

**HUMAN MEDICINE HM**

**College of Human Medicine**

- 101 Introduction to Public Health**  
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, Spring, Summer. 1 to 7 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of college.  
Special topics in ethics and humanities of health care, proposed by faculty on a group study basis.
- 501 Preceptorship Training**  
Fall, Spring, Summer. 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.
- 552 Medical School I**  
Fall. 16 credits. A student may earn a maximum of 32 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Human Medicine.  
A first course in a primary care, patient centered experience, integrating necessary biomedical and social sciences and humanities with clinical skills and professional development.
- 553 Medical School II**  
Spring. 16 credits. A student may earn a maximum of 32 credits in all enrollments for this course. P: HM 552 R: Open to graduate-professional students in the College of Human Medicine.  
Continuation of a primary care, patient centered experience, integrating necessary biomedical and social sciences and humanities with clinical skills and professional development. Includes selectives to develop areas of strength and remediate gaps.
- 554 Medical School III**  
Summer. 16 credits. A student may earn a maximum of 32 credits in all enrollments for this course. P: HM 553 R: Open to graduate-professional students in the College of Human Medicine.  
Continuation of a set of selectives to develop areas of strength and remediate gaps. The beginning of an interdisciplinary, patient centered experience, integrating necessary biomedical and social sciences and humanities with clinical skills and professional development.
- 555 Medical School IV**  
Fall. 16 credits. A student may earn a maximum of 32 credits in all enrollments for this course. P: HM 554 R: Open to graduate-professional students in the College of Human Medicine.  
Continuation of an interdisciplinary, patient centered experience, integrating necessary biomedical and social sciences and humanities with clinical skills and professional development.
- 556 Medical School V**  
Spring. 16 credits. A student may earn a maximum of 32 credits in all enrollments for this course. P: HM 555 R: Open to graduate-professional students in the College of Human Medicine.  
Continuation of an interdisciplinary, patient centered experience, integrating necessary biomedical and social sciences and humanities with clinical skills and professional development. Includes selectives to develop areas of strength and remediate gaps.
- 590 Special Topics in Medicine**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 34 credits in all enrollments for this course. R: Open to students in the College of Human Medicine.  
Special topics related to healthcare covering a wide variety of disciplines and fields
- 591 Special Problems in Human Medicine**  
Fall, Spring, Summer. 1 to 34 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Human Medicine.  
Work under the direction of a faculty member on an experimental, theoretical, or applied problem that requires a broad, interdisciplinary approach.
- 608 Sub-Specialty Clerkships**  
Fall, Spring, Summer. 4 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. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine. Administered by Human Medicine. R: Open to graduate-professional students in the College of Human Medicine or in the College of Osteopathic Medicine. SA: PTH 609  
Laboratory procedures. Correlation of laboratory data with morphologic abnormalities in patients with pathophysiology.
- 610 Pathology Clerkship**  
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine. Administered by Human Medicine. R: Open to graduate-professional students in the College of Human Medicine or in the College of Osteopathic Medicine. SA: PTH 608  
Anatomic and clinical pathology with emphasis on clinical-pathological correlation. Conducted in pathology departments of affiliated hospitals.
- 611 Hospice Clerkship**  
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
Treatment and interdisciplinary team evaluation in hospice medicine. Advanced care directive processes and procedures.
- 612 Pain Medicine**  
Fall, Spring, Summer. 6(6-0) A student may earn a maximum of 18 credits in all enrollments for this course. 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. Pain pharmacology. Trigger point injections, bursa injections, joint injections, peripheral nerve blocks and injections. Pain rehabilitation, prevention and interdisciplinary management.
- 613 Complementary Medicine Clerkship**  
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
Evidence based management of disease and symptoms with complementary and alternative medicine.
- 614 Student-Designed Elective Clerkship**  
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
Customized experience of clinical science skills and knowledge. Clinical performance evaluation.
- 615 Global Health Experience in India**  
Spring. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to students in the College of Human Medicine or in the College of Osteopathic Medicine.  
Rural health delivery in India. Pre-travel preparation and instruction in culture followed by experiences in pediatrics, women's health, mental health, and tropical disease.
- 622 Practical Application of Public Health Principles—Planning a Community Project**  
Fall, Spring, Summer. 6(6-0) P: HM 823 R: Approval of college.  
Research and planning for a group community project. Practical application of public health principles including epidemiology, biostatistics, health and public policy, public health administration structure and function, health behavior, health education, environmental health and community assessment.
- 623 Practical Application of Public Health Principles—Implementing a Community Project**  
Fall, Spring, Summer. 6(6-0) P: HM 622 R: Approval of college.  
Implementation, analysis, and documentation of group community project planned in HM 622.

## HM—Human Medicine

- 629 Leadership in Medicine for Underserved or Vulnerable Communities**  
Spring. 6 credits. P: PHD 600 and MED 608 and FM 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.
- 632 Rural Community Health**  
Spring. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: Completion of preclinical requirements for the Leadership in Rural Medicine Certificate. R: Approval of college.  
Patient centered and community based experience in rural medicine and rural medical health systems.
- 633 Advanced Rural Community Health**  
Spring. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: Completion of preclinical requirements for the Leadership in Rural Medicine Certificate. R: Approval of college.  
Advanced clinical skills, knowledge, and experience in rural patient medicine, rural community medicine, and rural medical health systems.
- 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.
- 639 Northern Wilderness, Emergency and Sports Medicine**  
Spring. 6 credits. R: Open to students in the College of Human Medicine. Approval of college.  
Development of knowledge, skills and attitudes to address the needs of patients outside of the hospital with wilderness or sports related injuries.
- 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. 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.
- 642 Critical Care in the Late Clinical Experience**  
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P: (HM 556) and (MED 641 or PHD 641 or SUR 641) R: Open to graduate-professional students in the College of Human Medicine. Approval of college.  
Critical care experience in medicine.
- 651 Advanced Skills and Knowledge in Medical School I**  
Fall. 2(2-0) A student may earn a maximum of 20 credits in all enrollments for this course. P: HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
Interdisciplinary small group course for advanced medical students combining advanced clinical skills with deep exploration of scientific and humanities literature underlying these skills.
- 652 Advanced Skills and Knowledge in Medical School II**  
Spring. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: HM 651 R: Open to graduate-professional students in the College of Human Medicine.  
Interdisciplinary small group course for advanced medical students combining advanced clinical skills with deep exploration of scientific and humanities literature underlying these skills.
- 653 Advanced Skills and Knowledge in Medical School III**  
Summer. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: HM 652 R: Open to graduate-professional students in the College of Human Medicine.  
Interdisciplinary small group course for advanced medical students combining advanced clinical skills with deep exploration of scientific and humanities literature underlying these skills.
- 654 Advanced Skills and Knowledge in Medical School IV**  
Fall. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: HM 653 R: Open to graduate-professional students in the College of Human Medicine.  
Advanced medical students combining advanced clinical skills with deep exploration of scientific and humanities literature underlying these skills.
- 655 Advanced Skills and Knowledge in Medical School V**  
Spring. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: HM 654 R: Open to graduate-professional students in the College of Human Medicine.  
Interdisciplinary small group course for advanced medical students combining advanced clinical skills with deep exploration of scientific and humanities literature underlying these skills.
- 691 Research Clerkship**  
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Human Medicine. Approval of college.  
Data gathering, analysis, interpretation, and presentation of a biological, behavioral, or clinical research project.
- 801 Introduction to Public Health**  
Fall, Spring, Summer. 3(3-0) R: Open to students in the Public Health Major or in the Public Health Graduate Certificate.  
Introduction to public health philosophy and core knowledge areas. Ethical, legal and political considerations. Emphasis on principles and tools for population health, disease prevention and health promotion, health determinants, healthcare and public health systems.
- 802 Biostatistics for Public Health**  
Fall, Spring, Summer. 3(3-0) RB: College Algebra. Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to students in the Public Health Major or in the Public Health Graduate Certificate.  
Practical applications and methods using software (SAS, Epi-Info) for statistical analysis, database construction, data visualization and interpretation
- 803 Epidemiology and Public Health**  
Fall. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's students in the Public Health major or in the Public Health Specialization.  
Distributions and determinants of disease in population. Epidemiologic research, quantitative methods, study designs pros/cons.
- 804 Public Health Policy and Administration**  
Spring. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's students in the Public Health Major.  
Structural, operational, leadership and components of health policy and public health administration. Community health assessment, advocacy and evaluation within public health agencies and programs. Major business systems used for administration of public health agencies and programs.

- 805 Social and Behavioral Aspects of Public Health**  
 Spring. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's 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) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's 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.
- 807 Practical Application and Critical Thinking in Public Health**  
 Fall, Spring, 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.  
 Critical thinking, reading skills, explanations, problem solving, and decision making in public health using case studies. Questioning assumptions, identifying bias, determining causality, and application of the scientific method. Reporting guidelines and systematic literature reviews.
- 808 Public Health Surveillance**  
 Summer of odd years. 3(3-0) RB: Academic or professional background in public health, epidemiology and/or public health related discipline. R: Open to students in the Public Health major or approval of college.  
 Introduction, history, and design of national, state and local public health surveillance systems for communicable diseases, chronic diseases, birth defects, injury, and disasters. Use of surveillance data sources.
- 809 Adolescence to Early Adulthood: Key Issues for Public Health Practice**  
 Fall of odd 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.  
 Public health issues that affect health status, health policies, and development of this population. Role of youth development strategies, community investment, social media, and life-skill development for this generation.
- 810 GIS and Public Health**  
 Fall of odd 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 the application of geographic information science (GIS) and geography in public health. Spatial representation, visualization, exploration, and analysis of public health data using GIS.
- 814 Making a Community Diagnosis II: Practical Applications**  
 Summer. 2(2-0) P: HM 859 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.  
 Continuation of HM 859. Skills and tasks required to plan, conduct, and communicate results of community assessment using case studies and real world examples. Barriers to implementation.
- 815 Introduction to Public Health Laboratory Data for Public Health Specialists**  
 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.  
 Develops analytic and assessment skills; lab test performance and interpretation; pathophysiological basis of abnormal test results for public health specialists to integrate laboratory data into public health programs and products.
- 816 Human Risk Assessment and Management in Public Health**  
 Fall of even years. 3(3-0) P: HM 802 and HM 803 or approval of college RB: Coursework in statistics and probability assessment. R: Open to students in the Public Health Major or approval of college.  
 Human risk assessment. Fundamentals of risk assessment in public health. Existing tools and data sources for conducting risk assessment in public health practice. Use of risk assessment to inform programs and policies.
- 817 Population Healthcare Analytics**  
 Fall of even years. 3(3-0) RB: Background in public health, health care, or other health related fields. R: Open to students in the Public Health Major or approval of college.  
 Introduction to healthcare analytics, the healthcare industry and the synergy between the two. Data manipulation, analyses and presentation of results. Highlights peculiarities, irregularities, and limitations of the healthcare industry and related data. Analytic tools and techniques used to create descriptive reports and predictive insights.
- 818 Six Sigma and Lean Methods in Public Health**  
 Spring of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases and quality initiatives. R: Open to students in the Public Health Major or approval of college.  
 Application of Define, Measure, Analyze, Improve and Control (DMAIC) methodology to healthcare organizations and public health sector. History and theory, tools to engage staff and to define key stakeholders and process steps in Six Sigma and Lean Methods.
- 819 American Healthcare Delivery: A Systems Approach**  
 Summer of odd years. 3(3-0) RB: Graduate students or professionals with public health, medical, law, policy background R: Open to students in the Public Health Major or approval of college.  
 Evolution of United States healthcare system. The Affordable Care Act (ACA). Overview of funding and costs of healthcare delivery. Effect of ACA on future healthcare delivery and health professions.
- 822 Introduction to Core Disciplines of Public Health for Medical Students**  
 Fall, Spring, Summer. 3(3-0) RB: Medical students with interest in public health R: Open to students in the Human Medicine Major or approval of college.  
 Introduction to philosophy and concepts of discipline of public health and its relationship to clinical medicine. History and development of the profession; ethical, legal and political considerations.
- 823 Medical Partners in Public Health: Special Seminars**  
 Fall, Spring, Summer. 3(3-0) P: HM 822 RB: Medical students with interest in public health R: Open to students in the Human Medicine Major or approval of college.  
 Analysis, discussion, and application of key public health competencies in the community setting.
- 824 SAS Programming for Population Health Analytics**  
 Spring of even years. 3(3-0) P: HM 817 RB: Background in public health, healthcare or other health related fields. R: Open to students in the Public Health Major or approval of college.  
 SAS programming skills for the access and management of administrative healthcare data; delivers data management training in health strategies for leaders in the growing field of unstructured information processing.
- 827 Principles of Public Health Leadership**  
 Fall, Spring, Summer. 1(1-0) 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.  
 Context, competencies and core leadership skills. Theories and research in public health and related organizations. Best practices, leadership styles, professional identity. Future leadership challenges.
- 828 Community Engagement in Public Health Practice**  
 Fall, Spring, Summer. 3(3-0) R: Open to graduate students in the Public Health Major.  
 Methods, ethics, and issues in community engaged practice and scholarship.
- 830 Practical Applications of Public Health Law**  
 Fall of odd years. 3(3-0) P: HM 801 RB: Academic or professional background in public health or public health related discipline. R: Open to students in the Public Health major or approval of college.  
 Overview of legal basis of public health authority. Use of law to direct public health practice.
- 831 Communicable Disease in Public Health**  
 Fall of even years. 3(3-0) P: HM 801 and HM 803 RB: Academic or professional background in public health or public health related discipline. Undergraduate level math or statistics course work. R: Open to students in the Public Health major or approval of college.  
 Fundamentals of communicable disease transmission. Overview of methods for prevention and control of communicable disease. Agents and organisms of public health significance.

## HM—Human Medicine

- 832 Global Public Health**  
Spring of even years. 3(3-0) RB: Academic or professional background in public health or public health related discipline. Undergraduate level math or statistics course work. R: Open to students in the Public Health major or approval of college.  
Factors and dynamics that affect global public health. Application of public health principles and policies in international settings. Key international stakeholders and their roles in global public health.
- 833 Introduction to Pharmaceutical Counterfeiting and Public Health**  
Fall of odd years. 3(3-0) P: HM 801 RB: Academic or professional background in public health or public health related discipline. R: Open to students in the Public Health major or approval of college.  
General principles of counterfeiting, counterfeit pharmaceuticals, and how it affects public health. Scope, policy, supply chain management, and health effects are examined using current case examples.
- 834 Advanced Counterfeit Pharmaceuticals: Analysis and Assessment**  
Spring of even years. 3(3-0) P: HM 801 and HM 833 RB: Academic or professional background in public health or public health related discipline. R: Open to students in the Public Health Major or approval of college.  
Advanced topics on the impact of counterfeit pharmaceuticals on public health.
- 835 Independent Study in Public Health**  
Fall, Spring, Summer. 1 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open to students in the Public Health major or approval of college.  
Independent study in areas relevant to public health.
- 836 Comparative Global Healthcare Systems**  
Spring. 3(3-0) RB: Undergraduate degree in science or applied science with experience in a healthcare clinical setting. R: Open to students in the Public Health major or approval of college.  
Public health and culture, environment, psychosocial and economic issues. Healthcare systems and health policies. Community health assessments.
- 837 Poverty and Public Health**  
Fall of even years. 3(3-0) P: HM 801 RB: Academic or professional background in public health or public health related discipline. Undergraduate level math or statistics course work. R: Open to students in the Public Health major or approval of college.  
Concepts of health and poverty and their interrelatedness from a global and public health perspective. Roles of international agencies, national policy, gender, socioeconomic status, race, ethnicity, culture, access to resources, and conflict. Role of public health programs in the achievement and maintenance of healthy populations. Struggle to eliminate poverty.
- 838 Cultural Aspects of Public Health Practice**  
Fall. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, undergraduate level math or statistics coursework R: Open to students in the Public Health major or approval of college.  
Cultural concepts that shape health and illness. Major issues and trends in global health. Cultural and socioeconomic factors related to work with diverse populations. Applications for public health practice.
- 839 Water and Public Health: A Global Perspective**  
Spring of odd 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 in the Public Health Specialization or approval of college.  
Role of water in public health, focusing on the global crisis of water quantity and quality. Specific water “hot spots” primarily the Middle East, Africa, Asia, the Western and Southern U.S., and Mexico.
- 840 Public Health Finance**  
Spring of odd 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.  
Issues surrounding financial administration of health service organizations. Pragmatic side of healthcare finance, incorporating healthcare economics.
- 841 Public Health Policy**  
Fall. 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 in the Public Health Specialization or approval of college.  
U.S. healthcare delivery and financing systems and their contributions to improving health status.
- 842 Introduction to Public Health Informatics**  
Fall of even 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.  
Survey of information technology applications in the public health domain, functions and tools used to generate public health knowledge. Disease surveillance platforms and web-based public health education, ethical and legal issues surrounding data exchange.
- 843 Methods in Public Health Informatics**  
Fall of even 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.  
Theory, processes and applications of management information systems and how they relate to public health management, project management skills for information system implementation and evaluation
- 844 Legal/Ethical Issues in Public Health Informatics**  
Spring 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.  
Focus on legal-ethical parameters affecting application of health technology.
- 845 Informatics and Information Technology**  
Spring of odd years. 3(3-0) P: HM 842 and HM 843 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.  
Information technology for health informatics systems, principles of relational database systems, operations, information systems, data sets, data standards and classification systems.
- 846 Advanced Topics in Public Health Informatics Management**  
Summer of odd years. 3(3-0) P: HM 842 and HM 843 and HM 845 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.  
Research, evaluation and applications of informatics in public health and public health research.
- 847 Public Health in Ghana: Methods for Community Practice**  
Summer. 4(4-0) Summer: Abroad. P: HM 848 RB: Academic or professional background in public health and/or public health related discipline; undergraduate level health-related discipline R: Open to students in the Public Health Major and open to juniors or seniors. Approval of college; application required.  
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.
- 848 Preparation for Public Health in Ghana: Methods for Community Practice**  
Spring. 1(1-0)  
Preparation for public health study abroad experiences in Ghana.
- 851 eHealth and Telemedicine in Public Health**  
Spring 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.  
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.

- 852 Outbreak Investigations in Public Health**  
 Spring 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.  
 Process for conducting public health outbreak investigations including the role of local, state, federal and international agencies. Legal, political, media and law enforcement issues.
- 853 Public Health Program/Intervention Evaluation**  
 Fall of even years. 3(3-0) P: HM 801 RB: Academic or professional background in public health and/or public health related discipline R: Open to graduate students in the Public Health major or approval of college.  
 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.
- 854 Health Equity Framework For Public Health Practice**  
 Spring of odd 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 in the Public Health Specialization or approval of college.  
 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.
- 856 Environmental Public Health: Assessment and Response**  
 Spring of odd years. 3(3-0) P: HM 806 and (HM 802 or HM 803) RB: Academic or professional background in public health and/or public health related discipline, experience with public health statistics. R: Open to students in the Public Health major or approval of college.  
 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.
- 858 Occupational Health and Safety in Public Health**  
 Spring 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.  
 Physical, biological and chemical hazards in terms of recognition, assessment, and control of workplace hazards. Current regulations, standards, personal protective equipment, monitoring equipment and career opportunities are covered.
- 859 Making a Community Diagnosis I: Fundamentals**  
 Spring of odd years. 1(1-0) 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.  
 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.
- 860 Migrant, Refugee and Mobile Populations: Impact on Public Health**  
 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.  
 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.
- 861 Introduction to Public Health Nutrition**  
 Spring of odd 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.  
 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.
- 863 Parasitic Diseases and Public Health in Developing Countries**  
 Spring of even years. 3(3-0) 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.  
 Nature, impact and control of parasitic diseases in developing countries.
- 864 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 graduate students in the Public Health major or approval of college.  
 Epidemiology and preventive medicine disease control methods for the control of infectious diseases and environmental health issues shared by animals and people.
- 865 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.
- 866 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.
- 867 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 R: Open to students in the Public Health Major or approval of college.  
 Methods and concepts in the study of population change. Approaches for analyzing and interpreting population changes. Applications for public health planning, policy, programs, administration and evaluation.
- 868 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 datum lifecycle.
- 869 Psychiatry and Public Health: A Bio-Psychosocial 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.
- 871 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.

## HM—Human Medicine

- 872 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.
- 873 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.
- 874 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.
- 876 Nutrition and Chronic Diseases: Living Longer and Healthier**  
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.  
Role of nutrition and physical activity in chronic diseases with emphasis on macronutrients. Relationship between obesity and health and socioeconomic disparities in the United States and current policies. Overview of nutrition transition and impact on developing nations.
- 877 Public Health Nutrition and the Life Stages**  
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.  
Effect of nutrition on growth and development. Role of public health interventions throughout life. Emphasis on at-risk populations in the United States and worldwide. Survey of current programs addressing specific public health nutrition concerns.
- 878 Applied Biostatistics for Public Health Practitioners**  
Fall of even years, Spring. 3(3-0) P: HM 802 RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or in the Public Health Graduate Certificate.  
Intermediate techniques and applications of multivariable logistic and linear regression in public health. Interpretation of statistical models.
- 880 Study Design and Research Methods for Public Health Practice**  
Fall, Spring, Summer. 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 databases R: Open to students in the Public Health Major or approval of college. Not open to students with credit in VM 830.  
Examination of empirical and logical basis of public health research. Identification of research questions, study design, data collection and qualitative and quantitative approaches. Reporting of findings. Proposal writing. Ethical considerations in research.
- 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.  
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.
- 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.  
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.
- 883 Mobile Health, 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.  
Utilization and critical analysis of mobile technology, social media platforms and games to assess, implement and improve public health programs and community education.
- 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 with an interest in new technologies and strategic planning and problem solving in public health. 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.  
Current approaches in the detection, measurement and field interpretation of parasitic infections at the individual level and community level.
- 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.  
Control programs, elimination/eradication of parasitic diseases of public health importance in developing countries.
- 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.  
Financial, personal, and logistical aspects of control programs for parasitic diseases. Practical applications in field methods.
- 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.  
Identification and conceptualization of public health problems. Generation of testable hypotheses and appropriate data sets. Interpretation of appropriate measures of associations. Evaluation of validity and 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.
- 890 Independent Study in Bioethics**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to master's students in the Bioethics, Humanities, and Society major. Approval of department.  
Special projects, directed readings, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.
- 891 Introduction to Public Health Practicum**  
Fall, Spring, Summer. 1(1-0) P: HM 801 RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Approval of college.  
Preparatory work for practicum placement. Special projects arranged by an individual student and faculty member in areas supporting practicum placement.

**892 Public Health Applied Practice Experience**  
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: HM 801 and HM 891 RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Approval of college. Professional practicum.

**893 Public Health Integrative Learning Experience**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. P: HM 801 and HM 891 and HM 892 RB: Academic or professional background in public health and/or public health related discipline, undergraduate level math or statistics coursework R: Approval of college. Capstone experience.

**894 Practicum in Bioethics**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: HM 820 R: Open to master's students in the Bioethics, Humanities, and Society major. Approval of department. Observations, participation, and study of ethical and policy issues in selected health, research, or governmental settings.

**895 Clinical Medicine Capstone Experience**  
Fall, Spring, Summer. 3 to 6 credits. P: HM 552 and HM 553 and HM 554 and HM 555 and HM 556 R: Open to students in the College of Human Medicine. Preparation and presentation of student's capstone project.

**899 Master's Thesis Research**  
Fall, Spring, Summer. 1 to 9 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Master's thesis research.