

# HEALTH SCIENCE (HLTH)

## **HLTH 120 | EXPLORING THE HEALTH SCIENCES | 2-4 quarter hours (Undergraduate)**

This course explores the growing and complicated landscape of the health professions. Students will explore a board range of careers available to people interested in the health of communities and individuals, helping them to identify their own skills, interests, and values. Designed for students in all majors who are interested in exploring a professional interest in health sciences, this course will include aspects of self-assessment and career exploration, health industry research, and connecting with individuals in the field. (2 quarter hours)

## **HLTH 133 | PREPARING FOR APPLICATION TO HEALTH PROFESSIONS | 2 quarter hours (Undergraduate)**

The course is designed for DePaul students who are planning to apply in the current year to a graduate-level health professional program including dental, medicine, optometry, veterinary medicine, physician assistant, physical therapy, pharmacy, and podiatry. This course is especially helpful for students planning to register for Pre-Health Advising Committee services during the current academic year. The goal for this course is to provide students with information about what applying to professional school will entail along with providing students an opportunity to prepare documents for their application. Class-time will include discovering student's interest in a clinical profession, learning how to articulate personal fit with their health profession of interest, creating a personal statement, mock interviews, peer reviews, and learning how to identify criteria for choosing target schools.

**BIO 191, BIO 192, BIO 193, (CHE 130 AND CHE 131), (CHE 132 AND CHE 133), AND (CHE 134 AND CHE 135) all with a grade of C or better.**

## **HLTH 140 | MEDICAL TERMINOLOGY | 2 quarter hours (Undergraduate)**

This course introduces the student to the specialized vocabulary of the Health Care environment. Terminology used in medical professions will be learned with an emphasis on understanding word roots and building vocabulary. Through studying each system of the body, terminology will be associated with specific anatomy, physiology, functions and minimal pathology of the human body. (2 quarter hours)

## **HLTH 150 | DISCOVERING DISEASE: SMALL POX, HIV, AND ZIKA | 4 quarter hours (Undergraduate)**

This course will introduce students to science as a way of knowing through the examination of three viral diseases: Small Pox, HIV/ AIDS and the Zika virus. In each case we will start by examining early understandings of the illness and then build towards a general biological theory of disease. Specifically, we will study the key observations that were made, and the evidence that was gathered in order to construct a theory of these three diseases that could then be translated into medical treatments. Special attention will be paid to the significant missteps that occurred as scientists struggled to understand the nature of these diseases. A key assumption of this course is that the dead ends and wrong turns encountered during the scientific process are a crucial component of scientific discovery. Each section will conclude with an overview of the most current scientific knowledge of the disease, including current treatments and prevalence levels around the world.

## **HLTH 194 | HUMAN PATHOGENS AND DEFENSE | 4 quarter hours (Undergraduate)**

This course will introduce students to the diverse microorganisms that cause significant disease within the human population. The biological basis of infectious disease will be explored with a focus on the mechanisms of viral and bacterial infection and spread. The principles behind tools used combat infection will be examined, including antiseptics, antibiotics/antivirals, and vaccination. The course also will profile how the human microbiome promotes health. The course is not appropriate for students who have taken BIO 210. Students practice standard microbial techniques in the laboratory, including bacterial culture, microscopy, antimicrobial testing, and species identification.

**A grade of C- or higher in BIO 191 is a prerequisite for this class.**

## **HLTH 195 | HUMAN FORM AND FUNCTION | 4 quarter hours (Undergraduate)**

This course provides a foundation for studying biological functioning of the human organism. Students will explore the basic principles of chemistry, cellular and molecular biology, and human genetics. In addition, we will examine the integral relationship between form and function that has evolved into the human body, with particular attention paid to the investigation of tissue organization, the biology of movement, and critical organ systems (nervous, endocrine, cardiovascular, and urinary). Related topics in human health and disease will also be discussed. Students practice standard microbial techniques in the laboratory, including bacterial culture, microscopy, antimicrobial testing, and species identification.

**A grade of C- or higher in BIO 191 is a prerequisite for this class.**

## **HLTH 200 | FOUNDATIONS OF HEALTH SCIENCES | 4 quarter hours (Undergraduate)**

This course introduces students to the B.S. in Health Sciences undergraduate program. Students will become familiar with the foundations of Health Sciences from biomedical, public health, historical, and political perspectives, and how each contributes to our understanding of human health and illness. Students will learn research methodologies applied to Health Sciences, as well as develop the skills to critically assess the results and implications of health research to critically consider the evidence base of health, medicine, and science. Upon completion of the course students will have developed skills and understanding that will serve as a foundation for the remainder of their coursework.

## **HLTH 210 | INTRODUCTION TO PUBLIC HEALTH | 4 quarter hours (Undergraduate)**

This course is designed to lay out the concepts, principles, and case outcomes of public health practice. It considers community health data source, classical intervention approaches, and the planning and evaluation of community health interventions.

**HLTH 200 or 202 is a prerequisite for this class.**

## **HLTH 220 | INTRO TO OCCUPATIONAL THERAPY | 4 quarter hours (Undergraduate)**

Broad over view of the profession of occupational therapy (OT). Students will learn about the wide variety of places occupational therapists (OTs) work and the diverse populations OTs work with. Particular focus will be spent on the occupational therapy practice areas: children & youth, health & wellness/adults, productive aging, rehab & disability, work & industry, intellectual disabilities, mental health, and assistive technology. This course will provide students an on-line shadowing experience and specific information for applying to OT graduate programs.

**HLTH 229 | ETHICS FOR HEALTH SCIENCES | 4 quarter hours  
(Undergraduate)**

This course provides an introduction to the ethical and moral theories that frame our response to fundamental issues in the health sciences. Moral philosophers, such as Aristotle, Thomas Aquinas and Immanuel Kant, all pose questions about the nature of right and wrong, and what is meant by a good life. The first part of the course examines the work of these philosophers and then uses them in order to think through specific topics, including: confidentiality, informed consent and end of life decision-making; health care disparities and health care reform; and global health ethics. Students who have taken REL 229 Medicine, Ethics, and Society, or PHL 229 Biomedical Ethics should not enroll in this course.

**HLTH 230 | FUNDAMENTALS OF HEALTH EDUCATION | 4 quarter hours  
(Undergraduate)**

This course provides health education majors with a foundational understanding of the professional health education field. Students will examine health education's role in planning, implementing, and evaluating the behavioral health challenges that affect the wellbeing of individuals and communities. Students will learn and then practice designing and delivering a wide range of health education activities, grounded in behavioral change theories, in a variety of settings and to diverse audiences. Finally, students will critically examine these issues through a variety of academic experiences, including academic service in a community setting, in order to identify and apply health education practices and principles that contribute to health promotion and disease prevention.

**HLTH 236 | GAY MEN'S HEALTH MATTERS | 4 quarter hours  
(Undergraduate)**

The purpose of this course is to introduce students to health issues relevant to gay men. We will explore the effects of minority status, heterosexism, and homophobia on gay men's health, including but not limited to STD/HIV/AIDS, substance use and mental health. Students will review epidemiological data, theoretical frameworks, and community-based health promotion approaches in order to gain a broad perspective on risk and resilience factors, health indicators, and strategies for self-care applicable to gay men's health.

**HLTH 240 | HEALTH STATISTICS | 4 quarter hours  
(Undergraduate)**

This course will introduce the basic principles and procedures of statistics as commonly used in health sciences. The course will cover statistical methods for single variable or multivariate, quantitative, and categorical data sources. The main goal is to prepare students to interpret health data, analyze data using the correct analytical methods, and present the findings in a way that is accessible to the public. In addition, this class will focus on literature review and critical evaluation through article critiques. Finally, students will be introduced to the computer based analytical software SPSS for beginner level data analysis and interpretation.

**MAT 100, MAT 101 or equivalent or higher is a prerequisite for this class.**

**HLTH 250 | HEALTH CARE POLICY IN THE UNITED STATES | 4 quarter hours  
(Undergraduate)**

This course provides students with an overview of health policy creation and describes the history of healthcare policy in the United States. Students will explore the delivery and finance of health care as well as analyze health care law and regulation. Students will gain an understanding of how political and economic policy is used to mitigate disease and illness in varied environments and how policy affects the delivery of health care and public health services.

**HLTH 210 is a prerequisite for this class.**

**HLTH 272 | INTRODUCTION TO MEDICAL ANTHROPOLOGY | 4 quarter hours  
(Undergraduate)**

This course explores the interrelationships between culture and human health for the purposes of understanding the biosocial origins of disease, systems of treatment, and the global inequalities that shape disease patterns and access to health care resources.

**HLTH 301 | INTEGRATED HUMAN ANATOMY AND PHYSIOLOGY-A | 4 quarter hours  
(Undergraduate)**

This course explores the fundamental principles of human anatomy and physiology that specifically relate to the sensation and perception of environmental stimuli, as well as the response to such challenges. In this context, broad consideration will be given to the body's various modes of cellular and tissue communication, with special emphasis on the interplay between the integumentary, skeletomuscular, nervous, and endocrine systems. In addition, the integrated approach will provide a strong foundation for the serial investigation of relevant topics relating to human health and disease, and clinical intervention. The required weekly laboratory component allows students to integrate and apply theory based lecture knowledge to hands-on anatomic and physiologic exercises, as well as provide critical analysis of course learning outcomes.

**BIO 193 and (CHE 134 or CHE 138) are a prerequisite for this class.**

**HLTH 302 | INTEGRATED HUMAN ANATOMY AND PHYSIOLOGY-B | 4 quarter hours  
(Undergraduate)**

This course explores the fundamental principles of human anatomy and physiology that specifically relate to the dynamic integration of critical organ systems. With the cardiovascular system as a starting point, students will investigate the complex orchestration of homeostatic mechanisms regulated by the respiratory, digestive, urinary, and reproductive systems. As with HLTH 301, the integrated approach will provide a strong foundation for the serial investigation of relevant topics relating to human health and disease, and clinical intervention.

**HLTH 301 is a prerequisite for this class.**

**HLTH 310 | FUNDAMENTALS OF EPIDEMIOLOGY | 4 quarter hours  
(Undergraduate)**

Epidemiology is generally considered to be the basic science of disease prevention. It encompasses the study of the distribution and determinants of health-related conditions in specified populations, and the application of this study to control health problems. This course will introduce students to methods employed by epidemiologists to collect data about the health of populations, to use epidemiologic data to generate and test hypotheses about the relationships between exposure and disease or other health conditions, and to use epidemiologic data that informs interventions and public policy that will address health problems and prevent their recurrence.

**LSP 121 or a statistics course**

**HLTH 315 | MATERNAL AND CHILD HEALTH | 4 quarter hours  
(Undergraduate)**

This course provides an overview of maternal and child health issues and trends that impact the health needs of women, children, and families. The course will involve a historical and current examination of the principles, programs, policies, and practices related to maternal and child health populations.

**HLTH 210 is a prerequisite for this class.**

**HLTH 318 | HEALTH OF AGING POPULATIONS | 4 quarter hours  
(Undergraduate)**

This course will address social science and basic science research, practice, and policy on the health of older populations. The rapidly increasing number and diversity of older Americans has broad implications for our health care and public health systems, as there will be an unprecedented demand on health care delivery and aging-related services. This course will introduce Health Sciences students to topics like the sociocultural and economic status of aging populations, theories of aging, aging policies, and aging health services. One objective of this course is to provide a foundation of aging health knowledge that can be utilized by Health Sciences students in future academic or professional careers.

**HLTH 210 is a prerequisite for this class.**

**HLTH 320 | MOLECULAR VIROLOGY | 4 quarter hours  
(Undergraduate)**

This lecture/seminar course is designed for students interested in the molecular details of virus replication and the interactions between viruses and host cells. Virus families that cause human disease are highlighted, however this course does not focus on the clinical aspects of virus infection and treatment. Students will review primary research articles and participate in group analyses of these works. Successful completion of BIO 250 Cell Biology is recommended prior to enrollment.

**BIO 210 or BIO 250 is a prerequisite for this class.**

**HLTH 325 | PHYSIOLOGY OF POVERTY | 4 quarter hours  
(Undergraduate)**

Low socioeconomic status is associated with psychological stress, nutritional challenges, and toxin exposure, in addition to low access to high-quality healthcare and education often discussed. In the US, it is also inseparable from racism, on a personal and structural level. This course will consider the effects of these stressors in driving cardiovascular, metabolic, immunological, and neurological diseases that contribute to striking disparities in quality of life and lifespan. With the support of lecture introductions, students will interpret data from basic research, biomedical studies, and epidemiology, and integrate them with public health and sociological perspectives. Documentaries and popular texts will contextualize these data and foster reflection and discussion in class meetings. By the end of the course, students will be able to apply what they have learned from the breadth of their scientific and liberal arts coursework to understand the critical challenges in addressing the impacts of socioeconomic inequality on human health.

**BIO 193 or (HLTH 194 and HLTH 195) is a prerequisite for this class.**

**HLTH 327 | PHYSIOLOGY AND SOCIAL IMPACT OF DRUG USE | 4 quarter hours  
(Undergraduate)**

This course aims to explore the biological, psychological and social effects of drug (ab)use by examining the known physiology and brain's role in addictive behavior and dependency. The course specifically explores the physiology-based pharmacology of: 1) Stimulants such as cocaine and amphetamines, 2) Nicotine, 3) Alcohol, 4) Opioids and 5) Cannabis. Furthermore, the course will touch on the social implications of addiction and review current treatment and prevention methods assessing efficacy and exploring novel or alternative treatments.

**HLTH 195 or HLTH 301 is a prerequisite for this class.**

**HLTH 329 | HEALTH HUMANITIES | 4 quarter hours  
(Undergraduate)**

The humanities and arts provide a unique insight into the human condition, suffering, personhood, and our relationship to medical and health technology. Through these practices, one can develop skills of observation, analysis, empathy and self-reflection, all of which are necessary for the provision of humane health care. In this course, students will explore health and medicine through the lenses of the humanities (literature, philosophy, ethics, history) and the arts (literature, theater, film, and visual arts).

**Status as a junior and WRD 103 and 104 (or HON 100 and HON 101) are prerequisites for this class.**

**HLTH 335 | COMMUNITY HEALTH ASSESSMENT | 4 quarter hours  
(Undergraduate)**

This course covers a range of community assessment processes focusing on health indicators within communities in Chicago. Students will be introduced to multiple data sources and methods. Implications of assessments will be framed within community health assessment requirements under the Affordable Care Act (ACA), as well as broader community needs and resources.

**HLTH 210 is a prerequisite for this class.**

**HLTH 336 | PROGRAM EVALUATION | 4 quarter hours  
(Undergraduate)**

This course will introduce students to methods in program evaluation, including process evaluation, monitoring of outputs and outcomes, impact assessment, and cost analysis. Students will gain practical experience in the design of conceptual frameworks, development of indicators, development of an evaluation plan to measure impact. Students will learn how this information can be used to improve program management and effectiveness. The course will cover experimental, quasi-experimental, and non-experimental study designs, and consider the strengths and limitations of each.

**HLTH 335 is a prerequisite for this class.**

**HLTH 339 | BIOETHICS IN SOCIETY CAPSTONE SEMINAR | 4 quarter hours  
(Undergraduate)**

This seminar is an interdisciplinary study of the function of bioethics in society. As a discipline and as a profession, bioethics stands as a distinctive barometer of our evolving and shifting conceptions not only of health and well-being, but of the world, society, and even ourselves. The seminar explores the history of bioethics, bioethics as a clinical practice, and the various questions that arise at this crossroad from health science, medical humanities, religious studies, sociological, and philosophical perspectives.

**PHL 229 or HLTH 229 or REL 229 is a prerequisite for this class.**

**HLTH 341 | DEATH AND DYING | 4 quarter hours  
(Undergraduate)**

As the only species that is aware of its own mortality, this course examines the human experience of death and dying as a biological, medical, legal, social, and cultural process throughout time. Students will learn about the biological breakdown of the body, hospice & palliative care, advance care planning, funerary and mourning practices, disposal of the human body, and beliefs of what happens after death.

**Junior Standing or above is a prerequisite for this class.**

**HLTH 343 | CANNABIS STUDIES AND SOCIAL JUSTICE | 4 quarter hours  
(Undergraduate)**

Cannabis has been recognized throughout history as a pharmacological agent to treat a variety of conditions. This history was interrupted by a series of prohibitions and criminalization policies that were driven by racism in the U.S. and elsewhere. This course examines systems of power that have perpetuated the criminalization of cannabis, the suppression of research into its viability as a pharmacological agent, as well as contemporary efforts to promote harm reduction, social justice and racial equity in the wake of the War on Drugs. Students will investigate the underlying structures that have created injustice among persons who use cannabis in the U.S., and they will study the ways in which racism has perpetuated inequality and oppression. Students will develop research skills by examining specific issues at the intersection of cannabis use or policy and social justice in depth, and evaluating approaches to redressing systemic injustice and creating a more equitable society. Readings will be supplemented by guest speakers from cannabis policy, research, and social justice spheres.

**HLTH 345 | FUNDAMENTALS OF ENVIRONMENTAL HEALTH | 4 quarter hours  
(Undergraduate)**

This course provides an introduction to and overview of the key concepts and methodological approaches in the field of environmental health. Students will understand the reciprocal nature of our interactions with the environment: how the environment affects human well being as well as how we impact the health of the environment. An emphasis in this course is on application through laboratory-based exercises, analysis of real data sets, and participating in the practice of environmental health.

**HLTH 210 is a prerequisite for this class.**

**HLTH 346 | ENVIRONMENTAL OUTREACH THROUGH EXPERIENTIAL LEARNING | 4 quarter hours  
(Undergraduate)**

In this course students will participate directly in environmental health by partnering with high school students in application-based service. Students will engage critically on concepts such as what it means to be a citizen, how to be an ally and provide access, and the guiding principles of working for peace and justice. The class will cover research methods, social and environmental justice work, asset and community-based approaches, culturally sustaining pedagogy, and science communication.

**HLTH 350 | HEALTH SCIENCES CAPSTONE | 4 quarter hours  
(Undergraduate)**

The Senior Capstone will bring students from both concentrations in the Health Sciences major together in an opportunity to share biomedical and psycho-social perspectives in an examination of current health issues.

**HLTH 250 and status as a senior Health Sciences major are prerequisites for this class.**

**HLTH 360 | INTRODUCTION TO GLOBAL HEALTH | 4 quarter hours  
(Undergraduate)**

This course introduces students to the factors that explain the unequal distribution of health and disease in the world through a series of global health case studies. Particular attention is paid to the ways in which long standing global interdependencies that do not appear immediately related to health: the ties of global trade, of global finance, and of global governance, nevertheless play a role in explaining unequal experiences of sickness and health. The course will trace how health policy takes different forms in changing political-economic environments including discussions of primary health care systems (e.g. inadequate investment, health workforce migration management); disease specific policies (e.g., child survival, AIDS treatment); and economic policies (e.g. World Bank & IMF Structural Adjustment Programs, pharmaceutical patent protections).

**HLTH 370 | MOLECULAR MECHANISMS OF HUMAN DISEASE | 4 quarter hours  
(Undergraduate)**

This course surveys current literature as a basis for discussing fundamental concepts in physiology, especially relating to the cellular and molecular determinants of human disease. In addition, connections will be drawn between the research literature and current clinical practices, including the development of therapeutic interventions. Topics will be selected with student input so as to meet individual needs and interests, and will include neurologic, cardiovascular, pulmonary, immunologic, and metabolic diseases. Students will read, review, and discuss primary research literature and group-present key findings in journal club format.

**HLTH 301 or BIO 250**

**HLTH 375 | INTRODUCTION TO PHARMACOLOGY | 4 quarter hours  
(Undergraduate)**

This course presents the basic principles of pharmacology, including, but not limited to pharmacokinetics, drug distribution, routes of administration, drug metabolism; pharmacodynamics, receptor theory, drug classification, drug action, and recent advances in pharmacotherapy.

**One of the following is a prerequisite for this class: HLTH 301, HLTH 302, BIO 307, BIO 308 or NEU 201**

**HLTH 380 | TOPICS IN HEALTH SCIENCES | 2-4 quarter hours  
(Undergraduate)**

Upper level course focused on a specific topic in Health Sciences that involves reading of primary literature and discussion.

**HLTH 397 | MENTORED RESEARCH EXPERIENCE IN HEALTH SCIENCES | 2-4 quarter hours  
(Undergraduate)**

The student and faculty research mentor will work together to formulate a research question based on current knowledge of the health sciences literature. They will develop a data analysis plan. The results and conclusions will be reported in a final project which may be a poster or oral presentation, or research manuscript. In addition, the student will reflect on how the project activities and experiences have contributed to their personal growth as a scientist and their future career plans. Relevant safety and ethical training will be based on the specific proposed research.

**HLTH 399 | INDEPENDENT STUDY | 1-4 quarter hours  
(Undergraduate)**

INDEPENDENT STUDY (1 quarter hour)

**A Health Science major is a prerequisite for this class.**