HEALTH SCIENCE (HAN) - COURSES

HAN

Health Sciences

HAN 200: Human Anatomy and Physiology for Health Science I
This is the first course in a two-part sequence that introduces the study of human anatomy and physiology at the cell, tissue and organ system levels of organization, with emphasis on understanding disease processes associated with systems. This course is designed for Health Science (HAV) majors, particularly those interested in pursuing HAN clinical concentrations of study. Open to non-HSC students. Prerequisite: one BIO course
3 credits

HAN 202: Human Anatomy and Physiology for Health Science II
This is the second course in a two-part sequence that continues the study of human anatomy and physiology. Topics include the endocrine system, blood composition, the cardiovascular system, the lymphatic system, the immune system, the respiratory system, the digestive system, nutrition, the urinary system, the reproductive system, fluid, electrolyte and acid-base balance and heredity. This course is designed for Health Science majors (HAV), particularly those interested in pursuing HAN clinical concentrations of study. Prerequisite: HAN 200.
3 credits

HAN 300: Health Care Issues
Provides students with an overview of the organization of the health care delivery system. Includes the role of health care professionals and health care organizations. Explores issues regarding health care insurance, the uninsured and underserved, managed care and changes in the health care marketplace. Provides an overview of major diseases including epidemics, chronic and acute illness. Discusses the role of health promotion and disease prevention as well as alternative and complementary medicine. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

HAN 312: Medical Terminology and Human Anatomy
Provides the medical terminology and human anatomy needed for non-clinical roles in healthcare. Presents medical terminology through didactic and experiential techniques by reviewing the digestive, urinary, integumentary, reproductive, respiratory, endocrine, nervous, musculoskeletal, cardiovascular and lymphatic systems. Students will learn how to build a medical vocabulary and understand the importance of precise communication in the delivery of health care. Open to non-HSC students.
2 credits

HAN 333: Communication Skills
Introduces the principles of effective communication and stages of group development. Offers theory and practice of interpersonal communication and groups. Provides specific topics related to health care teams. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

HAN 335: Professional Ethics
Provides students with a framework for identifying ethical dilemmas in professional settings. Through the use of case studies and role-playing, students simulate ethical situations relating to confidentiality, informed consent and truth-telling, and explore various approaches for resolving these conflicts. Presents professional codes of ethics using small and large group discussions. Presents and discusses ethics-related topics such as genetics, transplants, cloning, advance directives, and health care accessibility. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

HAN 364: Issues in Health Care Informatics
Acquaints students with the use and application of personal computers and medical information systems used in health care. Emphasizes the optimization and customization potential of computer functions for standard and specialized tasks. Examines the present and potential use of the Internet in the health care arena. Presents the application of medical informatics to health care delivery through classroom demonstrations and discussions. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

HAN 383: Professional Writing
Comprehensive overview of the skill set required to write professional documents. Students will be required to communicate to a variety of audiences via letters, memos, electronically transmitted documents, researched essays, and brochures. Introduces students to software packages and other web-based resources. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

HAN 395: Radiation Physics in Medicine
Provides an introduction to radiological and radiation oncology physics for students interested in a career in either medical imaging or radiation therapy/oncology. Presents elements of mathematics and general physics relevant to the radiological sciences. Topics include production of radiation, radioactivity, interaction of radiations with matter, radiation detection, characteristics of high energy medical LINAC radiation, absorbed dose calculation and measurement, radiography, radionuclide imaging, imaging with ultrasound, imaging with magnetic resonance, and basic medical radiation safety. Restricted to HANBS students.
Prerequisite: Admission to Undergraduate Health Sciences Center program
4 credits

HAN 401: Radiobiology and Health Physics
Presents an overview of the biological effects of radiation by examining the interaction of radiation with matter, macromolecules, cells, tissue and the whole body. Studies the clinical impact of responses to radiation. Introduces students to radiation safety through topics such as biologic consequences of irradiation, regulatory limitation of exposure, methods for exposure minimization, and radiation monitoring. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 394
Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 402: Radiographic Anatomy and Pathology
Provides basic radiographic anatomy from the present and potential use of the Internet in the health care arena. Presents the application of medical informatics to health care delivery through classroom demonstrations and discussions. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

HAN 383: Professional Writing
Comprehensive overview of the skill set required to write professional documents. Students will be required to communicate to a variety of audiences via letters, memos, electronically transmitted documents, researched essays, and brochures. Introduces students to software packages and other web-based resources. Restricted to HAN majors.
Prerequisite: Admission to Undergraduate Health Sciences Center program
3 credits

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Addresses the concept of marketing, the nature of marketing strategy and the environment in which marketing operates. Provides a framework for understanding the consumer, along with key selling methods. Topics include the "Four Ps" of marketing, promotional elements of marketing, the communication process, and personal selling. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 436: Continuous Quality Improvement in Health Care
Provides basic principles associated with Total Quality Management (TQM) and Continuous Quality Improvement (CQI). Aids identification and quality problem-solving found in all health care organizations utilizing CQI tools and techniques. Through the use of case studies, current events, and textbook materials, students will learn how to identify problems, recommend improvements, and collect data to demonstrate process improvement. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 440: Introduction to Community Health Education
Introduces students to the foundation of planning, implementing and evaluating community-based health education programs. Presents classic theories of health education including the social learning theory, health belief model, and the attribution theory. Reviews relevant health education programs. Examines various learning styles and skills. Basic health education models are introduced and critiqued through individual and group projects. Reviews health education professional organizations and associations. Each student is required to design a health education program for a selected population. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 447: Children with Disabilities
Provides a comprehensive overview of the theories of child development and issues related to children with developmental spectrum disorders, neurodevelopmental disorders, and communication and learning disorders. Includes behavioral, developmental, language, medical, motor and sensory needs of children with developmental disabilities. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 448: Disability and Employment
Presents a comprehensive overview of the Disability and Employment field. Explores pertinent employment-related legislation, the vocational rehabilitation system, the structure of existing governmental and not-for-profit programs, and current disability employment practices, through the use of didactic and experiential techniques. Emphasizes the key roles of placement professionals. Provides individualized learning opportunities for individuals with disabilities who happen to be job seeking. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 449: Project in Disability Studies
Students will develop independent projects in topic area of disability studies. They will be required to develop a set of readings, engage in a minimum of 15 hours of experiential learning [in the form of community site-visits, volunteerism, or internships]. Course instructors and assigned mentors will assist students during bi-weekly group meetings and by scheduled appointments. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
4 credits

HAN 450: Introduction to Public Health
Introduces the principles and practices of public health, including definitions and concepts, history and development, determinants of health, and ethical and legal aspects of public health. Orients students to various public health settings such as local and state health departments, not-for-profit community organizations, and agencies for special populations. Provides students with basic knowledge and skills for conducting community needs assessment with diverse populations. Addresses infectious disease control, environmental health, chronic disease control, tobacco and drug control, maternal and child health, women's health, and injury control topics. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 452: Epidemiology and Biostatistics
Provides students with the basic knowledge and skills for conducting health needs. Addresses epidemiological approaches and skills for collecting and organizing data of communities to meet health needs. Addresses epidemiological concepts, limitations and resources. Through the use of case studies, students study various epidemiological models used regionally, nationally and internationally. Includes discussions about ethical situations related to research and statistical studies. Restricted to
HEALTH SCIENCE (HAN) - COURSES

Fall 2011

students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 453: Research Methods in Public Health
Focuses on the details of public health research design. Guides students through a step-by-step approach through qualitative, comparative, and quantitative research designs and analysis methods. Students will learn the language of research, various methods for conducting research and how to identify and synthesize research literature. Builds on concepts covered in the other courses in the public health/community health concentration. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
4 credits

HAN 456: Behavioral and Social Aspects of Health
Introduces social and behavioral factors as determinants of health. Explores theories of human and group behavior and health behavior change models through lecture and case study. Explores the dynamics between health behaviors and culture, gender, age and socioeconomic status. Students study various inventory tools for measuring health-related knowledge and methods for measuring behavior change. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 462: Developing Health Information Systems
Introduces students to fundamental hardware and software concepts, operating systems, GUI or desktop environments and system development life cycles. Reviews Windows applications such as spreadsheet, database, forms, queries and reports. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
4 credits

HAN 464: Health Information Systems Management
The course includes organizational change issues in health care environments, resource management (inventory, tracking and acquisition) and the role of policy formulation. Consumer issues, standards and security and the provision of health information resources to healthcare workers will also be covered. Relevant applications and issues related to health services will also be explored. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 466: Applied Health Care Informatics
Provides overview of the role of information systems in health care organizations. Emphasizes the integration of evidence-based research into clinical decision-making and the influence of information systems on health outcomes. Explores technical, organizational and cost-benefit issues related to health care information systems, including clinical decision-support, integrated networking and distributed computing technologies, telemedicine applications and artificial intelligence solutions. Through a combination of classroom-based seminars, group case studies, and computer laboratory exercises, students will develop and exercise analytical skills for appraising health information systems, as well as accumulate practical experience using biomedical research databases, desktop application software, and electronic communication systems. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 467: Utilization and Outcomes Research Methods
Provides the necessary tools to evaluate and implement research methods and utilize outcomes within the health care system. Presents an overview of statistics and research methods and evaluation techniques by utilizing group discussions and case studies. Demonstrates the utilization of technology as a resource for existing research as well as management tools. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 470: Environmental Health, Occupational Health, and Safety Engineering
Provides fundamentals of occupational safety and health including safety engineering regulations, codes and practices, safety program administration, recognition of hazards, and implementation of hazard controls. Focuses on fire safety problems associated with modern industry and the controls needed to prevent or mitigate hazards. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
4 credits

HAN 471: Trauma and Trauma Systems
Explores concepts and issues that are critical to the assessment and care of trauma patients. Covers kinematics, pathophysiology, trauma patient assessment and management, and trauma system development. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 472: Weapons of Mass Destruction
Presents a comprehensive overview of nuclear, biological incendiary, chemical and explosive agents that are more likely to be used as Weapons of Mass Destruction (WMD). Expands the Emergency Medical Service (EMS) provider's training in responding to conventional HAZMAT incidents and focuses on the recognition and management of incidents involving bioterrorism, chemical and nuclear weapons. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
3 credits

HAN 474: Industrial Hygiene
Introduces basic concepts of industrial hygiene. Presents the methodology and procedures that professionals in the field use to identify, measure, and correct hazards in the work environment. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes
4 credits

HAN 476: Hazardous Materials, Emergency Response and Environmental Auditing

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Concentrates on the nature of hazardous materials and how they are handled in the workplace. Presents the fundamentals of emergency response planning and how to perform environmental audits. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes

HAN 477: HAZMAT Training for Emergency Medical Services

Comprehensive overview of the practice and procedures required of Emergency Medical Service (EMS) providers when responding to major HAZMAT incidents. Includes management strategies for Hazards Materials (HAZMAT) disasters. Emphasizes the coordination of services and resources by national, federal and local agencies. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes

HAN 483: Cardiopulmonary Physiology for ASATT

Familiarizes students with the anatomical structures and physiological mechanisms and functions of the cardiopulmonary system. Reviews mathematical formulas and calculations used in clinical applications of physiologic concepts. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes

HAN 485: Clinical Monitoring

Provides students with a working knowledge of clinical monitoring devices and their application to clinical settings. Covers duties of anesthesia technologist including the provision of technical support to professional staff in order to facilitate anesthesia departmental function. Student develops skills to maintain and organize the anesthesia environment, equipment and supplies. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes

HAN 486: Principles and Practice of Radiation Therapy

Introduces student to the practice and technical aspects of radiation therapy. An overview of cancer to include: statistics, epidemiology, etiology, patient education and assessment, and pharmacology and drug administration. Radiation therapy techniques specific to anatomical site will be demonstrated and treatment outcome statistics discussed. Explores treatment options available to cancer patients. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes

HAN 489: Pharmacology for ASATT

Presents basic principles of pharmacologic properties and clinical applications. Through the use of lectures and scenarios, provides working knowledge base of drug classifications and their modes of action to produce therapeutic effects on target sites. Restricted to students approved for appropriate senior year track in the Health Science major.

Prerequisite: Admission to HAN 400 level classes

HAN 492: Radiation Oncology/Medical Physics II

Provides students interested in a career in medical dosimetry with an introduction to medical physics for radiation oncology. This is the second course in a two-part series that provides the basis for further study of the applications of radiation oncology physics to radiation treatment planning and radiation dose calculations. Covers topics such as radiation dose distribution, patient dose calculations, treatment planning, electron beam therapy, brachytherapy, modern treatment delivery, and radiation protection. Restricted to students approved for appropriate senior year track in the Health Science program.

Prerequisite: Admission to HAN 400 level classes

HAN 499: Health Science Teaching Practicum

Advanced students assist faculty members teaching Health Science courses. In addition to working as tutors during instructional periods, students have regular conferences with a faculty supervisor. Students may not serve as teaching assistants in the same course twice. Permission of the instructor is required.

Prerequisite: Admission to Undergraduate Health Sciences Center program

1-2 credits