

Health Science (HSC) Courses

HSC1010 Introduction to Health Professions

This course is designed to survey different types of health professions for those in pursuit of a healthcare career. Students are provided with information about all training, educational and certification requirements for the professions discussed in class. Students learn how each of the professions plays a role in providing care in the healthcare system and how the professions interact with one another. Case studies introduce students to different scenarios in which various healthcare professions interact to solve complex patient problems.

Offered at Charlotte, Online, Providence

1 Semester Credit

HSC1020 Medical Terminology

This course provides an overview of medical terminology, the basis of the language used in healthcare. Students are introduced to the principles of medical word building, analysis and pronunciation, and define and interpret medical word parts and terms associated with the body using a systems approach. Common medical abbreviations applicable to each system are also defined.

Offered at Charlotte, Providence

1 Semester Credit

HSC1100 Determinants of Health

This course provides students with an overview of the determinants of health as described by the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO). The determinants of health are critical for understanding the impact of factors outside of genetics/biology on a population's health. A variety of topics are examined including a population-based overview of the determinants of health using the framework of social, physical, ecological and behavioral causation.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC1230 Introduction to Public Health

This course explores what public health means and how it impacts our lives through environment, policy, communication and personal relationships. Students are introduced to the basics of the public health system, covering the basic definition of public health, how we analyze public health problems, defining the biomedical basis of public health, and describing social and behavioral factors related to health interaction and medical care issues. This course uses case studies and real-life scenarios of challenges faced and the strategies implemented for working with communities on specific health issues that have the potential to impact a population.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC2100 Epidemiology

This course provides a systematic approach for acquiring and evaluating information on the distribution and causes of disease and other health outcomes in populations. Topics include epidemiologic methodologies utilized in health-related areas other than public health, such as clinical medicine, health administration, dentistry, occupational health and nursing. The link between epidemiology and the traditional liberal arts, such as social justice and health disparities, is discussed.

Prerequisite(s): HSC1230, MATH2001 or MATH2010.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC2130 Mindfulness for Health & Wellbeing

This course provides students with the opportunity to learn the principles of mindfulness, develop their own mindfulness meditation practice, and apply principles of mindfulness to daily life. This course also provides students with an overview of the relationship between mindfulness meditation and physical and mental health. Students learn mindfulness strategies to work with thoughts, emotions and sensations, while developing their capacity to enhance mind-body awareness of present-moment experience. Students in this course research the evidence supporting the use of mindfulness and meditation to improve overall physical and mental health outcomes. This course also introduces students to the public health implications of incorporating mindfulness into community-based and traditional medical settings. This course combines didactic, experiential, group and presentation-based learning.

Prerequisite(s): HSC1230 or PSYC1001.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC2230 Introduction to Global Health

This course introduces students to the major global health challenges, programs and policies that countries throughout the world make decisions about on a day-to-day basis. Students are introduced to the differences in global health status and disease prevalence and many of the factors that play a role in the reasons why some countries are able to eradicate disease more easily than others. Political, monetary and ideological values, as well as environmental factors, all play a role in creating health disparities globally. Discussion includes why people in some countries are healthier than those in others and why there are differences in resource allocation among these countries. Students are introduced to principal global health concepts such as the burden of disease, epidemiology, policy analysis and comparative health systems. Students learn to differentiate problems across countries and use learned skills to problem solve and communicate policy goals.

Prerequisite(s): HSC1230.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC2310 Introduction to Healthcare in the United States

This course introduces students to the organization, finance and delivery of healthcare in the United States. Students discuss how the structure of the healthcare system affects health outcomes for all populations. As part of this course, students explore the underlying principles of public and private health insurance. The course focuses on health policy reforms for both payers, providers, and patients and the challenges often faced with implementing reform. The influence of politics, economics, and environmental factors on delivery of healthcare services is discussed as well as how those factors affect patient outcomes and decision-making. In addition to the payment system, the course also introduces students to where healthcare is delivered and how care is regulated at both the state and federal level.

Prerequisite(s): HSC1230.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC2330 Healthcare Organizational Theory and Management

Students in this course examine the dynamic nature of organizations in the health services field and the administrative approaches in public and private agencies in the health sector. The healthcare system in the United States operates outside of traditional business norms, requiring leaders to understand the management principles that deliver healthcare services with high quality outcomes all while maintaining costs. Students explore healthcare management techniques through the lens of patients, providers and payers. This course also examines various principles of strategic management amidst the ever-changing regulatory environment with a focus on improving organizational efficiency, effectiveness and efficacy through leadership principles.

Prerequisite(s): HSC1230.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC2400 Research Methods for Health Science

This course introduces students to ecological, experimental and observational research methods that are necessary to conduct research in the health sciences and public health. Students discover the differentiating contributions of qualitative and quantitative research methods to the understanding of health and the disease process, as well as explore the role of innovative research designs, such as community-based participatory research, ecological momentary assessment, and mixed-methods designs. Students explore the relationship between methodological decisions and the strength of research findings. As part of the course, students develop a working knowledge of measurement theory; the validity and reliability of health-based measures; and population sampling techniques. Research ethics, including research funding and dissemination, are emphasized through historical and modern lenses, and past ethical errors relevant to the development of modern bioethical principles are discussed. Ethical codes created and supported by the American Medical Association and the American Public Health Association are prioritized. Students demonstrate their knowledge through the development of a research plan on a health or public health topic of their choice.

Prerequisite(s): (ESS2010/ESS2015 or HSC1230) and MATH2001 or MATH2010, sophomore status.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC3200 Health Education and Program Planning

This course is a study of the processes involved in planning health education and health promotion programs. Emphasis is on community analysis, including social assessment, epidemiological assessment, behavioral assessment and environmental/ecological assessment. Program implementation and assessment are also examined. Additionally, behavior theory is discussed to reflect the symbiotic nature between the target population and the service provider(s).

Prerequisite(s): HSC2100, MATH2001 or MATH2010.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC3300 Comparative Healthcare Systems

This course is designed to provide an in-depth survey of the structure, function and comparative performance of a variety of healthcare delivery and financing systems in the U.S. and other countries, and explores contemporary issues affecting the institutions that provide healthcare and the people who seek health services. The course also covers the historical development of international healthcare systems, the organization and financing of systems of care, and the policy process and priority setting. Finally, the course covers current efforts at healthcare reform.

Prerequisite(s): HSC1010, HSC1230.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC3410 Quality Improvement in Healthcare Organizations

Quality improvement in healthcare is designed to improve patient safety, patient-reported outcomes, and overall health equity among patient populations. Students in this course learn about the history of quality improvement and how this movement significantly changed the healthcare landscape in the United States during the past few decades. This course also covers methods for measuring, managing and improving the quality of healthcare. Students learn the principles of quality improvement and how to apply these principles in practical healthcare settings. This course focuses on current reform efforts focused on use of performance measures, quality reporting, and incentives as a way to improve quality across the healthcare system.

Prerequisite(s): HSC2330.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC3430 Healthcare Research Ethics

In this course, students discuss research ethics and management within a healthcare setting. Preceding events to the implementation of modern research policies are explored, and students learn the role of the institutional review board. Students discuss the grant acquisition process, intellectual property issues in research, conflicts of interest and publication ethics.

Prerequisite(s): HSC2400.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC3500 Current Issues in Health

This course allows students to examine the etiology and outcomes of recent or novel health events. Emphasis is put on developments within the health, public health, and healthcare fields within the previous 12 months, and topics may be nationally or globally relevant. Potential topics include emerging infectious disease outbreaks, changes in chronic disease trends, health care reform, and program or policy implementation. The course requires students to apply practical and theoretical knowledge towards the discovery of the causes of disease and the identification of effective disease prevention or treatment plans.

Prerequisite(s): HSC2100.

Offered at Charlotte, Providence

3 Semester Credits

HSC4100 Health Policy, Ethics and the Law

This course is designed to introduce students to topics that involve ethical issues in decision-making for public health issues that society faces every day. Students are exposed to a variety of issues in public health and provided examples of the process used to determine ethical trade-offs before decisions are made in the world of public health and healthcare. Topics include issues of conflict with values held by some stakeholders or members of the public; political and social circumstances; and when to impose restrictions on the freedom of individuals to protect the health of the community and the duties and obligations owed by citizens to the wider community.

Prerequisite(s): HSC1230, HSC2100.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC4310 Innovations in Healthcare Finance and Delivery Systems

Alternative payment models have emerged as innovative ways to contain costs and increase quality in delivery of healthcare services in the United States. Students in this course explore the new approaches to improving efficiency in care delivery and how to develop new ways to pay for that care. This course introduces students to the different strategies used in pay for performance programs, accountable care organizations, and other reforms implemented for provider-based incentives and care coordination. This course also explores the different health reforms passed as a way to integrate payment and service delivery to patients in the United States.

Prerequisite(s): HSC2310.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC4900 Data and Evidence in Health: Research Capstone

This course is designed to provide students with a context for performing research using different types of health data and to understand the differences across data types. Data as a decision-making tool is discussed as it pertains to issues in health, including making public health policy decisions, implementing new legislation, or deciding whether or not a drug is effective. Students perform an independent research study, beginning with the conceptualization of the research question, to selecting the appropriate data to create an analysis to be shared with colleagues. This is a capstone course that teaches students to transform their fundamental knowledge of public health research and methods in order to complete a research project using methods appropriate for public health research questions.

Prerequisite(s): (ESS2010/ESS2015 or HSC2100), HSC2400 and MATH2001 or MATH2010, junior status.

Offered at Charlotte, Online, Providence

3 Semester Credits

HSC5020 Foundations of Public Health

In this course, students explore the history of public health, and trace the historical developments that have led to modern U.S. public health structure and function. Integration of public health services within the healthcare and other related systems is discussed, and students compare the U.S. public health and healthcare systems with those implemented abroad. Students also learn issues related to workforce development within the public health field and assessing future needs in this area.

Offered at Charlotte, Providence

3 Semester Credits

HSC5080 Health and Healthcare

Using the Social Ecological Model as a guide, students learn the intra-personal, interpersonal, community, cultural, economic and political determinants of health. Health inequities that arise due to the social determinants of health are discussed, and relevant sociological concepts, such as social justice, are introduced. Students also discuss the role of globalization on health, including international trade, transnational corporations, and the internationalization of health. All topics are discussed within the context of national and international health concerns.

Offered at Charlotte, Providence

3 Semester Credits

HSC5100 Healthy Planet

Students discuss the environmental factors that influence population health, including pollution, environmental degradation, and climate change. Students also learn about the relationship between the health of the environmental ecosystem, animal health, and human health using the "One Health" model as a guide. Policy and regulations related to environmental health, and their impact on health, are discussed. As part of these discussions, students learn the details of the policy-making process and the ethical principles used when considering environmental interventions.

Offered at Providence

3 Semester Credits

HSC5120 Health Trends

Students learn the core epidemiological principles and practices that are used to determine the health status of communities. Students then apply these principles to examine the major causes and trends of morbidity and mortality at the local, state and national level. The utility of disease prevention efforts, such as screening and health promotion, at multiple stages of disease are discussed, and students learn to assess community health needs and disease prevention capacity.

Offered at Charlotte, Providence

3 Semester Credits

HSC5150 Chronic Disease Prevention and Control

Students in this course are introduced to the basic principles of biostatistics while applying those principles to the prevention and control of chronic disease. Chronic diseases are defined and characterized. Foundational principles of biostatistics are then introduced, including data types and distribution theory. Students learn to use descriptive and inferential statistical tests to identify disease trends, the risk and protective factors of chronic disease, and the effectiveness of chronic disease interventions.

Offered at Charlotte, Providence

3 Semester Credits

HSC5180 Discrimination and Health

Students in this course discuss the role of historical and modern privilege, prejudice, discrimination and racism in shaping the current health and healthcare environment. Students learn how discriminatory policies and practices, past and present, from the individual to the structural level, negatively impact population physical and mental health throughout the life course and lead to health inequities. Students also discuss the effectiveness of efforts and interventions to reverse these trends.

Offered at Providence

3 Semester Credits

HSC5220 Insights into Vulnerable Populations

In this course, students learn qualitative research methods while exploring issues related to sexual and reproductive health. The purpose and usefulness of key informant interviews, focus groups, medical record reviews, and other forms of archival review are discussed, and qualitative data analysis techniques are introduced. Students then learn how to use qualitative research to investigate relevant topics such as sexual and gender expression, sexual well-being, sexual assault, discrimination against sexual minorities, and culture and gender-based norms.

Offered at Charlotte, Providence

3 Semester Credits

HSC5260 Advocating for Healthier Diets

Students in this course learn how to resolve issues in the American food system and the American diet by using a systems thinking approach. Using visual models as a guide, strengths and deficits in the food system are identified, and potential change targets are detected. Then, students learn how to build coalitions and advocate for policy and program change as a key tool to improve the public's health.

Offered at Providence

3 Semester Credits

HSC5290 Combatting Infectious Disease

Preventing the spread of infectious disease has re-emerged as a key factor in significantly improving the public's health. In this course, students learn the epidemiology of infectious diseases, including types of agents, disease spread, invasiveness, virulence, and effective public health interventions. Then, students learn best practices when communicating to different population groups about infectious disease to decrease barriers to use and increase fidelity of infectious disease interventions. The role of cultural competence in public health communications is also discussed.

Offered at Providence

3 Semester Credits

HSC5320 Cultural Competency to Improve Health

Students learn U.S. and worldwide historical and current trends in mental illness, including disease screening efforts and DSM-V and ICD-11 diagnostic criteria. Risk factors and protective factors at the individual, interpersonal, community and environmental level are explored, and treatment options are discussed. Students discuss the impact of culture and language on the recognition and approach to mental health, including barriers and stigma that may arise. Students then develop a culturally competent program to decrease the burden of mental illness.

Offered at Providence

3 Semester Credits

HSC5350 Diversity, Equity and Inclusion

Students discuss the issues of diversity, equity and inclusion (DEI) as an essential part of team, program and organizational development. Students learn fundamental DEI principles, different groups that DEI initiatives need to consider, and held biases against such groups. The function and application of DEI in team building, leadership, and workplace environment are examined. Students also discuss the individual and societal effects of DEI initiatives.

Offered at Providence

3 Semester Credits

HSC5380 Policy of Addiction

In this course, students discuss current trends in the use of legal and illegal psychoactive substances, such as tobacco, alcohol, marijuana and opioids. State, national and international policies that prevent or promote psychoactive substance use are explored, and the effect of policies on substance use are discussed, with a focus on the role of policy in creating or eliminating health disparities. Then, students learn how to evaluate policy effectiveness using scientifically appropriate methodologies.

Offered at Providence

3 Semester Credits

HSC5420 Community Organizing

In this course, students learn the principles, purpose and activities involved in community organizing for a public health-related cause. Real-world examples are used to demonstrate effective and successful organizing activities. As part of this process, students discuss leadership theories, management strategies, negotiation tactics, and the role of mediation. Students also learn to identify the necessary tools and resources required for a successful community-organizing campaign and ensure long-term sustainability.

Offered at Providence

3 Semester Credits

HSC6110 Epidemiology and Food Safety

This course provides students with an introduction to epidemiologic methods used in foodborne disease outbreak investigation. Emphasis is put on the importance of surveillance in detecting various types of foodborne disease (e.g. bacteria, virus, parasite, etc.). In particular, students learn systematic approaches for collecting and analyzing data on the distribution of foodborne illness to identify the points of contamination and causes of foodborne disease. Both epidemiologic methods and molecular methods are presented to identify the causes of foodborne disease outbreaks. Finally, students evaluate the effectiveness of foodborne disease outbreak investigations using various case studies.

Offered at Online, Providence

3 Semester Credits

HSC6120 Improving Community Health

With faculty support, students work with community partners and stakeholders to apply learned knowledge in real-world settings. In the classroom, students learn the principles and process of developing community interventions and producing high-quality work products to improve population health.

Prerequisite(s): HSC5220.

Offered at Providence

3 Semester Credits

HSC6920 Public Health Capstone

Students in this course complete an integrative learning experience under faculty supervision. Students learn to apply their foundational public health knowledge to real-world situations using scientifically and field appropriate methods.

Prerequisite(s): HSC6120.

Offered at Providence

3 Semester Credits