HUMAN MEDICINE   HM

College of Human Medicine

101  Introduction to Public Health
Fall, Spring. 3(3-0). Core public health, philosophies and concepts. Health and disease – measures, determinants, health promotion and disease prevention. Introduction to health care delivery systems. Career opportunities in public health.

491  Special Topics in Bioethics and Medical Humanities
Fall. 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of college.

501  Preceptorship Training
Fall, Spring. 1 to 8 credits. A student may earn a maximum of 24 credits in all enrollments for this course. Interdepartmental with Family Medicine. Administered by Human Medicine. RB: One year of graduate-professional program in College of Human Medicine. Field experience in primary care.

511  Infectious Disease and Immunology
Fall. 3 credits. RB: Open to first year students. R: Open only to graduate-professional students in College of Human Medicine. Basic sciences applied to clinically relevant situations. Program-based small group experiences.

513  Neurological Domain
Fall. 3(3-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic sciences applied to clinically relevant situations. Problem-based learning small group experiences.

515  Cardiovascular Domain
Spring. 4(4-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic sciences applied to clinically relevant situations. Program-based learning small group experiences.

516  Disorders of Thought, Emotion, and Behavior Domain
Fall. 4(4-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic science applied to clinically relevant situations. Problem-based learning small group experiences.

517  Musculoskeletal Domain
Fall. 2(2-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic science applied to patient cases. Problem-based learning small group teaching.

525  Pulmonary Domain
Spring. 3(3-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic sciences applied to clinically relevant situations. Problem-based learning small group experiences.

526  Urinary Tract Domain
Spring. 3(3-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic sciences applied to clinically relevant situations. Program-based learning small group experiences.

527  Digestive Domain
Spring. 3 credits. RB: Block I. Not open to first year students. R: Open only to graduate-professional students in College of Human Medicine. Basic sciences applied to clinically relevant situations. Program-based small group experiences.

528  Metabolic and Endocrine and Reproductive Domain
Spring. 3 credits. RB: Block I. Not open to first year students. R: Open only to graduate-professional students in College of Human Medicine. Basic sciences applied to clinically relevant situations. Program-based small group experiences.

531  Clinical Skills I
Fall. 2(1-2) R: Open only to graduate-professional students in the College of Human Medicine. Basic principles of doctor-patient relationship, core interviewing techniques. Exposure to clinical arena. Adult screening physical examination and its integration with data-gathering skills.

532  Clinical Skills II
Spring. 2(1-2) RB: HM 531 R: Open only to graduate-professional students in the College of Human Medicine. Adult screening physical examination and its integration with data-gathering skills.

533  Clinical Skills III
Summer. 2(2-0) RB: HM 532 R: Open to graduate-professional students in the College of Human Medicine. Age specific screening examinations and integration with data-gathering skills. Skill-oriented content will be supplemented with theoretical material covering the human lifespan.

534  Clinical Skills IV
Fall. 2(1-2) RB: HM 533 R: Open only to graduate-professional students in College of Human Medicine. Advanced interviewing and physical examination skills. Communication with patient-related data with the patient and other health professionals, orally and in writing. Problem solving.

535  Clinical Skills V
Spring. Summer. 2(1-2) RB: HM 535 R: Open only to graduate-professional students in College of Human Medicine. Advanced interviewing and physical examination skills. Oral case presentations and written medical records. Introductory problem solving skills.

537  Topics in Reproductive Health
Fall. 1(1-0) R: Open only to graduate-professional students in the College of Human Medicine, the College of Osteopathic Medicine. and to graduate students in the College of Nursing. Pre-clinical focus on topics of reproductive health.

539  Hematopoietic/Neoplasia Domain
Fall. 4(4-0) RB: Not open to first year students. R: Open to graduate-professional students in the College of Human Medicine. Basic sciences applied to clinically relevant situations. Program-based learning small group experiences.

546  The Social Context of Clinical Decisions
Fall. 1(1-0) RB: Completion of Block I requirements. R: Open only to graduate-professional students in College of Human Medicine. Social perspectives on medicine and medical care.

547  The Social Context of Clinical Decisions II
Spring. 2(2-0) RB: HM 546 R: Open only to graduate-professional students in College of Human Medicine. Issues and concepts related to social and professional responsibilities of physicians.

548  Medical Humanities Seminar
Spring. 2(2-0) RB: HM 547 R: Open only to graduate-professional students in College of Human Medicine. Issues related to the humanities and human values pertinent to medical practice.

550  International Law and Ethics of Human Subject Research
Fall. 2(2-0) R: Open to graduate students or graduate-professional students or approval of department. Interdisciplinary understanding of the substance and interrelationships of international law and ethics in protecting human subjects of biomedical and behavioral research.

551  U.S. Law and Ethics of Human Subject Research
Spring. 2(2-0) R: Open to graduate students or graduate-professional students or approval of department. Interdisciplinary understanding of the substance and interrelationships of U.S. law and ethics in protecting human subjects of biomedical and behavioral research.

561  Basic Principles of Pathology

571  Integrative Clinical Correlations I
Fall. 3(3-0) RB: (ANT 561 or concurrently) and (BMB 521 or concurrently) and (PSL 501 or concurrently) R: Open only to graduate-professional students in the College of Human Medicine. Correlation of the principles of the basic biological and behavioral sciences with disciplines of clinical medicine using case presentations.

572  Integrative Clinical Correlations II
Spring. 1(1-0) RB: (HM 571 or concurrently) and (ANT 552 or concurrently) and (ANTR 562 or concurrently) and (BMB 521 or concurrently) and (PSL 501 or concurrently) R: Open only to graduate-professional students in the College of Human Medicine. Correlation of the principles of the basic biological and behavioral sciences within the disciplines of clinical medicine using case presentations.

581  Mentor Program
Fall. 1(0-2) R: Open only to graduate-professional students in the College of Human Medicine. Dimensions of being a physician. Performance skills needed for patient care and interaction with medical workers. Current trends.
608  Sub-Specialty Clerkships
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: FMP 602 R: Open only to graduate-professional students in College of Human Medicine. Hospital and office-based clinical experiences in sub-specialties in medicine and surgery.

609  Laboratory Medicine Clerkship
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 16 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine. Administered by Human Medicine. R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine. SA: PTH 608. Laboratory procedures. Correlation of laboratory data with morphologic abnormalities in patients with pathophysiology.

610  Pathology Clerkship
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine. Administered by Human Medicine. R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine. SA: PTH 608. Anatomic and clinical pathology with emphasis on clinical-pathological correlation. Conducted in pathology departments of affiliated hospitals.

612  Pain Medicine
Fall, Spring, Summer. 6(6-0) A student may earn a maximum of 12 credits in all enrollments for this course. P: SUR 608 and MED 608 R: Open to students in the College of Human Medicine. Evaluation and management of pain in acute and chronic disease settings. Evidence-based principles of pain medicine, pharmacology and procedures commonly used to treat pain. Interdisciplinary management of pain. Pain prevention and rehabilitation.

629  Leadership in Medicine for Underserved or Vulnerable Communities
Spring. 6 credits. P: PHD 600 and MED 608 and FMP 608 and PSC 608 and OGR 608 and SUR 608 R: Open to graduate-professional students in the College of Human Medicine. Approval of college. SA: MED 629. Issues involved in securing access to medical care and community resources for families in medically underserved communities.

631  Advanced Leadership in Medicine for Underserved or Vulnerable Communities
Spring. 6 credits. P: HM 629 R: Open to graduate-professional students in the College of Human Medicine. Approval of college. SA: MED 631. Continuation of HM 629. Medical care of an underserved or vulnerable population in a rural, urban, or international setting. Development of abilities to intervene in the public health issues of this population.

635  Core Competencies I
Fall, Spring, Summer. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Human Medicine. Core knowledge and skills from an interdisciplinary perspective.

636  Core Competencies II
Fall, Spring, Summer. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Human Medicine. Core knowledge and skills from an interdisciplinary perspective.

637  Core Competencies III
Fall, Spring, Summer. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Human Medicine. Core knowledge and skills from an interdisciplinary perspective.

640  Service Learning In the Community
Fall, Spring, Summer. 1(1-0) R: Open to graduate-professional students in the College of Human Medicine. Demonstrate preparation and planning to provide services which respond to community need. Participate for 40 hours with community organization. Demonstrate reflectivity on participation in services.

641  Clinical Skills Competence Experience
Fall, Spring, Summer. 6(6-0) A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of college. Review of communication skills, history-taking, and physical examination skills in faculty-observed patient encounters.

691  Research Clerkship
Fall, Spring. Summer. 2 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (HM 690) or approval of community research director. R: Open only to graduate-professional students in the College of Human Medicine. Biological, behavioral, or clinical research project.

801  Introduction to Public Health
Fall. 3(3-0) R: Academic or professional background in public health or public health-related discipline. R: Open to masters students in the Public Health major or in the Public Health Specialization. Philosophy and concepts of the discipline of public health. History and development of the profession. Ethical, legal and political considerations. Provide first introduction to core public health areas.

802  Biostatistics for Public Health
Fall. 3(3-0) R: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to masters students in the Public Health major or in the Public Health Specialization. Data management, analysis and presentation of public health data. Techniques and methods for calculating population-based statistics. Instruction using Epi-Info software package.

803  Epidemiology and Public Health
Fall. 3(3-0) R: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to masters students in the Public Health major or in the Public Health Specialization. Not open to students with credit in EPI 810 or EPI 811. Distributions and determinants of disease in population. Epidemiologic research, quantitative methods, study designs pros/cons.

804  Public Health Administration
Spring. 3(3-0) R: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to masters students in the Public Health major or in the Public Health Specialization. Planning, organization, administration, management, evaluation and policy analysis of public health. Legal and ethical considerations of public health.

805  Social and Behavioral Aspects of Public Health
Spring. 3(3-0) R: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to masters students in the Public Health major or in the Public Health Specialization. Concepts and methods of social and behavioral sciences applied to public health problems and issues.

806  Environmental Factors of Health
Spring. 3(3-0) R: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to masters students in the Public Health major or in the Public Health Specialization. Biological, physical and chemical factors that affect health of populations. Regulatory approaches to environmental hazards. Potential impact of environmental agents on health and preventive management approaches.
Focus on legal-ethical parameters affecting application of health technology.

Information technology for health informatics systems, principles of relational database systems, operations, information systems, data sets, data standards and classification systems.

Research, evaluation and applications of informatics in public health and public health research.

Overview of major public health issues and the health care system, both Western and traditional, in Ghana. Health status indicators and determinants; major programs/strategies; organization of the health care system, access to and payment for care; role, image and status of health care providers; interface between Western and traditional medicine; basic qualitative and quantitative field research methods for community health.

Preparation for public health study abroad experiences in Ghana.

Overview of major public health issues and the health care system in Brazil. Health status indicators and determinants of health and the legal basis and structure of the Brazilian health care system and social safety net. Includes field experiences with local health care providers and political leaders.

Application of information and telecommunication technologies to the provision of healthcare including the use of mobile telephones in mHealth (Mobile Health). Benefits and applications of eHealth, telemedicine and mHealth both domestically and internationally.

Process for conducting public health outbreak investigations including the role of local, state, federal and international agencies. Legal, political, media and law enforcement issues.

Introduce public health program evaluation methods/tools. Causal inference criteria, standard evaluation guides, procedural and outcome evaluation methods and needs assessment and performance monitoring methods. Integrates epidemiology, biostatistics and public health knowledge pertaining to program evaluation.

Social justice and health equity framework for the practice of public health with analysis of persistent health disparity across race, class, gender, and other forms of difference.

Provide students with a conceptual foundation, practical skills and exposure to community-based methodologies for identifying and assessing environmental issues and developing strategies for improvement.

International public health experience in Mexico. Spring of odd years. 1(1-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health major or approval of college. C: PRR 410 concurrently. International public health field experience designed to provide students exposure to the culture and health problems facing local communities through hands-on practical experience in Mexico.

Concept and methods used in conducting community assessments (nationally and globally) – exploring key health indicators, environmental factors and community resources used to identify problems in a population.

Core public health issues prevalent and sometimes elusive in immigrant, refugee and mobile populations. Historical context, health care delivery, access and other barriers to preventive care, social justice, cultural competence, health policy, program challenges, measurement and data assimilation.

Biological principles of nutrition and physical activity with public health focus. Nutritional issues in specific populations. Introduction to malnutrition, current issues in nutrition, role of nutrition in chronic diseases, and nutrition policy and intervention programs.

Nature, impact and control of parasitic diseases in developing countries.
Intersections of Human and Animal Health
Summer of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health major or approval of college.

Introduction to public health issues in vitamin and mineral nutrition, including biological roles, human requirements, and consequences of deficiency and excesses. Current issues regarding specific micronutrient status in U.S. and worldwide. Current and proposed population-based interventions.

Vitamins and Minerals: Risks to Public Health
Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college.

Introduction to public health issues in vitamin and mineral nutrition, including biological roles, human requirements, and consequences of deficiency and excesses. Current issues regarding specific micronutrient status in U.S. and worldwide. Current and proposed population-based interventions.

U.S. Healthcare Access and Delivery for Migrant, Refugee, and Mobile Populations
Summer of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college.

Impact and challenges posed to U.S. Public Health system by migrant, refugee and mobile populations entering the United States and core public health issues they face. Barriers to prevention including health care access and delivery, social justice, cultural and language competence, workplace and environmental factors. Issues in measurement and data assimilation.

Demography, Population Dynamics and Public Health
Spring of even years. 3(3-0) RB: Academic or professional background in public health or public health related discipline, experience with databases R: Open to students in the Public Health major or approval of college.

Methods and concepts in the study of population change. Analytical approaches for analyzing and interpreting population changes. Applications in planning, policy-making and administration.

Integrated Research Study Design and Informatics
Fall of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, nursing or allied health R: Open to students in the Public Health major or approval of college.

Introduction to clinical trial phases, research design, informatics aims, informatics platforms and datamet lifecycle.

Psychiatry and Public Health: A Biopsychosocial Perspective
Fall of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health major or approval of college.

Overview of common psychiatric diagnoses across the ages highlighting sociological and economic determinants of treatment and outcomes.

Zoonotic Diseases of Public Health Importance
Fall of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health major or approval of college.

Zoonotic diseases by agent (bacterial, viral, parasitic, prion, rickettsial, fungal), modes of transmission (direct, indirect-food, water, vectorborne), and human, animal, environmental interactions leading to disease intervention/control methods. Impacts of climate change and changing dynamics of the human population (migration, global travel, shifts in housing preferences and urbanization) and the animal population.

Vaccine Preventable Diseases of Public Health Importance
Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college.

Vaccine-preventable diseases of importance to the public health and the global community. Basic epidemiology, surveillance, vaccine updates, status of the vaccination programs, associated cost, benefits, and related public health policies. Current controversies associated with national and international disease control, elimination, and eradication campaigns.

Global Public Health in Action
Summer of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline. Basic knowledge of public health issues and epidemiology are essential R: Open to students in the Public Health major or approval of college.

Qualitative research methods and analysis using case studies in national and international public health. Development of a case study.

Maternal and Child Health: A Global Public Health Perspective
Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college.

Introduction to historical and cultural foundations of maternal and child global public health. Health care needs, health determinants and disparities, programs, policies and public health issues affecting women and children.

Critical Thinking for Public Health Practitioners
Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college.

Processes of questioning assumptions and determining causality explored through public health case studies. Cognitive psychology, thinking about thinking, cognitive biases and fallacies, brainstorming, innovative thinking. The scientific method of inductive and deductive reasoning, developing and testing hypotheses, experiments, and seeking explanations.
Human Medicine—HM

880 Public Health Research Methods
Spring of odd years. 3(3-0) P: HM 802 and HM 803 RB: Academic or professional background in public health and/or public health related discipline, experience with data bases R: Open to students in the Public Health major or approval of college. Not open to students with credit in VM 830. Specific causes and progression of major parasitic diseases important to global public health; diverse aspects of the host’s responses to the invasion by these organisms; protective and pathogenic immune responses; development of clinical disease; role of chemotherapy development of clinical disease; effects of chemotherapeutic agents; epidemiological discussion of the importance of quantification of the pathology and clinical disease seen in populations.

881 Pathogenesis of Parasitic Infections Important to Public Health
Summer. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college. Assessment of nutritional and physical activity on a population level. Identification of at-risk populations. Collection, interpretation and application of data for developing interventions and evaluating behavior change and health outcomes. Role of public health and national nutrition institutions.

882 Public Health Nutrition: Assessment and Development of Population-Based Interventions
Fall of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college. Master's thesis research.

883 Mobile Technology, Social Media, and Games in Public Health
Fall of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, healthcare administration, allopathic and osteopathic medicine, telecommunications, healthcare information technology, healthcare informatics, or computer science. R: Open to students in the Public Health major or approval of college. Decision theory, assessment, project management, and program evaluation of information technology for public health including telehealth, eHealth, and mobile technology for health (mHealth).

884 Decision Making and Technology Assessment in Healthcare and Public Health
Spring of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline and a familiarity with health information technology and telehealth concepts, R: Open to students in the Public Health major or approval of college. Identification and conceptualization of health information systems in healthcare and public health industries. Telehealth, eHealth, and mobile technologies for health (mHealth).

885 Health Information Technology and Telehealth Technologies as Applied to Public Health
Summer of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with data bases R: Open to students in the Public Health major or approval of college. Introduction to health information technology and health information systems in healthcare and public health industries. Telehealth, eHealth, and mobile technologies for health (mHealth).

886 Public Health Diagnosis and Interpretation of Parasitic Infections
Fall of even years. 3(3-0) P: HM 863 RB: Academic or professional background in public health and/or public health related discipline, knowledge of parasitology R: Open to students in the Public Health major or approval of college. Identification of research questions, study design including the role of chance, bias, generalizability of results and ethical issues surrounding the use of humans in epidemiological research. Real case studies are used to analyze study design including the role of chance, bias, misclassification, effect measure modification, interaction, and missing data.

887 Control and Eradication of Parasitic Infections of Public Health Importance
Spring of odd years. 3(3-0) P: HM 863 RB: Academic or professional background in public health and/or public health related discipline, knowledge of parasitology R: Open to students in the Public Health major or approval of college. Study design including the role of chance, bias, generalizability of results and ethical issues surrounding the use of humans in epidemiological research. Real case studies are used to analyze study design including the role of chance, bias, misclassification, effect measure modification, interaction, and missing data.

888 Field Methodology for Investigating Parasitic Diseases of Public Health Importance
Summer of odd years. 3(3-0) P: HM 863 RB: Academic or professional background in public health and/or public health related discipline, knowledge of parasitology R: Open to students in the Public Health major or approval of college. Study design including the role of chance, bias, generalizability of results and ethical issues surrounding the use of humans in epidemiological research. Real case studies are used to analyze study design including the role of chance, bias, misclassification, effect measure modification, interaction, and missing data.

889 Applied Epidemiologic Methods for Public Health Practitioners
Fall of even years. 3(3-0) Interdepartmental with Epidemiology. Administered by Human Medicine. P: HM 802 and HM 803 RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or approval of college. Study design including the role of chance, bias, generalizability of results and ethical issues surrounding the use of humans in epidemiological research. Real case studies are used to analyze study design including the role of chance, bias, misclassification, effect measure modification, interaction, and missing data.