

# HEALTH SCIENCES (HSC)

## Courses and Descriptions

### HSC 102 Medical Terminology 1 Credits

Medical terminology is the study of the principles of medical word building to help the student develop extensive medical vocabulary used in health care occupations. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole.

**Prerequisite(s):** Permission of instructor.

### HSC 105 Introduction to Health Professions 1 Credits

Course Description: This course will provide a basic overview of the health science professions including but not limited to: athletic training, clinical exercise physiology & cardiac rehabilitation, chiropractic, physician assistant, occupational therapy, nursing, community health education specialist, and physical therapy. The course will also cover the professional activities (i.e. professional organizations, certifications, professional issues, and professional liabilities) that are related to these professional applications.

### HSC 110 Introduction to Human Nutrition 3 Credits

This course is designed to offer the student an understanding of fundamental human nutrition concepts including, but not limited to, digestion, absorption, metabolism, functions, and sources of macronutrients and micronutrients. The theme of the course will align with human health and disease states and the important conceptions about the food industry and its relation to healthy dietetic choices.

### HSC 150 Introduction to Public Health 3 Credits

Public Health is the science of protecting, promoting, and improving the health of people and the communities where they live, learn, work, and play. Students will gain an understanding of the history and functions of public health, strategies and methods used in public health research, and the determinants of health.

### HSC 200 Environmental Health & Human Health 3 Credits

The health of any individual is a function of both our genetics and environmental factors. Environmental factors most broadly defined include the air we breathe, the water we drink and the food we eat. This course will focus on numerous examples of how bacteria, viruses, and exposure to environmental chemicals result in human diseases. Examples range from failures in public health infrastructure (cholera, diphtheria, river blindness, etc), failures to vaccinate (polio, measles, hepatitis, etc) and chemical exposures (birth defects, cancer, etc). There is also much known about how diet and nutrition can prevent diseases.

**Prerequisite(s):** BIO 10X Life Science course or any biology laboratory course or BIO 115 or 116 or 117.

### HSC 210 Nutrition for Exercise and Physical Activity 3 Credits

An introductory exploration of evidence based nutritional theory and applications in sport and exercise.

**Prerequisite(s):** HSC 110 with a minimum grade of D or BCH 225 with a minimum grade of D.

### HSC 250 Introduction to Epidemiology 3 Credits

Epidemiology is the study of distribution and determinants of defects, disease, and injury in human populations and the application of that study to assess the magnitude of health problems and the result of interventions designed to control them. This course is designed to introduce students to the basic principles, methods, and uses of epidemiology to better understand and characterize health and disease at a population level. The role of epidemiological evidence in planning and evaluation will be also be explored.

**Prerequisite(s):** MTH 102 or higher OR MSD 105 or higher OR permission of instructor.

### HSC 302 Kinesiology 3 Credits

The purpose of this course is to explore human movement during performance of activities. This course will explore the relationship between anatomical structures and function in the production of movement. The application and relationships between the fundamental principles of mechanics and musculoskeletal system function will be addressed within the framework of clinical and research perspectives. Both qualitative and quantitative approaches will be applied towards a better understanding of human movement, the analysis of physical activity. **Prerequisite(s):** BIO 221 & MTH 105 (or equivalent) or POI.

**Corequisite:** HSC 303.

### HSC 303 Kinesiology Lab 1 Credits

This lab is a co-requisite and must be taken with HSC 302.

**Corequisites:** HSC 302.

### HSC 490 Independent Study: Research and Creative Expression 1-4 Credits

Immerses the student in health science-related research. The student learns to organize material, use relevant medical/scientific literature, make precise measurements, and obtain reproducible data. If possible, the student will publish the results or present them at a scientific meeting.

### HSC 491 Internship in Health Sciences 1-4 Credits

A supervised work experience in an approved organization where qualified students gain real-world knowledge and utilize their academic training in a professional environment. Placement may be in private, public, non-profit, or governmental organizations. These can include educational or research institutions. The method of evaluation will be formalized prior to the approval of the internship by the sponsoring faculty member and should include keeping a journal of activities, a term paper or project report and an oral or poster presentation.

**Prerequisite(s):** 2.5 GPA required.