## HLSC - Health Sciences

### HEALTH SCIENCES Courses

**HLSC 405. Interprofessional Study Abroad on Global Health. 1-3 Credits.**
This study abroad service learning course will introduce the student to the political, social, cultural, and ethical issues involved in prevention and health promotion globally. Students will travel to another country and learn the incidence/prevalence, morbidity/mortality, and identified public health problems in specific regions and countries. Prerequisite: ENGL 110C.

**HLSC 701. Introduction to Health Services. 3 Credits.**

**HLSC 702. Health Management. 3 Credits.**
This seminar will provide students with an understanding of health care organizations and effective management. Particular attention will be given to the issues of access, cost and quality.

**HLSC 705. Interprofessional Study Abroad on Global Health. 1-3 Credits.**
This study abroad service learning course will introduce the student to the political, social, cultural, and ethical issues involved in prevention and health promotion globally. Students will travel another country and learn the incidence/prevalence, morbidity/mortality, and identified public health problems in specific regions and countries.

**HLSC 706. Leadership in Complex Systems and Organizations. 3 Credits.**
This course will focus on the leadership that comprises two types: informal and formal leadership. Competencies will include communication, knowledge of health care environment, leadership, professionalism, and business skills.

**HLSC 707. Informatics and Healthcare Technology. 3 Credits.**
This course will cover the use of data in health care as well as other informatics applications. Students will explore healthcare technology used to improve the delivery and evaluation of care.

**HLSC 708. Evidence-Based Management for Quality Healthcare. 3 Credits.**
The focus of the course is on the development of system processes to ensure quality health care. The evidence-based model will be applied to organizational systems.

**HLSC 709. Multidisciplinary Approach to Health Services Research. 3 Credits.**

**HLSC 710. Research Design and Application. 3 Credits.**

**HLSC 712. Qualitative Research Methods. 3 Credits.**

**HLSC 713. Measurement of Health Phenomena. 3 Credits.**
An overview of measurement theory with emphasis on the development, testing, and refinement of norm- and criterion-referenced data collection instruments for health-related research.

**HLSC 714. Theory in the Health Sciences. 3 Credits.**

**HLSC 716. Competitive Resource Design and Utilization. 3 Credits.**
This course focuses on the competitive design and utilization of organizational and human resources. Emphasis will be placed on the strategic process to ensure that resources are applied in ways to ensure high-quality care and excellent patient outcomes. The course will cover the business models for effective financial and personnel management of healthcare organizations. Analysis of the costs and quality of care will be performed.

**HLSC 746. Epidemiology. 3 Credits.**
This course examines epidemiology as a method for viewing inborn community health problems and as a body of knowledge derived from this method. Skills in using epidemiology as a method and as knowledge to solve community health problems will be included.

**HLSC 751. Developmental Neonatal Physiology. 2 Credits.**
This course provides an in-depth examination of human genetics, embryologic development and normal physiologic functioning of developing body systems. Mechanisms involved in cell division, gametogenesis, and inheritance patterns will be addressed. Basic genetics and epigenetics will be included. The structural and functional development of fetal systems, during critical periods, will be emphasized. Abnormalities and alterations in fetal development will be explored.

**HLSC 764. Health Economics. 3 Credits.**
Lecture 3 hours; 3 credits. This course describes the application of economic tools to analyze the operation of markets for health care and insurance. Topics covered include the consumption and costs of health care in the United States, the viewpoints of players in the health care market, and an overview of both supply and demand analysis and cost effectiveness analysis. Complexities of economics unique to health care will be detailed. Further, students will employ these principles in several case studies of current and classic issues in health economics. (Cross-listed with CHP 764).

**HLSC 768. Practicum in Global Health. 2 Credits.**
Global health related field placement (112 hours).

**HLSC 772. Policy and Politics of Health. 3 Credits.**
This course enables the student to develop a systematic and analytical framework for understanding health care policy issues. The policy process is covered in detail. Timely policy issues also are discussed.

**HLSC 773. Pharmacology for Advanced Neonatal Care. 3 Credits.**
This course offers scientific inquiry into the use of pharmacologic agents in the advanced nursing care of infants, including fetal, neonatal life, and early childhood. Pharmacokinetics, pharmacodynamics, drug use in pregnancy and lactation, pharmacologic agents used in disease prevention and treatment, drug monitoring and drug safety in the home are explored.

**HLSC 774. Advanced Neonatal Care: High Risk Management I. 3 Credits.**
This course develops the students' ability to manage high-risk neonates. This is the second of three sequential management courses that provide the theoretical and practical knowledge for the neonatal nurse practitioner to manage the health care needs of the neonate at the highest level of nursing practice.

**HLSC 775. Foundations of Advanced Neonatal Care. 3 Credits.**
The foundations of advanced neonatal care course provides the theoretical and practical knowledge for the neonatal nurse practitioner or physician assistant to manage the health care needs of the neonate in the newborn nursery or level II neonatal intensive care unit.

**HLSC 776. Global Health. 3 Credits.**
This course will introduce the student to the political, social, cultural and ethical issues involved in disease prevention and health promotion globally. Specific emphasis will be on incidence/prevalence, morbidity/mortality, and identified health problems in specific regions and countries. This course will also identify international health prerogatives aimed at improving health status through education and intervention.

**HLSC 777. Global Environmental Health. 2-3 Credits.**
The goal of this course is to guide students with a public health perspective to develop skills to identify and analyze environmental health problems globally. It is designed to provide knowledge on recognizing and evaluating major environmental health issues and risk factors in developed and developing countries by using group discussions and real-life case studies.

**HLSC 780. Monitoring & Evaluating Global Health Programs. 2 Credits.**
This course familiarizes students with the basic concepts, issues, theories, approaches and models in evaluation in a global public health context. Students in this course will begin to develop technical skills to conceptualize and design evaluations of global public health programs or projects. These practices include determining which evaluation approach to use in a given context, developing an evaluation plan and appropriate evaluation questions, determining the data needed to answer the evaluation questions and establishing reporting processes to provide information to program developers.
This course will teach students the applications of multidisciplinary competencies towards solving human health challenges. The course will identify all areas of global health issues that require human, veterinary and environmental applications for solutions. One Health One Medicine is an important course for all students in Health or Environmental Sciences that are called upon to integrate multidisciplinary competencies as part of their education and career experiences.

**HLSC 784. Key Competencies for Co-creating Sustainable Futures. 2 Credits.**

This course is based in an ongoing NSF sponsored research project called the Sustainable Futures Protocol (SFP), which seeks to define and develop the key individual and collective competencies for collaboratively generating sustainable futures across global societies. This course will explore the quantitative and qualitative research on collaborative leadership and action that best addresses the challenges of climate change mitigation, adaptation, and justice as they relate to global public health.

**HLSC 785. Issues and Opportunities in Global Health Research. 2 Credits.**

This course focuses on global health research with an emphasis on cultural, political and economic influences on health in various regions and provides students opportunities to engage in inter-professional teamwork to brainstorm problem-based issues and establish research proposals.

**HLSC 795. Topics in Health Sciences. 1-3 Credits.**

Lecture, 1-3 hours; 1-3 credits. Designed to provide the advanced student with an opportunity to study independently or in small groups and investigate specific topics of current interest in health services or health sciences.

**HLSC 798. Supervised Research. 1-6 Credits.**

Supervised research on a specialized topic. Can be repeated.

**HLSC 801. Introduction to Health Services. 3 Credits.**

Lecture 3 hours; 3 credits. Focuses on the complexities involved in providing health services to populations. Presents issues related to public health, community health, urban and rural health, healthy people/communities and health care delivery in traditional and non-traditional settings.

**HLSC 802. Health Management. 3 Credits.**

This seminar will provide students with an understanding of health care organizations and effective management. Particular attention will be given to the issues of access, cost and quality.

**HLSC 804. Methods of Program Evaluation. 3 Credits.**

Lecture 3 hours; 3 credits. Prerequisite: HLSC 810 or PAUP 853. Departmental approval required. Examination of various methodologies for designing and conducting public health program evaluation and research. Experimental, quasi-experimental and non-experimental procedures will be covered.

**HLSC 805. Interprofessional Study Abroad on Global Health. 1-3 Credits.**

This study abroad service learning course will introduce the student to the political, social, cultural, and ethical issues involved in prevention and health promotion globally. Students will travel another country and learn the incidence/prevalence, morbidity/mortality, and identified public health problems in specific regions and countries.

**HLSC 806. Leadership in Complex Systems and Organizations. 3 Credits.**

This course will focus on the leadership that comprises two types: informal and formal leadership. Competencies will include communication, knowledge of health care environment, leadership, professionalism, and business skills.

**HLSC 807. Informatics and Healthcare Technology. 3 Credits.**

This course will cover the use of data in health care as well as other informatics applications. Students will explore healthcare technology used to improve the delivery and evaluation of care.

**HLSC 808. Evidence-Based Management for Quality Healthcare. 3 Credits.**

The focus of the course is on the development of system processes to ensure quality health care. The evidence-based model will be applied to organizational systems.

**HLSC 809. Multidisciplinary Approaches to Health Services Research. 3 Credits.**

Lecture 3 hours; 3 credits. Uses theory and research findings from areas such as Biology, Psychology, Sociology, Economics, Urban Studies, and Health Services to achieve an understanding of health services issues and problems. Emphasizes methods of analysis and of developing alternatives related to multidisciplinary perspectives.

**HLSC 810. Research Design and Application. 3 Credits.**

Lecture 3 hours; 3 credits. Prerequisite: graduate-level courses in research design and statistics or permission of the instructor. Emphasis is on exploring the advantages/disadvantages and uses of non-experimental, quasi-experimental, and experimental designs in health-related research with application to management, education, and clinical practice. (cross-listed with PT 810).

**HLSC 811. Quantitative Research Methods in Health Care. 3 Credits.**

An applied approach to the selection and application of bivariate and multivariate statistical techniques in health services research. Emphasis is placed on handling large data sets and the use of a computer for manipulation of quantitative data. Prereq.: HLSC 710 or HLSC 810.

**HLSC 812. Qualitative Research Methods. 3 Credits.**

Lecture 3 hours; 3 credits. An exploration of qualitative research methods including participant observation, ethnography and the generation of grounded theory. Individual interviews and focus group methods will be covered and historical, content analysis, phenomenological and montage approaches will also be discussed. Health related examples of published research in a variety of fields will be utilized to exemplify the methods.

**HLSC 813. Measurement of Health Phenomena. 3 Credits.**

An overview of measurement theory with emphasis on the development, testing, and refinement of norm- and criterion-referenced data collection instruments for health-related research. Prerequisites: graduate-level courses in research design and statistics or permission of the instructor.

**HLSC 814. Theory in the Health Sciences. 3 Credits.**

Lecture 3 hours; 3 credits. Introduces the philosophy of science by studying the nature and purposes of theory for the health sciences. Standards for evaluation of theories will be described. Selected theories and supporting research from the health sciences literature will be discussed and critically evaluated.

**HLSC 815. Decision Analysis in Health Care. 3 Credits.**

Lecture 3 hours; 3 credits. This course teaches students the art and science of decision making. It covers expected utility theory, decision tree analysis, cost-benefit analysis, and the psychological aspects of the decision-making process in the context of health policy research.

**HLSC 816. Competitive Resource Design and Utilization. 3 Credits.**

This course focuses on the competitive design and utilization of organizational and human resources. Emphasis will be placed on the strategic process to ensure that resources are applied in ways to ensure high-quality care and excellent patient outcomes. The course will cover the business models for effective financial and personnel management of healthcare organizations. Analysis of the costs and quality of care will be performed.

**HLSC 820. Health Care Delivery System. 3 Credits.**

Lecture 3 hours; 3 credits. This course provides the student with an opportunity to analyze the American health care system. The health care system is composed of complex organizational dynamics and structures which predicate the interaction between the major components of the system: personnel who provide service; institutions in which care is provided; financing mechanisms which pay for care; and the government which attempts to regulate it. This course is designed for in-depth analysis and synthesis of all aspects of health care delivery with an emphasis on improving the delivery and access to care.
HLSC 846. Epidemiology, 3 Credits.
This course examines epidemiology as a method for viewing inborn community health problems and as a body of knowledge derived from this method. Skills in using epidemiology as a method and as knowledge to solve community health problems will be included.

HLSC 864. Health Economics, 3 Credits.
Lecture 3 hours; 3 credits. This course describes the application of economic tools to analyze the operation of markets for health care and insurance. Topics covered include the consumption and costs of health care in the United States, the viewpoints of players in the health care market, and an overview of both supply and demand analysis and cost effectiveness analysis. Complexities of economics unique to health care will be detailed. Further, students will employ these principles in several case studies of current and classic issues in health economics. (Cross-listed with CHP 764).

HLSC 868. Internship in Health Sciences, 3 Credits.
3 credits. Supervised health services field experiences or health sciences laboratory experiences. A completed research project which is publishable or presentable at a professional conference is required to complete the course.

HLSC 872. Policy and Politics of Health, 3 Credits.
This course enables the student to develop a systematic and analytical framework for understanding health care policy issues. The policy process is covered in detail. Timely policy issues are also discussed.

HLSC 873. Development of Grants and Contracts in the Health Professions, 3 Credits.
Lecture 3 hours; 3 credits. Designed as a "hand-on" approach in effective grantsmanship, this course will guide the student from the identification of potential funding sources through proposal development. Highlights include program planning, nonprofit status, governmental/foundation corporate trends, local resources and grants administration.

HLSC 875. Comprehensive Health Planning, 3 Credits.
Lecture 3 hours; 3 credits. This course emphasizes the principles and processes of program planning, including a consideration of objectives, priorities, policy choices, assessment of resources, implementation, and evaluation. The student will gain practical experience in program development by developing a planning document.

HLSC 876. Global Health, 3 Credits.
This course will introduce the student to the political, social, cultural and ethical issues involved in disease prevention and health promotion globally. Specific emphasis will be on incidence/prevalence, morbidity/mortality, and identified health problems in specific regions and countries. This course will also identify international health prerogatives aimed at improving health status through education and intervention.

HLSC 881. Dissertation Seminar, 3 Credits.
3 credits. This course will assist students in developing a dissertation proposal. Steps in the research process will be reviewed as students submit drafts of their proposal for faculty and peer review. Problem formulation, integrating theoretical frameworks, preparing for human subjects review and outlining data analysis techniques for hypothesis testing will be discussed. Students will be introduced to University guidelines related to dissertations and other resources to assist them in their task.

HLSC 889. Colloquium I, 1 Credit.
Lecture 1 hour; 1 credit. Grading: Pass/Fail.

HLSC 890. Colloquium II, 1 Credit.
Lecture 1 hour; 1 credit. Grading: Pass/Fail.

HLSC 891. Colloquium III, 1 Credit.
1 credit. This course is the third in a series of colloquial courses in which doctoral level students receive presentations and present research and current topics of interest in health related professions.

HLSC 892. Colloquium IV, 1 Credit.
1 credit. This course is the fourth in a series of colloquial courses in which doctoral level students receive presentations and present research and current topics of interest in health related professions.

HLSC 893. Colloquium V, 1 Credit.
This is the fifth in a series of colloquial courses in which doctoral level students receive presentations and present research and current topics of interest in health related professions.

HLSC 894. Colloquium VI, 1 Credit.
1 credit. This is the sixth in a series of colloquial courses in which doctoral level students receive presentations and present research and current topics of interest in health related professions.

HLSC 895. Topics in Health Sciences, 1-3 Credits.
Designed to provide the advanced student with an opportunity to study independently or in small groups and investigate specific topics of current interest in health services. Prerequisites: Ph.D. standing or permission of the graduate program director.

HLSC 897. Independent Study, 1-3 Credits.
Individualized study selected by the student in collaboration with a faculty member. Area of study to be supervised and approved by a faculty member with the approval of the graduate program director. Prerequisites: Admission to Health Services PhD program and permission of graduate program director.

HLSC 898. Supervised Research, 1-6 Credits.
Supervised research on a specialized topic. Can be repeated.

HLSC 899. Dissertation, 1-12 Credits.
1-12 credits. Available for pass/fail grading only. An approved research project written under the supervision of a faculty advisor, in which the student demonstrates the capacity to design and complete independent applied research. The completed project must be approved by the dissertation committee.

HLSC 999. Doctoral Graduate Credit, 1 Credit.
This course is a pass/fail course doctoral students may take to maintain active status after successfully passing the candidacy examination. All doctoral students are required to be registered for at least one graduate credit hour every semester until their graduation.