

# Health Science (HSCI)

---

## Courses

### HSCI 1000. Concepts in Health. Unit: 1

Standards and guidelines for coordinated school health programs and comprehensive health education, prevention, and wellness. The following health topics will be included: nutrition, physiological and sociological effects of alcohol, narcotics, drug abuse, and tobacco. Course content is formulated for those planning a career in K-8 education. Does not qualify as a Health Science elective, nor as a clear credential course for post-baccalaureate credential candidates. Formerly HSCI 100; students may not earn credit for both courses.

### HSCI 1100. Problem Solving Skills for Health Science. Unit: 1

Course covers the problem solving and critical thinking skills necessary for all higher-level Health Science courses. Students will work through problems and case studies in epidemiology, statistics, nutrient and food composition, recipe conversion, body mass index, energy intake and expenditure, and others.

### HSCI 1200. Health and Society: An Ecological and Societal Approach. Units: 3

Quarter Prerequisite: satisfactory score on the Entry Level Mathematics examination

Study of the fundamental concepts of living systems and their implications in the processes of health and illness in the human organism. Major health problems are analyzed in relationship to nature and the function of health in personal, environmental, and societal aspects. Students will incorporate individual, interpersonal, and broader social factors that affect our health from an inclusive and socially responsible perspective. When combined with HSCI 1200L, this course is equivalent to the previously offered HSCI 120. Satisfies GE category B2.

### HSCI 1200L. Health and Society: An Ecological and Societal Approach Lab. Unit: 1

Semester Corequisite: HSCI 1200 or instructor consent

Laboratory component for HSCI 1200. Reinforces health topics covered in lecture and adds significant understanding to health concepts by having students perform personal health analyses, complete surveys, assess the environment using equipment for sound level, water quality, temperature and humidity, analyze epidemiological data, perform experiments to assess sexual and reproductive health, perform diet analysis of food consumed, analyze food labels and food for composition, assess stress level and its management, assess the impact of tobacco, drug, and alcohol on the body, and apply other lecture topics using case studies, scenarios, and health data. Students attain scientific knowledge working individually, in small groups and the entire laboratory class by explaining, analyzing, and interpreting health data and by class discussions. When combined with HSCI 1200, this course is equivalent to the previously offered HSCI 120. Satisfies GE Category B3. Materials fee required.

### HSCI 2018. Stress Management for Health. Unit: 1

Examines the history of stress-related research, sources of stress in modern society, the body's response to stress, recent advances in psychoneuroimmunology and nutrition therapies such as adaptogenic herbs. Also included is the exploration of a variety of stress control techniques applicable to both personal and professional settings. Formerly HSCI 218 and students may not earn credit for both.

### HSCI 2200. Introduction to Public Health. Units: 3

The course provides an interdisciplinary overview of the Public Health field infrastructure and unique features and responsibilities of Public Health, the history and accomplishments of Public Health officials and agencies, various Public Health institutions, and an in-depth examination of the core Public Health disciplines. These include epidemiology of infectious and chronic diseases, environmental health, health promotion, global health (including health disparities), health policy, and health services management. Formerly HSCI 271; students may not earn credit for both courses.

### HSCI 2202. Software Applications in the Health Sciences. Units: 3

The course offers an overview and application of a variety of software applications currently utilized in health science-related programs, including but not limited to assessment, planning, program implementation and management software; statistical packages; regional and national databases; and integrated applications. Materials fee required. Formerly HSCI 273; students may not earn credit for both courses.

### HSCI 2203. Introduction to Statistics in Health Sciences. Units: 3

The course provides an overview of concepts and application of introductory statistics, including descriptive and inferential relevant to health sciences.

### HSCI 2625. Nutrition and Dietetic Professional Career Pathways. Unit: 1

Overview of the dietetic profession and careers in nutrition and dietetics. Topics include professional history, ethics, organizations, scope of practice, interprofessional education, and exposure to career options for registered dietitians/nutritionists (RDN) and other nutrition and dietetic-related jobs. Formerly HSCI 225; students may not earn credit for both courses.

### HSCI 3010. Health and Human Sexuality. Units: 3

Relationship between health and human sexuality, emphasizing education as a means of preventing diseases, disorders, and dysfunction. Formerly HSCI 310; students may not earn credit for both courses.

### HSCI 3040. Introduction to Health Services Administration. Units: 3

Semester Prerequisite: HSCI 1200, HSCI 1200L, ECON 2201, ACCT 2110, HSCI 2203. Prerequisite: HSCI 120, Econ 220, ACCT 211, HSCI 273

Fundamentals of health services administration with an exploration of the roles and functions in the delivery of health services. Topics may include staff scheduling, compliance, risk assessment, and various aspects of workflow processes that may influence health care practices.

### **HSCI 3051. Health and Human Ecology. Units: 3**

Semester Prerequisite: Junior or senior standing. Quarter Prerequisite: Junior or senior standing

A survey of the impact of physical, social and biological environments on health-related issues such as poor housing, drug abuse, juvenile delinquency, radiation and pesticide exposure, food quality, noise, air and water resources and their relation to human settlements. Satisfies GE Category B5; G designation. Formerly offered as NSCI 351. Students may not take both courses for credit.

### **HSCI 3052. Principles of Environmental Health. Units: 3**

Quarter Prerequisite: College-level course in Biology  
Introduction to the effects of the physical, chemical, and biological environments and their impacts on human health and well-being. Emphasis is placed on the principles of assessment, evaluation, and control of environmental risks related to public health. Formerly HSCI 352; students may not earn credit for both courses. Graded ABC/No Credit.

### **HSCI 3060. Medical Care Organizations. Units: 3**

Semester Prerequisite: HSCI 1200, HSCI 1200L, ECON 2201, ACCT 2110, HSCI 2203. Quarter Prerequisite: HSCI 271 or consent of instructor  
Overview of healthcare systems such as health and medical care services, resources, facilities, interest groups, financial structures. Evaluation of how these systems and their interactions facilitate or raise barriers to health care access. Entitlements, including federal and state health insurance programs such as Medicare, Medicaid, and Med-Cal, are presented along with their organization, management, evaluation, quality, and historical evolution. Formerly HSCI 360; students may not earn credit for both courses.

### **HSCI 3067. Human Diseases and Disorders. Units: 3**

Overview of the structure and function of body systems along with prevention, management of risk factors, early detection, and treatment of representative diseases and disorders. Topics include healthy systems, development and progression of disease processes, diagnosis, and relevance to health professionals as well as individuals and families. Formerly HSCI 367; students may not earn credit for both courses.

### **HSCI 3080. Operations Management. Units: 3**

Semester Prerequisite: HSCI 3040, HSCI 3060. Prerequisite: HSCI 360  
Introduction to the concepts, principles, and practices of operations management within health care organizational settings. Topics may include the role of management in improving healthcare quality and outcomes, including clinical and organizational improvement, technology assessment, and quality improvement practices.

### **HSCI 3200. Foundations of Public Health Education. Units: 3**

Semester Prerequisite: HSCI 2200. Quarter Prerequisite: HSCI 271  
The course examines the profession of public health education in various settings and selected historical, cultural, philosophical, professional, and ethical issues in the practice of health education. Emphasis is placed on leadership, professionalism, career development, professional organizations, and interrelationships among physical, social, and cultural forces in the practice of health promotion and education. Formerly HSCI 301; students may not earn credit for both courses.

### **HSCI 3201. Health Behavior. Units: 3**

Quarter Prerequisite: HSCI 301

The course covers the theoretical foundation for the development, analysis, and interpretation of individual and community influences on decisions that impact health status. Emphasis is placed on strategies for health behavior modification. Formerly HSCI 370; students may not earn credit for both courses.

### **HSCI 3202. Topics in Environmental and Occupational Health. Units: 3**

This course emphasizes the applied content of public health aspects of environmental and occupational health. Sources, routes, media, and health outcomes associated with chemical, physical, and biological agents in the environment; effects on water quality, air quality, food safety, land resources, and disease in community and occupational settings. Includes methods to identify and evaluate hazard sources and framework used to effect hazard control. Public health issues, research designs, actors important to the development of monitoring programs, especially governmental regulatory bodies are discussed. Current federal legal framework, policies, and practices associated with environmental issues and intended to improve public health are primary focus of the course.

### **HSCI 3203. Global Health. Units: 3**

Quarter Prerequisite: HSCI 301

The course explores the main principles of global health within the social, cultural, geographic, environmental, political, and economic contexts that determine population-level health and illness, including factors that account for variations in and patterns of health outcomes. Topics include health policies, programs, health systems, identifying and interpreting current data sources, diseases, and interventions. Formerly HSCI 359; students may not earn credit for both courses.

### **HSCI 3204. Public Health Nutrition. Units: 3**

Quarter Prerequisite: HSCI 301

The course provides an overview of the role of policy, behavior, environment, and other societal factors that impact nutritional outcomes and by extension population health. Formerly HSCI 342; students may not earn credit for both courses.

### **HSCI 3205. Biostatistics for Health Science. Units: 3**

Quarter Prerequisite: MATH 110

The course covers concepts and application of statistical methods related to public health and other health sciences. Focus is on applied biostatistics with emphasis on data collection, analysis, use, evidenced-based practice, and use of SPSS and other relevant software. Formerly HSCI 315; students may not earn credit for both courses.

### **HSCI 3206. Public Health Law and Ethics. Units: 3**

The course examines the government's authority, at various jurisdictional levels, to improve the health of the general population within societal limits and norms. Discusses the ethical and legal implications of public health measures for preventive care.

### **HSCI 3207. Social Determinants of Health. Units: 3**

The course examines the social environment and underlying disparities that lead to poor health outcomes across populations. The course will explore the various social determinants of health and the mechanisms through which they influence health disparities.

### **HSCI 3208. Introduction to Professional Development and Communication. Units: 3**

The course offers practical experience in a variety of oral and written communication styles encountered by public health professionals, especially skills needed to communicate with lay audiences. The course also prepares students for their capstone experience.

### **HSCI 3291. Community Service Project. Unit: 1**

Quarter Prerequisite: consent of department

Academically related tasks performed in community/government institutions. Completion of 45 hours for each unit earned. HSCI 3291 and 3292 may be repeated for a combined total of six units. May not be used as an upper division HSCI elective in the Nutrition Science and Dietetic Program. Requires a proposal to be submitted by the end of the preceding semester to a faculty advisor and Department consent required. Formerly HSCI 399A; students may earn credit for HSCI 399A, 399B, 3291, 3292 up to a total of 6 units. Graded credit/no credit.

### **HSCI 3292. Community Service Project. Units: 2**

Academically related tasks performed in community/government institutions. Completion of 45 hours for each unit earned. Requires a proposal to be submitted by the end of the preceding semester to a faculty advisor. Department consent required. HSCI 3291 and HSCI 3292 may be repeated for a combined total of six units. May not be used as an upper division HSCI elective in the Nutritional Science and Dietetic Program. Graded credit/no credit. Formerly HSCI 399B; students may earn credit for HSCI 399A, 399B, 3291, 3292 up to a total of 6 units.

### **HSCI 3374. Basic Audiometry and Hearing Problems. Units: 3**

Examination of the anatomy and physiology of the auditory mechanism. Nature of the acoustic stimulus, hearing disorders, problems of the hard of hearing, and pure-tone audiometry. Students earn a certificate of completion and are eligible to take the basic audiometry and hearing test granted by the California Department of Health Services upon successful completion. This course was formerly offered as HSCI 374; students may not earn credit for both.

### **HSCI 3522. Air Pollution and Radiological Health. Units: 3**

Semester Prerequisite: College-level courses in biology, chemistry, and physics. Quarter Prerequisite: College-level courses in biology, chemistry, and physics

Principles of air quality management and effects of radiation on health. Topics include health implications of polluted air, applicable fundamentals of meteorology, air quality regulations, current concepts in air pollution control technology, and effects of radiation. Methods of identification, evaluation, and control of exposure to radiation and polluted air are emphasized. Formerly a combination of HSCI 322 and HSCI 324; students earning credit for HSCI 322 and 324 may not earn credit for HSCI 3522. Graded ABC/No Credit.

### **HSCI 3556. Housing, Institutions, and Land Use. Units: 3**

Basic public health principles, regulations, and environmental quality considerations associated with residential and recreational housing, land use, and institutions such as health care, educational, and penal facilities. Relationship of housing quality to physical, socio-economic, and ethnic/cultural factors, and their influences on health. Understanding regulations of public and private housing land use such as measurement, zoning, subdivision mapping, coordinates, and development. Formerly HSCI 356; students may not earn credit for both.

### **HSCI 3558. Water Quality and Pollution Control. Units: 3**

Semester Prerequisite: HSCI 3052 or consent of instructor. Quarter Prerequisite: HSCI 352 or consent of instructor

Topics include sources of water pollution, methods of control, water legislation, wastewater treatment, quality control criteria for safe drinking water, and impact of water quality on aquatic life, and public health. Formerly HSCI 358; students may not earn credit for both. Graded ABC/No Credit.

### **HSCI 3580. Principles of Toxicology. Units: 3**

Semester Prerequisite: College-level biology and chemistry courses.

Quarter Prerequisite: College-level biology and chemistry courses  
Principles of chemical toxicity and relationship to public health, including intoxication, disease, dose-response measurement, mechanisms of action, and antidotal therapy. Discussion of various classes of chemical intoxicants and specific toxicological studies as related to various food, drug, consumer, industrial, and environmental problems. Formerly HSCI 380; students may not earn credit for both. Graded ABC/No Credit.

### **HSCI 3581. Occupational Safety. Units: 3**

Principles of industrial safety, including general principles; accident control; industrial, mechanical, electrical, chemical, and flammability hazards; fire and explosion protection; accident investigation; industrial safety inspections; record keeping; safety training and emergency planning; and methods of industrial safety management as a unifying theme. Formerly HSCI 381; students may not earn credit for both. Graded ABC/no credit.

### **HSCI 3600. Nutrition for Health. Units: 3**

The course will cover the science of human nutrition, functions of nutrients for healthy individuals, and application of nutrition concepts related to life stages needs from pregnancy to elderly with application to different cultural and environmental settings. The course is designed for Health Promotion and other allied health majors and may not be taken for credit by students in Nutritional Science and Dietetics (NSCD) majors.

### **HSCI 3601. Fundamentals of Human Nutrition. Units: 3**

Semester Prerequisite: CHEM 2060 and CHEM 2060L, BIOL 2230 and 2240 or consent of instructor. Quarter Prerequisite: CHEM 207, or a one year GOB (General, Organic, Biochemistry) sequence, BIOL 223 and BIOL 224, or consent of instructor

Impact of chemical, physiological and metabolic processes of food and nutrients on health and disease prevention. Topics include the functions, regulations, and utilization of macronutrients, micronutrients, and water; energy balance; environment and sustainability; application of nutrition standards and recommendations on health and disease prevention using science and evidence-based principles. Formerly HSCI 350; students may not earn credit for both courses.

## **HSCI 3602. Lifecycle Nutrition and Assessment. Units: 3**

Semester Prerequisite: HSCI 3601 or consent of the instructor. Quarter Prerequisite: HSCI 350

Semester Corequisite: HSCI 3607 and HSCI 3607L

Understanding of nutritional needs and assessment methods through the life cycle. Topics include relationships among environment, culture, food, and nutrition in a healthy body through different stages of life, disease prevention, and consideration for individuals with special needs. Formerly HSCI 365; students may not earn credit for both courses.

## **HSCI 3605. Cultural Practices and Cuisines. Units: 3**

Semester Corequisite: HSCI 3605L

Study of global culture and food patterns including ingredients and cooking techniques, meal patterns, food customs and practices, cooking and food preparation methods, family and social structures, traditions, health beliefs, communication styles, and effects of geographical, climate, religion, economics, and historical events on practices of people around the world. Emphasis on understanding the people, culture, customs, food choices, culinary techniques, and practices on nutrition and health. Survey of social, economical, religious, and aesthetic aspects of food, culture, and customs. Formerly HSCI 385; students may not earn credit for both courses.

## **HSCI 3605L. Cultural Practices and Cuisines Lab. Unit: 1**

Semester Corequisite: HSCI 3605

Preparation and tasting of dishes using recipes and cooking methods representative of cultural, ethnic, and religious practices around the world. Introduces basic cooking techniques to the nutrition and dietetic majors as well as provides exposure to food ingredients and cooking methods used by people around the world. Laboratory is only required for the Nutritional Science and Dietetic majors. Formerly a part of HSCI 385, students may not earn credit for both courses. Materials fee required.

## **HSCI 3607. Nutrition Counseling, Assessment, and Research Applications. Units: 3**

Semester Prerequisite: HSCI 3601 and one of the following courses: MATH 1201, MATH 1203, HSCI 2203, or HSCI 3205; or consent of the instructor. Quarter Prerequisite: HSCI 315, HSCI 350 and HSCI 365 or consent of instructor

Semester Corequisite: HSCI 3602 and HSCI 3607L

Nutrition assessment and counseling techniques as components of the Nutrition Care Process. Topics include health behavior theories, Nutrition Focused Physical Examination and Assessment, anthropometric, biochemical, dietary, and clinical assessments and interpretation of findings related to health and disease, and effective counseling techniques including motivational interviewing. Nutrition research methods and applications including quality management and improvement of nutrition services. Formerly HSCI 384 with taken with 3607L; students may not earn credit for both courses.

## **HSCI 3607L. Nutrition Counseling, Assessment, and Research Applications Lab. Unit: 1**

Semester Prerequisite: HSCI 3601 or consent of instructor. Prerequisite: HSCI 350

Semester Corequisite: HSCI 3607 and 3602

Hands-on nutrition assessment and counseling techniques using Nutrition Care Process and science- and evidence-based methods. Practice nutrition counseling techniques, Nutrition Focused Physical Examination and Assessment, and equipment/tools used for assessment. Collection of data for a research project and preparation of manuscript for publication. Analysis and interpretation of data for quality management of nutrition service. Journal club presentation with critical evaluation of peer-reviewed articles. Formerly part of HSCI 384; students may not earn credit for both. Materials fee required.

## **HSCI 3615. Food Science and Production. Units: 3**

Semester Prerequisite: CHEM 2050 and CHEM 2050L or consent of the instructor. Quarter Corequisite: 3615L. Quarter Prerequisite: CHEM 205 or equivalent

Understanding food production, processing, sustainability, scientific principles, and their applications in the use of food ingredients in developing food products, food preparation, and consumer acceptance. Formerly HSCI 245 and HSCI 345; students may not earn credit for both HSCI 3615 and HSCI 345.

## **HSCI 3615L. Food Science and Production Lab. Unit: 1**

Semester Corequisite: HSCI 3615

The course covers experiments which apply food science principles in food preparation and product development for consumer acceptance. Includes a recipe modification project. Formerly part of HSCI 245 and HSCI 345; students may not earn credit for both HSCI 345 and HSCI 3615L. Materials fee required.

## **HSCI 3644. Global Nutrition. Units: 3**

Presents major nutritional problems that influence the health, survival, and developmental capacity of populations in developing societies. Covers approaches implemented at the household, community, national, and international levels to improve nutritional status. Explores the degree to which malnutrition can be prevented or reduced prior to achieving full economic development through targeted public and private sector interventions that address the causes of malnutrition. Formerly HSCI 344; students may not earn credit for both courses.

## **HSCI 3810. Sport and Exercise Nutrition. Units: 3**

Discusses nutritional requirements for active people and athletes. Topics include nutritional requirements for exercise, nutrient timing, macronutrients, micronutrients, and popular sports nutrition supplements. Formerly offered as KINE 382 and HSCI 382; students may not earn credit for both courses. It is recommended to take BIOL 2240 prior to this course.

### **HSCI 4023. Health and Wellness of Older Adults. Units: 3**

This course takes an ecologic approach to the health, wellness, and changing needs of older adults, addressing intersections of the physical (age-related physiological changes, acute and chronic disease), mental (emotional, psychological), social, spiritual, sexual, intellectual, financial (managed care, case management, and funding sources for routine care as well as hospitalization, post-acute, and long-term care), and other dimensions. Lifespan and health care ethics, as well as end-of-life issues are also addressed. Formerly HSCI 423; students may not earn credit for both courses.

### **HSCI 4036. Human Resource Management in Health Care. Units: 3**

Semester Prerequisite: HSCI 3040 and HSCI 3060. Quarter Prerequisite: HSCI 360

Principles of effective human resource management in health care settings. Topics include state and federal regulations for the workplace, recruitment, retention, training, compensation, and benefits. Formerly HSCI 436; students may not earn credit for both courses.

### **HSCI 4037. Information Systems & Financial Management in Health Care. Units: 3**

Semester Prerequisite: HSCI 3040, HSCI 3060. Quarter Prerequisite: HSCI 360

This course addresses HIPAA-mandated and other considerations for hardware, software, information system, and financial management needs of various health care organizations. Topics include staffing, patient scheduling, electronic medical records, accounting and reimbursement processes, budgeting, and related aspects of information technology and security in an ever-changing environment. Formerly offered as HSCI 437; students may not earn credit for both courses.

### **HSCI 4050. Health Issues of Men. Units: 3**

Exploration of men's health issues from an ecologic perspective, e.g., physical, mental, social, intellectual, financial, spiritual, sexual, and other related dimensions. Emphasis is on balance as well as intersections of biological sex, gender concerns, racial considerations, and other diverse factors; personal responsibility for maintaining and promoting health; self-care and access to appropriate healthcare. Formerly HSCI 405; students may not earn credit for both.

### **HSCI 4052. Special Topics in Health Services Administration. Units: 3**

Quarter Prerequisite: consent of instructor

Examination of current topics in health services administration. May be repeated for a maximum of 6 units as topics change. Priority registration will be given to students in the Health Science and Human Ecology department. Formerly HSCI 452; students may not earn credit for both courses.

### **HSCI 4055. Health Policy, Law, and Ethics. Units: 3**

Semester Prerequisite: HSCI 3040 and HSCI 3060. Quarter Prerequisite: HSCI 360

Provides a general overview of the law with specific emphasis on health care issues such as laws relating to employer-employee relations, patient treatment, and medical record. Examines the role of the legislature in the formulation of health care policy at the federal and state levels and how politics in healthcare influences policy formulation. Compares health care policy and policy formulation in the US to that of other countries. Explores the ethical considerations in health care business and clinical decision-making. Examines the principles of health care governance and associated functions such as accreditation and professional associations' oversight. Formerly HSCI 455. Students may not earn credit for both courses.

### **HSCI 4060. Strategic Planning and Marketing in the Health Care System. Units: 3**

Semester Prerequisite: HSCI 3040 and 3060. Quarter Prerequisite: HSCI 360

This course includes the basic methodologies and approaches applied in strategic planning and healthcare marketing. It entails strategic management planning processes with regard to economic and political forces to shape the healthcare marketplace. This course analyzes basic principles of marketing to be applied in the healthcare field. These include consumer diversity, distinguishing between corporate and patient perspectives, and changing the healthcare delivery model to suit the needs arising at a given time. This course also looks into effective tactics to be applied in a strategic formulation and implementation in the healthcare sector. Additionally, it explores the connection between strategic planning and mission statements together with their role in engaging all the stakeholders in the strategic planning process. Formerly HSCI 460; students may not earn credit for both courses.

### **HSCI 4068. Research Methodology in Health Science. Units: 3**

Semester Prerequisite: HSCI 3040, HSCI 3060, HSCI 3205. Quarter Prerequisite: HSCI 315, Math 262 or Math 305, or consent of the instructor

Entry-level research methods that focus on the formulation of a research question, model, review of the literature, documentation of research results and the application of the research methods skills to contemporary health problems. Students will develop their skills in the use of appropriate analytical techniques such as descriptive statistics and inferential statistics in the assessment of population parameters and hypotheses testing. This course will also help students develop their skills in the use of computer-based statistical software packages and their application in health data analysis. Formerly HSCI 468; students may not earn credit for both courses.

### **HSCI 4080. Leadership in Health Services Administration. Units: 3**

Semester Prerequisite: HSCI 3040 and HSCI 3060. Quarter Prerequisite: HSCI 360

Introduction to management theory and practice as they apply to the management of healthcare organizations. Emphasis is placed on the principal responsibilities of healthcare managers in relation to planning, analysis, organizing, staffing, directing, and evaluation functions. Strategy, structure, and budgetary functions are discussed as they relate to health service administration. Formerly offered as HSCI 480; students may not earn credit for both courses.

### **HSCI 4089. Field Experience Preparation. Unit: 1**

Semester Prerequisite: All lower-division coursework and upper-division coursework for the major must be completed with a grade of C (2.0) or higher

Prepares students for a practical, professional-level field experience through class discussion and assignments, preparing a portfolio, satisfying requirements of the field placement, and completing necessary coursework to identify and establish a field experience project. This course requires consent of the student's faculty academic advisor. Formerly offered as HSCI 489 and 4093. Students may not earn credit for both courses.

### **HSCI 4095. Field Experience in Health Services Administration. Units: 3**

Semester Prerequisite: HSCI 4089

Structured, practical, culminating field experience of a minimum of 120 hours, to be completed in one semester in an approved public health agency, community-based organization, tribal health site, or health care related setting. In addition to field hours, students will meet with the field supervisor as scheduled in syllabus and be required to submit a final report on their field work. Course should be taken during the final semester of the student's senior year; it must be preceded by HSCI 4089, Field Experience Preparation. Graded credit/no credit. Formerly HSCI 493 & 495; students may not earn credit for HSCI 493/495 and 4095.

### **HSCI 4200. Health Administration. Units: 3**

The course addresses the fundamental characteristics and organizational structures of the U.S. health system as well as the differences in systems of other countries. The course also emphasizes the economic aspects of public health decision making.

### **HSCI 4202. Epidemiology. Units: 3**

The course provides an introduction to methods and application of epidemiologic procedures to the understanding of the occurrence and control of diseases and other health problems. Emphasis is given to descriptive epidemiology, data interpretation, trend analyses, and introductory epidemiologic study design. Formerly HSCI 451; students may not earn credit for both courses.

### **HSCI 4203. Public Health Program Planning and Implementation. Units: 3**

The course focuses on theoretical foundations and application of program planning and implementation, including logic model, PRECEED-PROCEED model, and other relevant practices in public health. Emphasis is placed on needs assessment, stakeholder evaluation, and budgeting. Formerly offered as HSCI 471; students may not earn credit for both courses.

### **HSCI 4204. Research Methods and Evaluation in Public Health. Units: 3**

The course focuses on the critical understanding of both the theoretical and practical aspects of evaluation research relevant to public health. Emphasis is placed on key concepts and approaches to evaluation, including experimental studies, qualitative approaches, and cost-benefit analysis. The course also engages with the context of evaluation, including political influences, as well as ethical issues, practical issues, knowledge exchange and the dissemination of evaluation findings.

### **HSCI 4205. Advanced Professional Writing in Public Health. Units: 3**

The course offers practical experience in a variety of writing styles encountered by public health professionals, especially grant writing. The focus is on communication with public health professionals and scientific writing. Semester Prerequisite: HSCI 3200, HSCI 3201, and HSCI 3208.

### **HSCI 4206. Infectious Disease Burden in U.S.. Units: 3**

The course provides an in-depth analysis of the major and lesser-known causative agents of infectious disease, including hospital-acquired infections, emerging infectious diseases, and sexually transmitted infections. Emphasis is placed on current trends in the U.S. related to such infections. The primary focus of the course is on empirical evidence and implications for evidence-based practice.

### **HSCI 4207. Chronic Disease Burden in U.S.. Units: 3**

The course provides an in depth analysis and prevention strategies of the major chronic diseases in the U.S. by prevalence and population including obesity, cardiovascular diseases, hypertension, diabetes, cancer. Evaluates experimental and analytical techniques commonly used in chronic disease prevention.

### **HSCI 4208. Drug and Alcohol Issues. Units: 3**

The course will include the analysis of factors influencing human use or abuse of drugs, alcohol, and other substances; and their effects on the health and well being of the individual, family and society. Formerly offered as HSCI 364; students may not earn credit for both courses.

### **HSCI 4209. Complementary and Alternative Medicine. Units: 3**

The course offers an introduction to complementary and alternative medicine (CAM) practices relevant to public health issues. Discussion of current public health policies and programs related to such practices and analyses of current evidence of efficacy of CAM.

### **HSCI 4210. Cultural Competency. Units: 3**

The course explores the approaches to cultural competency in public health and their relationship to addressing health disparities. The course will highlight interventions and programs that work with various marginalized groups.

### **HSCI 4211. Mental Health Issues in Public Health. Units: 3**

The course provides an introduction to mental and behavioral health issues in public health. Discussion of current public health policies and programs focused on prevention and treatment of mental health issues.

### **HSCI 4212. Topics about Special Populations. Units: 3**

Examination of programs, policies, and services that affect the health of special populations across the lifespan. Emphasis on social, political, economic, environmental, personal, and behavioral factors associated with the health of special populations.

**HSCI 4214. Latinx Health. Units: 3**

Examination of programs, policies, and services that affect Latinx health across the lifespan. Emphasis on social, political, economic, environmental, personal, and behavioral factors associated with Latinx health. The goal of the course is to provide students with an understanding of the main public health issues impacting Latinx in the United States.

**HSCI 4501. Advanced Environmental Health. Units: 4**

Semester Prerequisite: HSCI 3052 or consent of instructor. Quarter Prerequisite: HSCI 352 or consent of instructor

An integrated view of the environmental factors that contribute to illness, injury, or death of individuals and populations. Lecture topics include epidemiology, demographics and statistics on health status, determinants of health and illness, behavioral aspects of health, and preventive care. Environmental health laws and regulations as well as compliance with current regulations are emphasized. The laboratory emphasizes methods of measuring and evaluating environmental health risks as well as field experience. Lab topics include: environments within buildings, food sanitation, water sanitation and control, solid and hazardous waste and control, air pollution and control, and community noise and control. Three hours lecture and three hours laboratory. Formerly HSCI 401; students may not earn credit for both. Counts towards the GE Writing Intensive designation. Materials fee required. Graded ABC/no credit.

**HSCI 4502. Principles of Occupational Health. Units: 4**

Semester Prerequisite: HSCI 3052 and college-level coursework in chemistry or consent of instructor. Quarter Prerequisite: HSCI 352 and college-level coursework in biology and chemistry or consent of instructor. Principles of occupational health risks including anticipation, recognition, evaluation, and control. Influence of workplace risks on human health and their relationship to occupational medicine. Study of occupational health laws and regulations as well as methods of compliance with current regulations. Laboratory and field experience topics include: toxic and hazardous chemicals, airborne chemicals, materials of biological origin, noise, and electromagnetic radiation. Three hours lecture and three hours of laboratory. Formerly HSCI 402; students may not earn credit for both courses. Materials fee required. Graded ABC/no credit.

**HSCI 4503. Vector-borne Disease Control. Units: 4**

Semester Prerequisite: HSCI 3052 and college-level coursework in chemistry or consent of instructor. Quarter Prerequisite: HSCI 352 and college-level coursework in chemistry or consent of instructor. Identification and control of insect and other vectors of diseases. Discussion of major topics in vector ecology including natural and chemical control methods and their impacts on health and environmental quality. Three hours lecture and three hours laboratory. Formerly HSCI 403; student may not earn credit for both. Materials fee required. Graded ABC/no credit.

**HSCI 4550. Health Aspects of Death and Dying. Units: 3**

Semester Prerequisite: Completion of at least 60 units is required. Investigation into how the realities of death and loss influence the quality of a person's life and personal health status. The focus is on assisting students and professionals to develop the skills necessary to assist individuals deal with death, loss, grief, bereavement, and mourning in the healthiest ways possible. Formerly offered as HSCI 550; students may not earn credit for both courses.

**HSCI 4552. Special Topics: International Perspectives on Stress Management. Units: 3**

This course examines the history of stress-related research and applications through international perspectives. Topics include physical, psychological, emotional, and behavioral effects of stress; recent advances in psychoneuroimmunology; sources of stress across various cultures; and global approaches to stress management. This course requires participation in the study abroad program; in addition to online academic preparation, the course involves an experiential component achieved through international travel. Principles are incorporated into students' time abroad to design practical stress management programs.

**HSCI 4577. Environmental Health Engineering. Units: 3**

Semester Prerequisite: HSCI 3052 or consent of instructor. Quarter Prerequisite: HSCI 352

Methods used in designing systems which mitigate environmental contamination of air, soil, and water. Topics include stream re-aeration, kinetics of biological degradation, soil mechanics, adsorption and other principles related to environmental media protection and renovation. Formerly HSCI 477; students may not earn credit for both. Graded ABC/no credit.

**HSCI 4578. Environmental Health Management. Units: 3**

Semester Prerequisite: College-level coursework in biology and chemistry. Quarter Prerequisite: College-level coursework in biology and chemistry

Methods of management for promoting optimum environmental health, emphasizing land use planning, environmental impact reporting, facility planning, and risk assessment. Formerly HSCI 458. Students may not earn credit for both. Graded ABC/no credit.

**HSCI 4621. Foodservice Principles and Practice. Units: 3**

Semester Prerequisite: HSCI 3615, 3615L, and 3602 or consent of the instructor. Quarter Prerequisite: HSCI 345 and 350, or consent of instructor

Semester Corequisite: HSCI 4621L

Principles related to various types of quantity foodservice production systems. Production topics include sustainability, design layout and surfaces, equipment operation and maintenance, staffing needs, flow of production and efficiency, sanitation and safety, and recipe modification. Principles related to procurement include specifications for selection, purchasing, storage of quantity foods and equipment. Formerly HSCI 465; students may not earn credit for both courses.

## **HSCI 4621L. Foodservice Principles and Practice Lab. Unit: 1**

Semester Corequisite: HSCI 4621

Rotations through different types of foodservice systems and observation/performance of foodservice production functions. Tasks may include receiving, storage, preparation, operation and maintenance of foodservice equipments, team efforts, HACCP and sanitation, scheduling, and overall operation of foodservice system. Formerly part of HSCI 465; students may not earn credit for both courses.

## **HSCI 4622. Foodservice Management. Units: 3**

Semester Prerequisite: HSCI 4621 and 4621L. Quarter Prerequisite: HSCI 465

Management principles related to foodservice facilities and systems. Topics include budget and finances, human resources, equipment, menus, federal and state regulations and mandates, leadership and management skills, labor relations, marketing, satisfaction assessment and accountability. Formerly HSCI 467; students may not earn credit for both courses.

## **HSCI 4625. Dietetic Pathways and Processes. Unit: 1**

Semester Prerequisite: HSCI 2625 and completion of 90 units. Quarter Prerequisite: HSCI 225 and senior standing in the Nutrition and Food Science program

Explores different types of supervised-practice programs. Students review and start the online centralized dietetic application system (DICAS) process which includes updating resumes, writing a personal statement, and a mock interview. Understanding issues of professionalism, exploration of dietetic career pathways and volunteer opportunities to further enhance professional goals. Formerly HSCI 446; students may not earn credit for both courses.

## **HSCI 4661. Human Metabolism and Nutritional Biochemistry. Units: 3**

Semester Prerequisite: HSCI 3602 and 3607. Quarter Prerequisite: HSCI 365 and 384

Integration and exploration of macro- and micro-nutrients in biochemical, physiological, and metabolic functions. Strong emphases on integration of metabolic and physiological effects on cellular to whole body functions and effects on the systems by different physiological states and disease processes. Formerly HSCI 441; students may not earn credit for both courses.

## **HSCI 4662. Advanced Nutrition and Topics. Units: 3**

Semester Prerequisite: HSCI 4661. Quarter Prerequisite: HSCI 441

Integration of human metabolism with exploration of specific topics related to macro- and micro-nutrients and health and disease. Topics include nutrigenomics, effectiveness of alternative therapies and supplements, digestive health, and other relevant topics in nutrition and dietetics. Counts towards the GE WI requirement for Nutritional Science and Dietetics majors. Formerly HSCI 442; students may not earn credit for both courses.

## **HSCI 4680. Public Health Nutrition in Dietetics. Units: 3**

Semester Prerequisite: HSCI 3602, HSCI 3607, and HSCI 3607L. Quarter Prerequisite: HSCI 273, 442, and 443

Public Health Nutrition for dietitians and nutritionists working in communities. Topics include disease prevention, epidemiology, public policy and advocacy, screening and assessment, grant writing, health care delivery systems, nutrition education principles, health promotion, program planning and assessment, federal, state, and local nutrition programs, and other relevant information. Formerly HSCI 445; students may not earn credit for both courses.

## **HSCI 4681. Medical Nutrition Therapy I. Units: 3**

Semester Prerequisite: HSCI 3602, 3607, and 3607L. Quarter Prerequisite: HSCI 441, HSCI 365, and HSCI 384

Semester Corequisite: HSCI 4661

Introduction to skills and knowledge necessary for nutrition and dietary interventions in disease states using the principles of medical nutrition therapy and the Nutrition Care Process. Includes pathophysiology of disease processes, nutrition assessment, diagnosis, intervention, monitoring, and evaluation to recover from disease conditions and/or to improve the quality of life. Introduction to coding and billing of nutrition and dietetics services to obtain reimbursement for services provided. Introduction to the Academy of Nutrition and Dietetics' Evidence Analysis Library. Formerly HSCI 443; students may not earn credit for both courses.

## **HSCI 4681L. Medical Nutrition Therapy I Lab. Unit: 1**

Semester Prerequisite: HSCI 3602, 3607, and 3607L

Semester Corequisite: HSCI 4681

Hands on activities with students for exploration and discussion of clinical case studies and tools used to assess and to provide medical nutrition therapy to patients with different diseases and conditions. Includes nutrition assessment and counseling experience on or off campus.

## **HSCI 4682. Medical Nutrition Therapy II. Units: 3**

Semester Prerequisite: HSCI 4681 and 4681L. Quarter Corequisite: HSCI 4682L. Quarter Prerequisite: HSCI 443

Continuation of HSCI 4681, Medical Nutrition Therapy I. Further development of skills and knowledge for nutrition and dietary interventions in different disease states and conditions not covered in the previous course. Includes pathophysiology of disease processes, nutrition assessment, diagnosis, intervention, monitoring, and evaluation to recover from disease conditions and/or to improve the quality of life. Formerly HSCI 444, students may not earn credit for both courses.

## **HSCI 4682L. Medical Nutrition Therapy II Lab. Unit: 1**

Semester Corequisite: HSCI 4682

Hands on activity with students for exploration and discussion of case studies and tools used to assess patients in relation to different disease conditions. Includes nutrition assessment and counseling experience on and off campus. Formerly a part of HSCI 444; students may not earn credit for both courses.



**HSCI 4690. Senior Capstone. Units: 2**

Semester Prerequisite: Must be a graduating senior in the last year of graduation

Capstone course for senior nutrition students. The course will serve as a culminating experience/ practice for the registration exam to become a Registered Dietitian Nutritionist (RDN) and program assessment. Students will review course material from the last two years of the Didactic Program in Dietetic (DPD) courses, integrate knowledge and skills learned, take the practice exams, engage with case studies, and pass the summative assessment with a score of 80% or higher. Strategies for taking online exam will also be discussed. Students will be allowed to take the summative exam until they pass with 80%. Must be a graduating senior in the Nutritional Science and Dietetics major. Department consent required. One hour lecture and 3 hours lab.

**HSCI 4999. Preparation for Public Health Capstone. Unit: 1**

The course examines the profession of public health in various settings and career options in the field of public health. Emphasis is placed on leadership, professionalism, and capstone course preparation.

**HSCI 5010. Hospital Administration. Units: 3**

Semester Prerequisite: HSCI 3040 and HSCI 3060, or HSCI 2200 and MGMT 3020 or PSYC 3020. Quarter Prerequisite: HSCI 360, or HSCI 271 and MGMT/PSYC 302

Organization and administration of hospital facilities including planning and evaluation of services. Role of the hospital as part of the community. Formerly offered as HSCI 510; students may not earn credit for both courses.

**HSCI 5013. Managed Care Systems. Units: 3**

Semester Prerequisite: HSCI 3040 and 3060, or consent of the instructor. Quarter Prerequisite: HSCI 360

In this course, students gain advanced knowledge on healthcare reimbursement mechanisms. A key ingredient to this course is students' exposure to post-acute care, ethics in business and clinical decision-making and quality assessment for patient care improvement. In post-acute care, students learn about the examination of hospitalization from a service point of view. This is done by looking into the nursing facilities, nursing homes, inpatient rehabilitation facilities, and long term hospital care. In business and clinical decision-making, students understand the exploration and analysis of contemporary health care from an ethical perspective. In quality assessment for patient care improvement, students understand the various assessment tools and how to evaluate the accuracy and reliability of the assessment tools. Formerly offered as HSCI 513; students may not earn credit for both courses.

**HSCI 5213. Community Service Project in Public Health. Units: 3**

Semester Prerequisite: HSCI 3201, HSCI 3208 and HSCI 4999  
Academically related tasks in such agencies as governmental, social service, and educational institutions. Instructor consent required. May be taken three times for six units. Students may earn up to a total of 6 units from HSCI 3291, 3292, and 5213. Formerly known as HSCI 4213.

**HSCI 5240. School Health Programs and Practices. Units: 3**

Advanced examination of the roles of K through 12 teachers within a coordinated school health program. Students will be able to understand and communicate principles of effective school health programs and policies that can promote student health and increase academic achievement. State and national guidelines for mandated school health education programs and required health education curriculum are reviewed and discussed. Formerly HSCI 540; students may not earn credit for both.

**HSCI 5530. Food-Borne Illnesses and Their Prevention. Units: 3**

Semester Prerequisite: HSCI 3052 or consent of instructor. Quarter Prerequisite: HSCI 352 or consent of instructor  
Microbial, chemical, and other factors of food-borne illnesses, food poisoning, and their prevention. Discussion of food safety and proper environmental control measures for environmental health conditions involved in purchase, preparation, storage, transportation, and service of foods to minimize health dangers. Formerly HSCI 530; students may not earn credit for both. Graded ABC/no credit.

**HSCI 5531. Bioterrorism and Emergency Response. Units: 3**

A general overview of the history, identification, properties, and mode of transmission of agents of terrorist acts: agro-, bio-, chemical-, and nuclear terrorism with the main focus on bioterrorism, including its prevention, control, and counter measures. Discussion of emergency preparedness and response, including incident command and resource allocation in the event of incidence of bioterrorism. Graded ABC/No Credit. Formerly offered HSCI 531; students may not receive credit for both courses.

**HSCI 5557. Solid and Hazardous Waste Management. Units: 3**

Semester Prerequisite: BIOL 2010 or BIOL 2230, and CHEM 2100. Quarter Prerequisite: BIOL 200 or BIOL 223, and CHEM 215  
Major methods for the control of solid and hazardous wastes from generation, transportation through disposal, including health impacts, environmental, and legal aspects of solid and hazardous wastes as well as discussion of various disposal techniques. Formerly a combination of HSCI 354 and HSCI 357; students earning credit for HSCI 354 and 357 may not earn credit for HSCI 5557. Graded ABC/No Credit.

**HSCI 5558. Management of Water Quality. Units: 3**

Semester Prerequisite: HSCI 3558 or consent of instructor. Quarter Prerequisite: HSCI 358 or consent of instructor  
Survey of water quality parameters and pollution control techniques. Includes in-depth discussion of current topics in water legislation, water pollution and its impact on public health, flood impacts, water conservation options, and drought management. Formerly HSCI 558; students may not earn credit for both. Graded ABC/no credit.

### **HSCI 5753. Field Experience in Public Health. Units: 3**

Semester Prerequisite: HSCI 3201, HSCI 3208 and HSCI 4999  
A combined seminar and supervision course that includes a field experience and integrated professional support. Students will complete a minimum of 120 hours of structured, practical field experience under the direct supervision of a preceptor at an approved site. The experience may be completed in public health offices, community health centers, clinical sites, nonprofit health agencies, worksite health promotion programs, or health care organizations. In addition, class will meet for a total of 5 hours during the term to provide support for the field experience. Letter of approval signed by site preceptor and faculty advisor needs to be filed in with department office prior to beginning the field experience. Formerly known as HSCI 689D; students may only earn credit for HSCI 5753 or for HSCI 489, 493, and 495.

### **HSCI 5754. Internship in Environmental Health. Units: 4**

Individual studies in environmental health under supervision of a preceptor at a rotation site. Students will be placed with public agencies to gain 180 hours of applied and/or research experience as an environmental health specialist. To be taken during the final semester of the program with consent of the instructor. Formerly HSCI 496; students may not earn credit for both. Graded credit/no credit.

### **HSCI 5951. Independent Study. Unit: 1**

Semester Prerequisite: Completion of 90 units, a minimum overall grade point average of 3  
Independent study under the supervision of a faculty member. The project must be related to a specific question relevant to the field of study. A final written report must be submitted and approved by the supervising faculty member. Formal presentation may be required. Formerly HSCI 595A. HSCI 5951-5953 may be repeated for a total of 6 units. Department consent required. Graded ABC/No Credit.

### **HSCI 5951PH. Independent Study for Public Health. Unit: 1**

Independent study of classic and contemporary public health issues in a defined area combined with scheduled individual and small group conferences with supervising faculty member. Departmental consent required. HSCI 5951PH-5953PH may be repeated for a total of 6 units. Graded ABC/No Credit.

### **HSCI 5952. Independent Study. Units: 2**

Semester Prerequisite: Completion of 90 units, a minimum overall grade point average of 3  
Independent study under the supervision of a faculty member. The project must be related to a specific question relevant to the field of study. A final written report must be submitted and approved by the supervising faculty member. Formal presentation may be required. Formerly HSCI 595B. HSCI 5951-5953 may be repeated for a total of 6 units. Department consent required. Graded ABC/No Credit.

### **HSCI 5952PH. Independent Study for Public Health. Units: 2**

Independent study of classic and contemporary public health issues in a defined area combined with scheduled individual and small group conferences with supervising faculty member. Departmental consent required. HSCI 5951PH-5953PH may be repeated for a total of 6 units. Graded ABC/No Credit.

### **HSCI 5953. Independent Study. Units: 3**

Quarter Prerequisite: A minimum overall grade point average of "B"  
Independent study under the supervision of a faculty member. The project must be related to a specific question relevant to the field of study. A final written report must be submitted and approved by the supervising faculty member. Formal presentation may be required. Formerly HSCI 595C. HSCI 5951-5953 may be repeated for a total of 6 units. Department consent required. Graded ABC/No Credit.

### **HSCI 5953PH. Independent Study for Public Health. Units: 3**

Independent study of classic and contemporary public health issues in a defined area combined with scheduled individual and small group conferences with supervising faculty member. Departmental consent required. HSCI 5951PH-5953PH may be repeated for a total of 6 units. Graded ABC/No Credit.

### **HSCI 5970. Honors Thesis for Public Health. Units: 4**

Semester Prerequisite: HSCI 3201, HSCI 3208 and HSCI 4999  
Honors thesis conducted under the supervision of two public health faculty. The project must include independent research focused on a relevant public health research question. Students must have a major GPA of 3.5 and an overall GPA of 3.0. Formal presentation may be required. May be taken two times for eight units; total of 4 units may be applied to the upper division requirements for the BS in Public Health.

### **HSCI 6010. Administration of Health Care Programs. Units: 4**

Economic forces which impact on health and health delivery systems and an assessment of the distribution of financial resources required to sustain these systems. Emphasis on trends in financing health care and the economic influence of reimbursement policies on financial decision-makers. Departmental consent required. Formerly offered as HSCI 601, students may not receive credit for both.

### **HSCI 6020. Management, Organization and Planning. Units: 4**

Organizational, environmental, socio/political, and behavioral aspects of health and health delivery systems. Ecological perspectives related to management and planning of health programs, including strategies to facilitate communication, decision-making, and problem solving and planning and administrative approaches in developing, modifying and sustaining modern health systems. Departmental consent required. Formerly offered as HSCI 602, students may not receive credit for both.

### **HSCI 6030. Health Economics and Financial Systems. Units: 4**

Micro- and macroeconomic aspects of health services, various payment approaches, third-party reimbursement systems, budgeting and financial analysis, decision-making and planning in health services and organizations. Departmental consent required. Formerly offered as HSCI 603, students may not receive credit for both.

### **HSCI 6100. Communication and Human Relations in Health Services. Units: 4**

Techniques for effective written and oral communication at the interpersonal and organizational levels. Particular emphasis is placed upon enhancing human relations skills in health services settings. Departmental consent required. Formerly offered as HSCI 635, students may not receive credit for both.

## **HSCI 6140. Information and Technology Systems Management in Health Services.**

### **Units: 4**

Quarter Prerequisite: consent of instructor

Information systems, networks, and computer software systems, used in health services setting. Formerly offered as HSCI 645, students may not receive credit for both.

## **HSCI 6150. Health Law and Medical Ethics.**

### **Units: 4**

Legal and ethical issues and practices related to health care delivery and health services administration. Ethical administrative behavior, standard of care, tort law and professional liability, negligence and liability law, contracts, lawsuits and civil liability process, corporate law and liability, antitrust, case law and related health law issues are covered. Department consent required. Formerly offered as HSCI 653, students may not receive credit for both.

## **HSCI 6160. Strategic Planning and Evaluation.**

### **Units: 4**

Community analysis including generating goals and objectives to implement effective community interventions. Logic models and program evaluation methodologies will be utilized to set parameters and to assure delivery of appropriate health services programs and outcomes. Organizational strategy evaluation, formulation, tactics, and development. Department consent required. Formerly offered as HSCI 665, students may not receive credit for both.

## **HSCI 6170. Health Services Administration Leadership, Team and Quality Development.**

### **Units: 4**

Leadership skill development, including interface within public, private, and non-profit health organizations. Collaborative partnerships, issues of diversity in leadership, negotiation, conflict resolution, continuous quality improvement process and management, and attributes of leaders and leadership. Health administration team behaviors, actions, and approaches along with team development are analyzed. Department consent required. Formerly offered as HSCI 675, students may not receive credit for both.

## **HSCI 6180. Health Services Administration Capstone Seminar. Units: 4**

Integration and application of leadership theory and administrative skills and approaches as applied to the organizational and team management process and management of health services organizations. Departmental consent required. Formerly offered as HSCI 685, students may not receive credit for both.

## **HSCI 6190. Graduate Research Methodology in Health Science. Units: 4**

Quarter Prerequisite: HSCI 315 or consent of instructor

Graduate-level research methods and application to contemporary health problems in health services administration. Health data analysis and development of skills for determining appropriate analytical techniques and procedures. Departmental consent required. Formerly offered as HSCI 690, students may not receive credit for both.

## **HSCI 6200. Professional Development and Leadership in Public Health. Units: 4**

The course introduces the promotion of professional development skills, leadership abilities and critical thinking skills that are needed for addressing complex public health issues. Emphasis is placed on philosophical foundations of health, historical and professional perspectives relevant to public health and the implementation of a professional portfolio. Students also conduct competency matching to program goals and accreditation standards. Departmental consent required.

## **HSCI 6210. Advanced Biostatistics for Public Health. Units: 4**

Concepts and application of advanced statistical methods related to public health: logistics, regression, survival analysis, and big data using SPSS and other relevant public health software. Departmental consent required. Formerly offered as HSCI 612, students cannot receive credit for both courses.

## **HSCI 6220. Advanced Topics in Epidemiology. Units: 4**

Advanced application of epidemiologic procedures related to the understanding of the occurrence and control of diseases and other health problems. Emphasis is given to survey development, study design, data quality, validity and reliability of epidemiological data, service learning in form of epidemiological intervention, and journal club-style critical evaluation of literature. Departmental consent required. Formerly offered as HSCI 617, students cannot receive credit for both courses.

## **HSCI 6230. Advanced Topics in Environmental and Occupational Health.**

### **Units: 3**

Sources, routes, media, and health outcomes associated with chemical, physical, and biological agents in the environment; effects on water quality, air quality, food safety, land resources, and disease in community and occupational settings. Includes methods to identify and evaluate hazard sources and framework used to effect hazard control. Public health issues, research designs, factors important to the development of monitoring programs. Current federal legal framework, policies, and practices associated with environmental issues and intended to improve public health. Departmental consent required. Formerly offered as HSCI 616, students cannot receive credit for both courses.

## **HSCI 6240. Advanced Study in Health Promotion. Units: 4**

Psychological, social, ecological, economic and political theories relevant to the mission and process of health promotion. Applying behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities. Consent required. Formerly offered HSCI 613. Students may not receive credit for both courses.

## **HSCI 6250. Advanced Topics in Public Health Policy and Administration. Units: 4**

The course emphasis the principles, practices, and skills essential to successful public health system with focus on the U.S. health care system, role of governmental agencies, and factors that shape public health system. The major focus of the course remains on the key aspects of policy development, critical analysis of policy development, with culminating product of a policy brief and/or white paper relevant to the professional field. Departmental consent required. Formerly offered as HSCI 611, students cannot receive credit for both courses.

### **HSCI 6260. Health Education Program Planning and Evaluation. Units: 4**

Comprehensive analyses and application of theories and methods for planning, implementation, and evaluation of health promotion programs. Techniques for collecting and analyzing quantitative and qualitative data to establish evaluation plan is also covered. Consent required. Formerly offered HSCI 615. Students may not receive credit for both courses.

### **HSCI 6270. Advanced Research Methods in Public Health. Units: 4**

Quarter Prerequisite: Consent of applicable MPH program coordinator  
Advanced tools in research methods relevant to public health. Types of research, process of scientific inquiry and critical analysis of research are covered with emphasis on national criteria for research evaluation, journal club, and systematic reviews. Departmental consent required. Formerly offered HSCI 608. Students cannot receive credit for both.

### **HSCI 6280. Grant Writing for Health Sciences. Units: 4**

Provides an overview of the principles and practice of grantsmanship from a public health and healthcare management perspective. Assists students to develop proficiency in the processes, factors, and required elements of a successful grant, including identifying granting bodies, formulating objectives, appropriate research questions, evaluation methods, budgeting, and sustainability plans. This course fulfills the culminating experience requirement for the MPH program. Consent required. Formerly offered HSCI 609. Students may not receive credit for both courses.

### **HSCI 6290. Bioterrorism. Units: 4**

Semester Prerequisite: College level biology or consent of instructor.  
Quarter Prerequisite: College level biology and chemistry or consent of instructor  
History, identification, properties, and modes of transmission of agents of bioterrorism, including preventive, control, and treatment countermeasures. Risk assessment in the evaluation of relative threat level from different agents and delivery modes. Formerly offered HSCI 513. Students may not receive credit for both courses.

### **HSCI 6300. Global Health. Units: 4**

Quarter Prerequisite: Consent of instructor  
Roles of cultures and their relationships to health status, health practices, and health-seeking behaviors. Focus on global perspective in disease prevention and health promotion, such as One Health. Departmental consent required. Formerly HSCI 607; students may not earn credit for both courses.

### **HSCI 6310. Health Education Practice. Units: 4**

Quarter Prerequisite: Consent of instructor  
The course discusses effective public health interventions using the socio-ecologic framework as a foundation to explore various levels of intervention. Concepts of program planning, implementing, and evaluating public health programs in the context of cultural competency. Emphasis is placed on applying theory in diagnosing the nature of health and social problems, interpreting empirical research results, and planning health education and promotion interventions to improve public health and creating a culminating product demonstrating health education practice. Formerly offered as HSCI 614. Students cannot receive credit for both.

### **HSCI 6320. Advanced Topics in Epidemiological Methodology. Units: 4**

Semester Prerequisite: HSCI 6210 and 6220 OR consent of instructor.  
Quarter Prerequisite: HSCI 451 and 690  
This course focuses on advanced topics in epidemiology with emphasis placed on clinical trials and quasi experiments. Students evaluate the efficacy of each in relation to various public health settings and the various types of epidemiological applications, including: healthcare, social, pharmaceutical, and especially molecular epidemiology. Departmental consent required. Formerly offered as HSCI 620, students cannot receive credit for both.

### **HSCI 6330. Advanced Topics in Health Science and Human Ecology. Units: 4**

Analysis of current literature, practices, procedures and issues in health science and human ecology at local, state, national and international levels in the form of journal club and a final culminating product. Formerly offered as HSCI 660D, students cannot receive credit for both courses.

### **HSCI 6340. Information Literacy in Public Health. Units: 4**

This course discusses the importance of how information is shaped and disseminated in the public health field, especially the role of funding and political unrest on information sharing. Departmental consent required.

### **HSCI 6350. Infectious Disease Burden in US. Units: 4**

Semester Prerequisite: Graduate standing  
This course evaluates trends in infectious diseases, especially HIV and AIDS in the United States. Examination of various aspects of the policy response and preventative care regulations as well as how U.S. policy is shaped in terms of both domestic and global responses to the pandemic. Departmental consent required.

### **HSCI 6360. Qualitative Methods in Public Health. Units: 4**

Semester Prerequisite: Graduate standing  
Application of qualitative methods in the development of health promotion interventions, evaluations, and research. Collecting and analyzing qualitative data through participant observation, interviewing, group methods, and case studies. Departmental consent required.

### **HSCI 6370. Survey Design in Public Health. Units: 4**

Semester Prerequisite: Graduate standing  
This course teaches students how to frame questions in health promotion surveys using sound principles of questionnaire design with emphasis on reliability and validity. Students learn survey design principles and methods and how to analyze survey data.

### **HSCI 6380. Maternal Child Health. Units: 4**

Semester Prerequisite: Graduate standing  
Public health issues affecting the health and well-being of women, children, and families. A multidisciplinary perspective that integrates biological, demographic, epidemiological, economic, behavioral, social, cultural and environmental aspects. Consent required.

### **HSCI 6390. Advanced Professional Development and Leadership in Public Health. Units: 2**

Advanced principles of effective leadership, communication, negotiation, collaborative problem solving, and conflict management in public health. The course requires a graduate portfolio and demonstration of public health practice experience. Departmental consent required.

### **HSCI 6400. Health Science Data Science. Units: 4**

Semester Prerequisite: Graduate standing  
Discussion on current use of data, especially big data in public health. Course evaluates the current trends in data science, data visualizations, and means to assess data efficacy for evidence-based practice. Departmental consent required.

### **HSCI 6410. Project Preparation. Unit: 1**

This course prepares students for their project, the culminating experience for the MPH program. Tasks include proposal development and approval in addition to committee establishment. Program Director approval required.

### **HSCI 6601. Macronutrient Biochemistry. Units: 3**

Semester Prerequisite: Graduate standing  
Advanced general nutritional concepts. Integrating nutritional biochemistry with physiological systems, population nutrition issues, and research approaches. Advanced concepts on carbohydrates, lipids, and protein metabolism. Department consent required.

### **HSCI 6602. Micronutrient Biochemistry. Units: 3**

Semester Prerequisite: Graduate standing  
Advanced concepts on vitamins, cofactors, bioactive compounds, and mineral metabolic functions and nutritional interactions among and with micronutrients. Department consent required.

### **HSCI 6603. Research Methods and Biostatistics in Nutrition Science. Units: 3**

Semester Prerequisite: Graduate standing  
Advanced tools in research methods relevant to Nutrition Science. Types of research, process of scientific inquiry and critical analysis of research are covered with emphasis on appropriate statistical methods, journal club, and systematic reviews. Department consent required.

### **HSCI 6610. Principles of Human Nutrition. Units: 4**

Quarter Prerequisite: Classified graduate standing and prior or concurrent enrollment in HSCI 661 or consent of instructor  
Application of the principles of physiology and metabolism to the study of nutrition emphasizing nutrient functions, nutrient requirements and impact of diet on health and disease, including both macronutrients and micronutrients. Metabolic pathways and the functions of nutrients will be discussed. Formerly offered as HSCI 661, students may not receive credit for both courses.

### **HSCI 6651. Complementary and Alternative Therapy. Units: 3**

Semester Prerequisite: Graduate standing  
Survey of Complementary and Alternative Medicine (CAM) to introduce the core concepts and methodologies in CAM with an emphasis on nutrient and diet related therapies and modalities including herbals, megavitamins, and Ayurvedic diet and medicine. Department consent required.

### **HSCI 6653. Nutrition Assessment. Units: 3**

Semester Prerequisite: Graduate standing  
Assessment of nutritional status of both individuals and populations for purposes of etiologic research and disease prevention and management. Application of biochemical, anthropometric, clinical and dietary assessments for prevention of disease and malnutrition, and promotion of wellness and health. Emphasis on understanding and use of methods appropriate for measurement of nutritional risks in epidemiological or population studies. Department consent required. Formerly offered as HSCI 667, students may not earn credit for both.

### **HSCI 6654. Advanced Topics in Nutrition Across the Life Span. Units: 3**

Semester Prerequisite: Graduate standing  
Significance and role of nutrition during pregnancy, lactation, infancy, childhood, adulthood, and among the elderly. The course will include in-depth discussion of the chronic- and genetic-disease conditions across the life span that impact nutrition status and ways to prevent malnutrition and development of chronic diseases. Department consent required. Formerly offered as HSCI 561, students may not earn credit for both.

### **HSCI 6656. Advanced Public Health Nutrition. Units: 3**

Semester Prerequisite: Graduate standing  
Major nutrition-related diseases and their prevention, including effects of public policy on health status. The course will cover the role of public health dietitian/nutritionist in disease prevention using research-based data and implementation plans. Knowledge and skills in grant writing, funding opportunities, program evaluation, and assessment. Department consent required. Formerly offered as HSCI 663, students may not earn credit for both.

### **HSCI 6657. Management of Nutrition and Dietetic Services. Units: 3**

Semester Prerequisite: Graduate standing  
An in-depth knowledge of different types of food systems and food service management. Include development of the skills necessary to guide practice in the management and leadership of food and nutrition service operations. Department consent required.

### **HSCI 6658. Advanced Topics in Medical Nutrition Therapy. Units: 3**

Semester Prerequisite: Graduate standing  
Discussion of advance medical nutrition therapy of several major chronic diseases, especially cardiovascular disease, cancer, and relevant nutrition topics of the time. Focuses on understanding evidence-based interventions using the Academy of Nutrition and Dietetics' Evidence Analysis Library, science-based, and reputable sources for treatment of these diseases and the role of health professionals in management and treatment of nutrition related diseases. Includes use of Nutrition Care Process and data collection for monitoring and evaluation of treatment outcome. Department consent required. Formerly offered as HSCI 664, students may not earn credit for both.

**HSCI 6659. Topics in Global Nutrition. Units: 3**

Semester Prerequisite: Graduate standing

Identification and discussion of malnutrition incidences in developing and industrialized countries. Focuses on the multi-factorial causes of malnutrition around the world, including food production, distribution, geographical, political, and economic policies on nutrition status of the individuals and population. Identification and discussion of resources and policies for optimal public health nutrition and to alleviate malnutrition. Department consent required. Formerly offered as HSCI 562, students may not earn credit for both.

**HSCI 6660. Nutrition in Health & Disease. Units: 3**

Semester Prerequisite: Graduate standing

Integration of biochemical, physiological, and genetic aspects of nutrition in the context of clinical and epidemiological observations related to health and disease, such as obesity, diabetes, cancer, vascular and neurodegenerative diseases, osteoporosis, and birth defects. Review and consideration of governmental role in public health nutrition via guidelines and policies. Department consent required.

**HSCI 6690. Nutrition Graduate Seminar. Unit: 1**

Advanced topics in nutrition research. Emphasis will be on presenting research papers, proposals, and findings, and engaging in intellectual discussions about nutrition research. May be taken 2 times for 2 units. Department consent required.

**HSCI 6754. Administrative Residency. Units: 3**

Quarter Prerequisite: Advancement to candidacy and consent of program director

Supervised internship of 120 hours in sites such as hospitals, health plans, HMOs, medical groups, managed care organizations, private or public health services or agencies. Requires a rotation in administrative organization and function. Requires formal written report and presentation. Graded credit/no credit. Departmental consent required. Formerly offered as HSCI 697, students may not receive credit for both.

**HSCI 6954. Field Experience. Units: 4**

Quarter Prerequisite: Graduate status after consultation with program coordinator

A minimum of 45 hours for each unit of credit will be spent in a guided, structured, practical, educational experience in sites that may include public health offices, community health centers, clinical sites, nonprofit health agencies, worksite health promotion programs, or health care organizations, under the direct supervision of a preceptor at the site and guidance of the department. Letter of approval signed by site preceptor and program director to be filed in department office prior to beginning the field experience. Students must complete 180 hours to meet field experience requirement. Consent required. Formerly called HSCI 689D. Students cannot count both for credit. Graded Credit/No Credit.

**HSCI 6960. Project. Units: 4**

Quarter Prerequisite: completion of HSCI 608, HSCI 612, and at least 24 units of approved coursework; an officially appointed project committee; and advancement to candidacy

Completion of a major project that integrates and applies public health knowledge and skills to a problem or issue related to public health practice or policy, resulting in a high-quality written product and an oral presentation (either on campus or at a professional meeting). The project may emerge from or be initiated during HSCI 6954: Field Experience. May be taken two times for eight units.

**HSCI 6963. Graduate Project in Nutrition Science. Units: 3**

Semester Prerequisite: Graduate standing

Preparation and completion of a project for the students in the Masters of Science in Nutrition Science (MSNS) and Individualized Supervised-Practice Pathway (ISPP) program. This project will consist of supervised-practice experience hours and an applied research project in one of the intern rotations. Includes formal defense or professional presentation. May be taken 2 times for 6 units. Department consent required.

**HSCI 6971. Thesis. Unit: 1**

Semester Prerequisite: Consent of Department

Research, Writing and Defense. Independent graduate research conducted under the guidance of an advisor in the Department of Health Science and Human Ecology. Departmental consent required. Formerly offered as HSCI 699, students cannot receive credit for both.

**HSCI 6972. Thesis. Units: 2**

Semester Prerequisite: Consent of advisor

Research, Writing and Defense. Independent graduate research conducted under the guidance of an advisor in the Department of Health Science and Human Ecology. Consent required.

**HSCI 6973. Graduate Thesis. Units: 3**

Research, writing, and defense of graduate thesis. Independent graduate research conducted under the guidance of an advisor in the Department of Health Science and Human Ecology. May be taken 2 times for 6 units. Department consent required.

**HSCI 6974. Thesis. Units: 4**

Quarter Prerequisite: successful completion of HSCI 699A

Research, Writing and Defense. Independent graduate research conducted under the guidance of an advisor in the Department of Health Science and Human Ecology. Consent required. Formerly offered as 699D.

**HSCI 6980. Comprehensive Examination. Units: 0**

Semester Prerequisite: advancement to candidacy, completion of a minimum of 16 units, approval of department, and good academic standing. Quarter Prerequisite: advancement to candidacy, completion of a minimum of 16 units, approval of department, and good academic standing

Assessment of student's ability to integrate the knowledge of the discipline, show critical and independent thinking, and demonstrate mastery of the subject matter. Department consent required. Formally HSCI 999. Graded credit/no credit.

### **HSCI 6990. Continuous Enrollment for Graduate Candidacy Standing. Units: 0**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **HSCI 6991. Continuous Enrollment for Graduate Candidacy Standing. Unit: 1**

Quarter Prerequisite: Advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **HSCI 6992. Continuous Enrollment for Graduate Candidacy Standing. Units: 2**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **HSCI 6993. Continuous Enrollment for Graduate Candidacy Standing. Units: 3**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **HSCI 6994. Continuous Enrollment for Graduate Candidacy Standing. Units: 4**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

### **HSCI 6995. Continuous Enrollment for Graduate Candidacy Standing. Units: 5**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities. See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.

## **HSCI 6996. Continuous Enrollment for Graduate Candidacy Standing. Units: 6**

Quarter Prerequisite: advancement to candidacy and approval of program graduate coordinator or, if an interdisciplinary studies major, consent of the Dean of Graduate Studies

Independent study leading to completion of requirements (other than course work) for the master's degree. To retain classified standing in the master's program, a student must enroll in a Continuous Enrollment for Graduate Candidacy Standing course each quarter until the project or thesis is accepted or the comprehensive examination passed. Students who enroll through the university have full use of all university facilities.

See Culminating Experience: Exam, Thesis, or Project in Graduate Degree and Program Requirements section of the Bulletin of Courses. Continuous Enrollment for Graduate Candidacy Standing is a variable unit course, see fee schedule in the Financial Information section of the Bulletin of Courses. Earned units are not degree-applicable nor will they qualify for financial aid.