

HEALTH SCIENCE (HS)

HS 362. Orthopedic & Athletic Injury. (2 Credits)

A study of the mechanism, treatment, rehabilitation, and prevention of musculoskeletal injury. The course begins with the study of the injury process from a physiological and biomechanical perspective. The course then progresses into the study of specific injuries to the various areas of the body. The course concludes with the study of various treatment modalities utilized in the health care arena. Departmental adjunct faculty and health professionals from the community serve to expand the course content within their area of expertise. Pre or Corequisite: BIOL 331 and BIOL 331L, BIOL 332 and BIOL 332L. Additional course fee required: \$10.

HS 368. Concepts in Nutrition. (4 Credits)

This course includes the theory and techniques of nutrition, dieting, and proper weight control. Digestion and absorption will be presented at the biochemical and applied physiological levels. Experimentally based research projects and case studies will be accomplished in small groups.

HS 371. Clinical Kinesiology. (4 Credits)

This course will study the biomechanical forces involved in human movement. Applications will include the study of normal human movement, abnormal/pathological movement (e.g. abnormal gait analysis, rehabilitation aspects of movement), as well as sport and exercise biomechanics. Attention will be given to both the quantitative and qualitative analysis of movement. Prerequisite: BIOL 331, BIOL 331L, BIOL 332, BIOL 332L. Additional course fee required: \$25.

HS 381. Concepts in Epidemiology. (4 Credits)

An introductory course of the basic science of disease prevention. Overview of epidemiologic methods and research designs to explore the variation of disease occurrence among individuals and populations and how that variation is studied to understand the causes of disease. Discussion of the biologic, behavioral, social and environmental determinants of health and disease. Description of how epidemiologic findings are applied to health maintenance and disease prevention.

HS 382. Biostatistics. (4 Credits)

The purpose of this course is to train students to become intimately familiar with the basics of research design and statistical modeling techniques commonly used in the health sciences. Knowledge will be gained as students learn how to go from hypothesis generation, to appropriate research design, to the implementation of a statistical model, to the interpretation of results.

Tags: AAQR

HS 391. Community-Based Research in Urban Public Health. (4 Credits)

Theory and practice of public health program planning and evaluation in partnership with community public health organizations in urban Chicago. Students will integrate principles of community building and organizing to address community-identified health issues in the context of social change. Emphasis will be placed upon the development of faith-based cultural humility for the recognition and empowerment of existing healthy community assets for the improvement of urban health and quality of life. Quantitative and qualitative research methods will be utilized and integrated throughout all phases of health planning and program evaluation. \$50 course fee. Prerequisite: HS 381. Additional course fee required: \$50.

HS 451. Advanced Human Anatomy. (2 Credits)

This course covers advanced concepts of human cadaver anatomy. A thorough general dissection of the entire body with various in-depth dissections throughout the course will be the focus. This course is intended to serve students interested in the health professions. Prerequisite: BIOL 331 and BIOL 331L, BIOL 332 and BIOL 332L.

HS 452. Applied Physiology. (4 Credits)

This course will present the applied physiology of the following conditions: heart disease, obesity, type-2 diabetes mellitus, lower limb amputations, pregnancy, and aging and the role of prescribed exercise in the management and rehabilitation of these conditions. The physiological and biochemical adjustments and adaptations to acute and chronic exercise will be presented. Experimentally based research projects will be accomplished in small groups. Prerequisite: BIOL 331 and BIOL 331L, BIOL 332 and BIOL 332L. Additional course fee required: \$95.

HS 494. Integrative Seminar. (2 Credits)

This course is designed to provide an integrative conclusion to the major by reflecting on how a Christian liberal arts education has shaped students' knowledge and character, to connect the discipline of Applied Health Science within the broader context of liberal arts and the Christian faith, and to clarify/reaffirm vocational calling.

General Education: SHAR

HS 495. Problems in Health Science. (1 to 4 Credits)

Special projects and independent research study. These projects must offer a unique learning experience for the student and will usually be an experimentally based research project with the purpose of developing critical thinking and with the intent of being published.

HS 496. Internship. (4 to 8 Credits)

Practical experience under supervision in an approved program. Prerequisite: Junior or senior standing as a Health Science major.