

COURSE DESCRIPTIONS HEALTH SCIENCES MAJOR PRE-PHYSICAL THERAPY OPTION

BIO 160 - Introduction to Animal Biology (5 cr) - Anatomy, physiology, adaptation, and classification of animals; morphology and anatomy of various types of animals. Three hours lecture, three hours lab per week. Additional two-hour test sections four times during the semester.

BIO 285 - Human Physiology (4 cr) - Normal functions of organ systems in humans; fulfills the physiology requirements for biology, human development and nutritional sciences, physical education majors, and is recommended for students with preprofessional interests in medical or allied health fields. Three hours lecture, three hours lab per week. Prereq: 160; or 101 and Chemistry 101.

BIO 387 – Human Anatomy (4 cr) – Human Anatomy is examined using models, X-rays, charts, computer animations, and prosected cadaver demonstrations. Complements Biol. 285 to provide a general background in human structure and function. For students preparing for health care careers. Three hrs. lecture, three hrs. lab per week. Prereq.: 281 or 285 or con reg in 281 or 285.

CHEM 105 - Fundamental Chemistry (5 cr) - (Two semester basic course) Fundamental principles and theories of chemistry, including stoichiometry, atomic and molecular structure and bonding, nuclear chemistry, thermodynamics, descriptive chemistry of nonmetals and transition metals, chemical kinetics and equilibria, introduction to organic chemistry. 3 hrs lec, 1 hr disc, 3 hrs lab per wk. Prereq: Math 90 or placement in 100 or above.

CHEM 106 - Fundamental Chemistry (5 cr) - Continuation of 105. 3 hrs lec, 1 hr disc, 3 hrs lab per wk. Prereq: 105, Math 100 or higher.

MATH 100 - College Algebra (3 cr) - Functions, solutions and graphs of linear and quadratic equations, inequalities and systems of equations; logarithmic and exponential functions. Prereq: 051 or suitable placement test score.

MATH 355 - Elementary Statistical Methods (4 cr) - Fundamental concepts and techniques which underlie applications to the various disciplines, including descriptive statistics; averages; dispersion; random sampling; binomial, normal, Student T, Chi-square, and F distributions; estimation and tests of hypothesis; linear regression and correlation; laboratory emphasis on sampling and applications. Prereq: 100 or a suitable placement test score.

CLS 105 - Evolution of Health Care and Health Care Professions (3 cr) - Study of the history of medicine and the evolution of health care professions in the context of philosophical and cultural influences; examination of various health care systems; analysis of current health care system and health professions in the United States. 3 hrs lecture per week.

CLS 295 - Medical Terminology (2 cr) - Examination of bases of medical terms: prefixes, suffixes, roots, combined forms; terms that name the nine basic body systems and organs. 2 hrs lecture per week.

CLS 495 - Research Design and Methods in Clinical Laboratory Science (1 cr) – Apply scientific method to clinical laboratory research problems; explore research design principles; write research proposals; design research project. 1 hr lecture per week. Prereq: Admission to the professional program.

FN 253 - Introduction to Nutrition and Nutrient Metabolism (3 cr) - Basics for and use of nutrient recommendations and dietary guidelines; digestion, metabolism, use and interrelationships of foods and nutrients. Prereq: sophomore standing.

HP/W 312 - Exercise Physiology (3 cr) - Effects of exercises on speed, strength, skill and endurance; nature of muscular behavior, fatigue; effects of exercise with respect to nutrition, age, sex, and occupation. Prereq: 126 or Physical Education 200/201, Biology 285.

HS 105 - Survey of Common Diseases (3 cr) - Course Description: This course examines major disease categories such as infectious disease, cancer, stroke, and heart disease. Basic physiology, causes, risk factors, and prevention are explored within the context of public health.

HS 350 - Leadership and Management in Health Care (3 cr) - Interdisciplinary analysis of leadership theory, including concepts of working cooperatively, effective communication, conflict resolution, fiscal responsibility, human resource development, time management, building strategic alliances, and outcomes assessment. Pre-req: CLS 105; HS 105.

HS 390 - Human Pathophysiology (4 cr) - Examine fundamental concepts of diseases such as cellular adaptation and injury, inflammation, immunity, edema, and neoplasia and apply them to common diseases of select organ systems. Prereq: Biology 285 and 387.

HS 395 - Fundamentals of Epidemiology. 3 cr. Introduction to basic principles and methods of epidemiology and application to health care delivery. Includes historical perspective of epidemiology, measures of disease occurrence and association, clinical epidemiology, disease screening, causal inference, study design. Prereq: HS 105 and Math 355 or cons instr.

HS 410 - Issues in Aging. 3 cr. Interdisciplinary focus on gerontology, outlining associated health issues with impacts on families and caregivers. Includes demographics, roles and responsibilities, relationships within families, socioeconomic concerns, and barriers to health care. Prereq: HS 390, Political Science 306.

HS 490 - Interdisciplinary Perspectives in Health Care (3 cr) - Many health care situations, particularly the complex, require the expertise and contributions of a team of health care professionals. Using case studies, the student will critically analyze health care situations from the physical, psychological, socioeconomic, legal, and political standpoints, relating their impact on a variety of health care roles. Pre-req: CLS 105; HS 105; HS 390; HS 350.

HS 499 - Selected Topics in Health Sciences (1 cr) - Students will choose from a group of topics within their chosen health care option of study and will work on an independent project while under the supervision of a member of the HS faculty. Pre-req: HS 390; junior-level standing.

PHY ED 310 - Kinesiology (3 cr) - Study body movement and principles that affect movement. Prereq: 271, or cons instr.

PSYC 260 - Introduction to Developmental Psychology (3 cr) - Survey growth and development; physical, perceptual, cognitive, linguistic, emotional, and social development; emphasis on human development from conception through adulthood. Prereq: 110. GDR:SS1.

PSYC 351 - Abnormal Psychology (3 cr) Research-based study of the classification, causes, origins (etiology), and treatment of the major psychological disorders including anxiety and mood disorders; schizophrenia; personality disorders, childhood problems, sexual dysfunctions, and neurological disorders. Prereq: 6 cr in psych and jr st; or cons instr.

PHYS 203 - College Physics I (5 cr) - Mechanics, heat, and sound. For students in general education, biology, premedical and related fields. 3 hrs lec, 1 hr disc, 3 hrs lab per wk. Prereq: 1 yr high school algebra and 1 yr high school geometry, or equiv. GDR:NS.

PHYS 204 - College Physics II (5 cr) - Light, electricity and magnetism, and topics in modern physics. For students in general education, biology, premedical and related fields. 3 hrs lec, 1 hr disc, 3 hrs lab per wk. Prereq: 203 or equiv, or cons instr. GDR:NS.