class is designed to develop research skills specific to the athletic training field. Students learn to collect, review, synthesize, and critically analyze scholarly research. Students also learn to create research questions and establish hypotheses, and they are exposed to a variety of data collection methods. In addition, students learn to apply appropriate techniques to interpret data and apply the results in athletic training settings. Special attention is given to the use of research in evidence-based practice. This class is for MSAT students only and is not a substitute for HESP 279.

HESP 229. Psychosocial Aspects of Athletic Training. 3 Units.
This course will provide students with a foundation of the psychological and sociocultural elements surrounding pain and athletic injuries. Psychosocial antecedents of injury will be presented as will psychological strategies that can assist the rehabilitation process. Social perspectives on pain and injury and social support during recovery will also be covered in the class.

HESP 233. Advanced Kinesiology. 4 Units.
This graduate seminar considers the musculoskeletal analysis of human movement, posture, exercise prescription, and rehabilitation. Prerequisite: HESP 133 or permission of instructor. Graduate standing.

HESP 235. Graduate Nutrition/Exercise Metabolism. 4 Units.
Students study the principles of nutrition as they relate to health and participation in sport or physical activity. The course includes calculation of energy needs and expenditures, and the role of carbohydrates, fats, protein, vitamins, minerals, and water in sport and physical activity.

HESP 237. Advanced Sport Psychology. 4 Units.
This course provides a detailed examination of the theories and concepts that explain how the human psyche affects sport performance. Particular emphasis is given to the application of these concepts for coaches and athletes.

HESP 239. Advanced Applied Sport Psychology. 4 Units.
This graduate seminar is designed for advanced students to explore theoretical concepts of psychology as they relate to individual and group behavior in physical activity environments.

HESP 241. Advanced Sociology of Sport. 4 Units.
This graduate seminar deals with theoretical concepts of sociology related to the American sport environment. This course uses a sociological perspective to provide an appreciation of sport as an integral part of our cultural dynamics. The relationship of sport and other social institutions such as media, economy, politics, and education are covered, as well as the relationship of sport and social stratification such as gender, race, and class.

HESP 242. Global Sports Worlds. 4 Units.
Like all social institutions in the United States, global forces are increasingly shaping the sports worlds we live in. Understanding this phenomenon is imperative for future practitioners with sport sciences. This course is designed to explore this relationship between sport and globalization processes. Students learn to identify the characteristics of the sport-globalization nexus and critically examine its consequences. Through a host of experiential learning opportunities, students develop a deeper understanding of the implications of global sports worlds in your field of study. The eight pre-trip meetings take place during the Spring semester(one per week from Spring break onwards). The trip to London is scheduled after these meetings each year. The students register for the class as a Spring course. Travel required. Prerequisite: HESP 279 with a "B-" or better or permission of the instructor. Graduate standing.
HESP 247. Advanced Exercise Physiology. 4 Units.
This course is an advanced study of physiological responses to exercise with emphasis on laboratory methods and procedures for testing and demonstrating these responses for research application. Lab fee is required. Prerequisites: HESP 147 and permission of the instructor.

HESP 248. Applied and Clinical Physiology. 4 Units.
This course is designed to study the fundamental principles of exercise testing and interpretation for high risk, healthy, and athletic populations. The course is structured to focus on the cardiovascular, metabolic, and pulmonary responses to aerobic exercise and implications for designing training programs to enhance health, fitness, and performance. This course serves as a foundation for clinical exercise science and the use of exercise testing in the study of cardiac, metabolic and respiratory pathology.

HESP 253. Advanced Adapted Physical Education. 4 Units.
This course provides the culminating learning experience for those teaching credential candidates who are completing the waiver program with an emphasis in adapted physical education. Lab fee required.

HESP 255. Advanced Motor Learning. 4 Units.
This graduate course examines both the information processing and dynamical systems approaches to the study of human motor behavior and skill acquisition. Content is theoretically and research based with a behavioral emphasis. Topics covered include: variability and motor control, visual control of action, the role of reflexes, task interference, limitations in information processing, effects of stress on performance, and the Schema theory. It is intended to provide students with an advanced understanding of the conceptual, functional properties of the motor system and human motor performance and their application to teaching, coaching, industrial and therapeutic settings.

HESP 257. Advanced Clinician in Sports Medicine. 4 Units.
This course integrates theory and practice and requires students to develop a research topic, consistent with an explicitly and narrowly defined area of interest. Prerequisite: Permission of instructor.

HESP 259. Professional Preparation in Sport Sciences. 4 Units.
This course is designed for the future professional practitioner who wishes to deliver an effective, meaningful clinical or educational experience to a diverse population. The course helps them sustain the experiences through the knowledge to conceive and plan meaningful programs, the administrative skill to produce an organizational structure within school and/or practicum that optimizes the impact of the program, and the creative energy to link the program to opportunities for children and adults. Students engage in an in-depth study of the research on teaching and the application of research-based knowledge to the teaching and clinical professions.

HESP 261. Advanced Biomechanics of Sport. 4 Units.
This course is an advanced study of mechanical principles which influence human movement. Both non-cinematographic and cinematographic/ videographic techniques are used to analyze and evaluate motor skills and errors in performance and critical evaluation of current research findings in biomechanics. Lab fee required. Prerequisite: an undergraduate course in kinesiology or biomechanics or permission of instructor.

HESP 265. Advanced Sports Law. 4 Units.
This course addresses legal issues and responsibilities relevant to professionals in the areas of sports medicine, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered.

HESP 269. Advanced Management of Sport Enterprises. 4 Units.
The purpose of this class is to prepare graduate students to lead in the unique business environment of sport. The unique governance structure of intercollegiate athletics and professional sports is presented. Students then develop a multi-frame approach to management of sport organizations. Students also explore the subjective nature of leadership to develop a style best suited for sport. Emphasis is placed on the integration of applied research that uses leadership and management theories.

HESP 272. Advanced Case Analysis of Sport and Fitness Management. 4 Units.
This graduate seminar is designed to provide breadth and depth of topical knowledge beyond that covered in the introductory course.

HESP 274. Advanced Sport Marketing and Promotions. 4 Units.
This course provides an in-depth study of the unique nature of sport marketing that focuses on three areas. Students learn how to market sport products and events. The course explores the many mechanisms through which sport is used as a marketing tool. Finally, students learn to gain maximum benefit from the relationship between sport and the media.

HESP 275. Advanced Sport Management. 4 Units.
This class provides graduate students with the knowledge base necessary to lead the mega-events and manage multipurpose and single-use facilities common in sport. The first portion of the course is devoted to event planning, marketing and execution. The second part of the course focuses on planning, design and maintenance of sports facilities. Special attention is given to the environmental impact of sporting events and facilities.

HESP 279. Research Methods in Sport Sciences. 4 Units.
This in-depth evaluation of the various methods used in the disciplines of the sport sciences, includes experimental, descriptive, qualitative and historical approaches. Students learn the means of selecting a research problem and planning its solution as well as important considerations to regard in reviewing the literature. The course also includes an overview of proper form and style in research writing. Student must complete a fully developed Research Proposal as part of this course. Prerequisite: a course in statistics. Graduate standing.

HESP 287. Advanced Internship: Sport Medicine. 4 Units.
This course provides an opportunity for qualifying students to work in an area of sports medicine that interests them. Prerequisites: HESP 257 with a "C" or better and permission of instructor. Graduate standing. Grading option is Pass/No Credit only.

HESP 287A. Advanced Internship: Sport Management. 4 Units.
This course provides professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background. Grading option is Pass/No Credit only.

HESP 287B. Advanced Internship: Sport Management. 4 Units.
This course provides professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background. Grading option is Pass/No Credit only.

HESP 289A. Advanced Practicum: Sport Management. 4 Units.
This course is designed to provide students with a practical experience in the application of administrative theory. Prerequisite: HESP 169 or HESP 269 with a "B-" or better. Grading option is Pass/No Credit only.
HESP 289B. Advanced Practicum: Coaching. 2-4 Units.
This practicum offers non-classroom experiences in activities related to Sports Medicine, under conditions determined by the appropriate faculty member. HESP 189 represents advanced practicum work that involves increased independence and responsibility. Enrollment is limited to six units maximum of HESP 089/189A, B, C, D offerings and no category within a course may be repeated for credit. Grading option is Pass/No Credit only.

HESP 291. Independent Study. 1-4 Units.

HESP 293. Special Topics. 3 or 4 Units.

HESP 297. Independent Research. 1-4 Units.

HESP 299. Thesis. 4 Units.