

SUBJECT: Exercise and Health Science

EXHS 111 Introduction to Exercise and Health Science (4)

In this course, students will be introduced to the discipline of exercise science and its application to health science, sports and physical activity. Students will examine a wide range of exercise science topics, including professionalism, ethics, certification and licensure, career opportunities, evidence-based practice, and foundational concepts of various subdisciplines. Fall and Spring.

EXHS 203 Coaching Methods (2)

In this course students will learn best practices for coaching and teaching sport skills, as well as creating effective practice plans. Students will practice analyzing exercise and sport techniques, identifying errors, and providing effective feedback. Students enrolled in this course will actively participate in coaching sessions with peers. A-F grading only. Fall and Spring.

EXHS 204 Sport Nutrition (2)

In this course students will discuss and apply the role of various nutrients in sport performance and body composition for athletes. Issues related to drug and supplement use as well as their legality and effects on performance will also be addressed. A-F grading only. Fall and Spring.

EXHS 210 Functional Human Anatomy (2)

In this course, students will examine the macroscopic structure and function of bones, joints, and muscles, and how these structures contribute to human movement. Spring.

EXHS 211 Exercise Science Laboratory Skills (2)

Competency in laboratory testing and techniques is important for collecting high quality data. In this course, students will develop competency in performing lab skills used by exercise and health scientists. Students will learn to measure physiological variables at rest and during exercise, how to perform maximal and submaximal exercise testing, proper blood draw and safety procedures, the importance of data confidentiality, and common techniques for quantifying physical activity. Prerequisites: EXHS 111. Fall. This course carries a \$25 lab fee for disposable lab supplies.

EXHS 220 Sport Identity (4)

This course examines personal identity and how it intersects/interacts with cultural and gender roles related to sport experiences. Students will understand that sport serves as a lens that reflects and defines societal roles, beliefs and values. Historical, political and economic views/events will be compared/contrasted with contemporary American sport culture. Underrepresented ethnic groups, physical abilities and gender identity will be discussed in relation to sport representation/power. Intercultural communication and personal bias regarding others will also be discussed. Students will learn to discuss, collaborate with peers and orally present well-researched course related topics to the larger class. Fall.

EXHS 230 Sports Injury Management I (2)

In the context of preparing students to become effective, athlete-centered athletic coaches, part one of the two course sequence provides a foundation for best practices in preparation for, and prevention, recognition, and care of, sports related emergency situations. The skills taught in this course do not replace professional medical help but offer guidelines and techniques for recognizing and managing emergency conditions until advanced medical help arrives. Fall and Spring. A-F grading only.

EXHS 231 Sports Injury Management II (2)

In the context of preparing students to become effective, athlete-centered athletic coaches, part two of the course sequence provides a foundation for best practices in the prevention, recognition, and care of sports related bone, muscle, and joint injuries, including the role of the coach in designing and implementing conditioning programs to help prevent athletic injuries. The skills taught in this course do not replace professional medical help but offer guidelines and techniques for recognizing and managing bone, muscle, and joint injuries until advanced medical care

is provided. Prerequisite: EXHS 230. Fall and Spring. A-F grading only.

EXHS 271 Independent study (0-4)

Supervised reading or research at the lower-division level. Approval of department chair required. Not available to first-year students.

EXHS 299 Research Practicum (1-4)

The student will work jointly with a faculty member in conducting a faculty-designed research project. The course is repeatable for a maximum of four total credits in the department. Prerequisite: Permission of instructor.

EXHS 302 Clinical Healthcare: Theory and Application (4)

Introduction to the field of clinical assessment of athletic injury and pathology. This course will cover evaluation protocols, initial and progressive management, and principles of rehabilitation. The course includes a laboratory for skill acquisition in hands-on musculoskeletal function evaluation focusing on functional anatomy and the use of special tests to augment evaluation. Prerequisites: EXHS 111 and [EXHS 210 or BIOL 325]. Spring of even years.

EXHS 303 Physical Activity Epidemiology (4)

Physical activity epidemiology uses large population-based studies to link behavioral, environmental, and other factors that influence physical activity to health outcomes. This course will use an evidence-based approach to examine how we understand factors that influence health and efforts to increase physical activity. Students will examine methods to assess health as well as subjective and objective methods to measure physical activity, inactivity, and health behaviors. Students in this course will also study basic epidemiological research design including strengths and weaknesses through critical review of major studies. Students will also examine and critique current public health intervention efforts to increase physical activity at the individual and population levels.

Prerequisites: EXHS 111 and EXHS 379A. Spring.

EXHS 306 Kinesiology (4)

In this course, students will integrate and apply fundamental anatomical, physiological, and biomechanical concepts to understand and describe human movement. Students will use analytical skills to evaluate human movement, including complex movements such as walking. The laboratory component of the course will emphasize critical thinking and problem-solving skills through the qualitative and quantitative assessment of human movement. Prerequisites: EXHS 111, EXHS 379A and [EXHS 210 or EXHS 258 or BIOL 325]. Spring.

EXHS 308 Exercise Physiology (4)

In this course students will advance their understanding of the human body's physiological response to exercise. Topics include acute responses and chronic adaptations of the muscular, cardiovascular, respiratory, endocrine, and bioenergetics systems to exercise induced stress. Environmental influences on performance and sex differences will also be explored. In the laboratory portion of the course students will practice the scientific method by assessing physiological capacities using the laboratory assessment methods. Prerequisites: EXHS 211, EXHS 379A and [EXHS 258 or BIOL 216 or BIOL 326]. Fall.

EXHS 310 Principles of Strength Training and Conditioning (4)

Students will develop a functional understanding of exercise science as it applies to strength training and conditioning. Exercise science concepts and principles will be applied to assess human performance, and to design evidence-based exercise programs. In the laboratory portion of the course, students will develop a practical understanding of the principles of test selection and administration, and the principles used to effectively instruct physically active individuals in safe and effective exercise technique. Prerequisites: EXHS 258 or BIOL 216 or BIOL 325. Spring of odd years.

EXHS 323 Sport in a Diverse Society (4)

Students will examine how sport serves as a microcosm of the greater world and how it is a prism through which larger cultural and gender-related issues, values and beliefs can be studied. Historical, political and economic views will be addressed along with LGBTQI issues, Title IX, and feminist perspectives as they intersect with all levels of

sport. Students will learn about their own personal culture and other cultures and sub-cultures. Intercultural communication, questions related to justice, and personal bias regarding others will also be explored. Prerequisite: EXHS 111 and completion of the Culture and Social Difference: Identity Integrations Curriculum requirement or Permission of Instructor. Fall and Spring.

EXHS 324 Sports and Exercise Psychology (4)

In this course, students will examine psychological theories and concepts as they apply to exercise and sport participation and performance. Students will use critical thinking and evidence-based decision-making skills to examine issues and solve problems related to sport and exercise psychology. Students will also discuss professional and ethical issues and apply ethical decision-making skills to the practice of sport psychology. Prerequisite: EXHS 379A or PSYC 235. Spring.

EXHS 371 Independent Study (1-4)

Supervised reading or research at the upper-division level. Approval of department chair and completion and/or concurrent registration of 12 credits within the department required. Not available to first year students.

EXHS 373 SPECIAL TOPICS IN EXHS (1-4)

NO COURSE DESCRIPTION

EXHS 379A Research Methods in Exercise and Health Science (4)

This course emphasizes the search for truth and the ways in which this search is conducted. Students will be introduced to the wide continuum of research methodologies and experimental designs used in the fields of exercise science and health. Students will study each step of the scientific process with emphasis on the elements leading up to data collection, including identifying relevant background literature, critical reading of scholarly literature, developing a research question, and creating ethical and appropriate research methods. The course includes a detailed examination of different research methods, and basic descriptive and inferential statistics. Research ethics and the role of the Institutional Review Board in protecting the rights of human subjects will also be discussed. Prerequisites: EXHS 111 and [MATH 124 or PSYC 221]. Fall and Spring.

EXHS 390 Sport Ethics (4)

This course introduces students to a variety of theories of moral reasoning, ethical and unethical behavior in sport, and the development of moral education through sport. Students will engage in learning about how they should act in order to support the moral foundation necessary for sport to function effectively while examining actions that would be considered just or unjust. Students will wrestle with questions such as "how should I act" or "what type of an athlete, coach, official, manager, fan or parent should I be" through readings and discussions. Decision-making models based on moral reasoning theory and other principles of strategic reasoning will be employed as students navigate case studies and issues related to sport. Fall.

EXHS 394 Research Design (2)

This course assists students in designing and completing a proposal for an independent or group research project in exercise and health science. Students will integrate theoretical concepts from previous exercise and health science coursework to formulate a research question, conduct a background literature review, and develop appropriate and ethical methods for data collection. Students will complete and present the full proposal within the context of the course. Offered for A-F grading only. Prerequisites: EXHS 379A. Spring.

EXHS 395 Research Seminar I (1)

Students in this course will continue the work they began in ESSS 316 Research Methods, including finalizing research proposals and applying for Institutional Review Board review, if necessary. Students will pilot their procedures and begin data collections for their research projects. Students will communicate their ideas, challenges, and progress to class colleagues throughout the semester. Throughout the research process students will be asked to reflect upon the process, on how their project has integrated their previous coursework, and how performing research has changed their perspectives on health and human performance. Offered for A-F grading only. Prerequisites: ESSS 316 or EXHS 394. Fall.

EXHS 396 Research Seminar II (1)

Students on this course will continue the data collection process for research projects started in ESSS/EXHS 395. Students will communicate their ideas and progress to class colleagues. After data collections, students will analyze data and interpret the results. Conclusions will be drawn from the results and the final projects will be presented on or off campus. Throughout the research process students will be asked to reflect upon the process, on how their project has integrated their previous coursework, and how performing research has changed their perspectives on health and human performance. Note: Students must complete 395 and 396 to earn the EL or EX designation. A-F grading only. Fall.

EXHS 397 Internship (1-4)

Internship in an approved setting. Work experience in a health, sport, or exercise related field supervised by agency personnel and faculty moderator. All internships need to be planned with the CSB/SJU internship office one semester prior to work experience.

EXHS 397A NON-CAPSTONE INTERNSHIP (1-4)

NO COURSE DESCRIPTION