ROLLINS SCHOOL OF PUBLIC HEALTH OF EMORY UNIVERSITY

Core Competencies

Upon graduation, a student with an MPH/MSPH should be able to:

- Use analytic reasoning and quantitative methods to address questions in public health and population-based research
- Describe environmental conditions, including biological, physical and chemical factors, that affect the health of individuals, communities and populations
- Describe the use of epidemiology methods to study the etiology and control of disease and injury in populations
- Discuss how health policy and finance affect the delivery, quality, access and costs of health care for individuals, communities and populations
- Describe behavioral, social and cultural factors that contribute to the health and well being of individuals, communities and populations
- Assess global forces that influence the health of culturally diverse populations around the world
- Apply skills and knowledge in public health setting(s) through planned and supervised experience(s) related to professional career objectives
- Integrate the broad base of public health knowledge and skills acquired from coursework, practicum and other learning activities into a culminating experience (thesis, Special Studies Project, Capstone)
- Develop the capacity for lifelong learning in public health
- Apply principles of ethical conduct to public health practice

Department of Behavioral Sciences and Health Education

MPH with a Concentration in Behavioral Sciences

Upon completion of the MPH degree, the graduate will be able to:

- Communicate in both written and oral format with public health programs, community-based organizations, and others involved in improving the public's health
- Conduct public health practices including needs assessment and/or evaluation of public health programs
- Design observational and intervention studies in critical public health areas using quantitative and qualitative research methods
- Apply social and behavioral science theory in public health research and practice
- Implement research protocols and programs employing behavioral sciences
- Evaluate research theory and findings in a manner that effectively informs public health policy and programs
- Disseminate research theory and findings in a manner that effectively informs public health policy and programs
- Promote the adoption and integration of ethical behavioral science research methods and findings into a unified public health practice
- Conduct original research on the social determinants of health risks
- Provide critical analysis of lessons to be learned from the past and present
MPH with a Concentration in Health Education

Upon completion of the MPH degree, the graduate will be able to:

- Communicate both in written and oral format, with public health programs, community-based organizations and others involved in improving the public’s health
- Conduct public health practices including needs assessment and/or evaluations of public health programs
- Assess individual and community needs for health education
- Plan effective health education programs
- Implement effective health education programs
- Evaluate the effectiveness of health education programs
- Coordinate the provision of health education services
- Act as a resource person in health education
- Communicate health education needs, concerns and resources
- Apply appropriate research principles and methods in health education
- Advance the profession of public health
- Provide critical analysis of lessons to be learned from the past and present

PhD in Behavioral Sciences and Health Education

Upon completion of the PhD degree, the graduate will be able to:

- Draw from major social and behavioral science theories to apply appropriate empirical methods and analysis in research practices
- Design health promotion interventions
- Implement health promotion interventions
- Evaluate health promotion interventions
- Disseminate knowledge to students and the larger scientific community
- Translate knowledge derived from research to promote public health through policy making

Certificate in the Social-Contextual Determinants of Health

Upon completion of the certificate, the graduate will be able to:

- Identify the causes of social and behavioral factors that affect health of individuals and populations
- Describe the role of social and community factors in both the onset and solution of public health problems
- Describe the merits of social and behavioral science interventions and policies
- Specify multiple targets and levels of intervention for social and behavioral science programs and policies
- Critically evaluate the epidemiologic literature
- Formulate a testable hypothesis to determine an appropriate study design concerning the etiology and control of health problems

Department of Biostatistics and Bioinformatics

MPH in Biostatistics

Upon completion of the MPH degree, the graduate will be able to:

- Identify biostatistical aspects in contemporary public health issues
- Collaborate with investigators in the design of standard biomedical and public health studies
- Estimate the sample size in the context of a given standard public health study design
• Collaborate with investigators and statistical colleagues in the analysis of data from biomedical and public health studies
• Communicate the results of statistical analyses to a broad audience
• Adhere to guidelines of responsible research
• Identify data sources and research questions associated with a particular application area within public health
• Apply analytic methods to address specific research questions in the particular application area of interest
• Use standard statistical software for both data management and data analysis
• Demonstrate analytic skills within a specified application area
• Complete start-to-finish analyses addressing substantive questions within the application area of interest using standard statistical design and analysis techniques

MSPH in Biostatistics

Upon completion of the MSPH degree the graduate will be able to:
• Identify biostatistical aspects in contemporary public health issues
• Collaborate with investigators in the design of standard biomedical and public health studies
• Estimate the sample size in the context of a given standard public health study design
• Collaborate with investigators and statistical colleagues in the analysis of data from biomedical and public health studies
• Communicate the results of statistical analyses to a broad audience
• Adhere to guidelines of responsible research
• Use central concepts in statistical theory and inference
• Use statistical software for both data management and data analyses, including coding of custom techniques
• Apply custom statistical methods as needed to address public health or medical problems
• Demonstrate advanced analytic skills within a collaborative setting
• Demonstrate technical accuracy with advanced analytic methods

MSPH in Public Health Informatics

Upon completion of the MSPH degree the graduate will be able to:
• Develop public health information systems as needed to support public health efforts
• Evaluate information systems that meet the needs of public health practice
• Assist in the development and adoption of information technology in public health
• Choose software allowing for the interface of data entry and statistical analysis software
• Apply statistical methods in the analysis of public health information
• Assess individual data elements and display results effectively and appropriately
• Adhere to guidelines of responsible research

BA/MSPH in Biostatistics

The MSPH competencies related to this degree are the same as the MSPH in Biostatistics Competencies.

PhD in Biostatistics

Upon completion of the PhD degree, the graduate will be able to:
• Identify biostatistical aspects in contemporary public health issues
• Collaborate with investigators in the design of standard biomedical and public health studies
• Estimate the sample size in the context of a given standard public health study design
• Collaborate with investigators and statistical colleagues in the analysis of data from biomedical and public health studies
• Communicate the results of statistical analyses to a broad audience
• Adhere to guidelines of responsible research
• Use central concepts in statistical theory and inference
• Use statistical software for both data management and data analyses, including coding of custom techniques
• Demonstrate advanced analytic skills within a collaborative setting
• Demonstrate technical accuracy with advanced analytic methods
• Conduct independent research and develop novel methodology in statistics
• Apply new and existing statistical theory and methods as needed to address public health or medical problems
• Develop new statistical theory and methods to address a broad range of complex medical or public health problems
• Conduct complex statistical analyses for a broad range of applications
• Teach statistical theory or methodology at all levels

Certificate in Public Health Informatics

Upon completion of the certificate, the graduate will be able to:
• Define public health information systems as needed to support public health efforts
• Assist in the development and adoption of appropriate information technology in public health
• Choose appropriate software allowing for the interface of data entry and statistical analysis software
• Apply appropriate statistical methods in the analysis of public health information
• Interpret data results effectively and appropriately
• Adhere to guidelines of responsible research

Department of Environmental Health

MPH in Environmental Health

Upon completion of the MPH degree, the graduate will be able to:
• Describe major environmental risks to human health ranging from the local to global scale
• Assess the sources and movement of contaminants through the environment
• Characterize the magnitude, frequency and duration of environmental exposures
• Apply the principles of toxicology to assess health effects of environmental exposures
• Apply the principles of epidemiology to assess health effects of environmental exposures
• Evaluate the risks posed by environmental hazards using risk assessment methods
• Explain major policy issues in Environmental Health including regulatory frameworks
• Design environmental health programs, policies, interventions and/or research intended to improve the health of individuals, communities, and populations
• Communicate the key methods, findings and public health implications of research on a poster and verbally to an audience of public health professionals

MPH in Global Environmental Health

Upon completion of the MPH degree, the graduate will be able to:
• Describe major environmental risks to human health ranging from the local to global scale
• Assess the sources and movement of contaminants through the environment
• Characterize the magnitude, frequency, and duration of environmental exposures
• Apply the principles of epidemiology to assess health effects of environmental exposures
• Apply the principles of toxicology to assess health effects of environmental exposures
• Appraise the environmental, behavioral and social factors that contribute to the emergence, re-emergence, and persistence of infectious diseases
• Assess the major forces that influence the health of populations around the world.
• Critique major global priorities and the reasons for their prioritization.
• Design environmental health programs, policies, interventions and/or research intended to improve the health of individuals, communities, and populations
• Communicate the key methods, findings and public health implications of research on a poster and verbally to an audience of public health professionals

BS/MPH in Environmental Studies and Environmental Health

The MPH competencies related to this degree are the same as the MPH in Environmental Health Competencies.

MSPH in Environmental Health and Epidemiology

Upon completion of the MSPH degree, the graduate will be able to:
• Describe major environmental risks to human health ranging from the local to global scale
• Characterize the magnitude, frequency and duration of environmental exposures
• Explain major policy issues in environmental health including regulatory frameworks
• Describe the role of toxicology in evaluating health effects of environmental exposures
• Develop an epidemiologic study to address an environmental health question
• Conduct basic epidemiologic analysis of environmental health data
• Interpret results of epidemiologic studies of an environmental health question
• Synthesize epidemiologic literature on an environmental health question
• Communicate the key methods, findings and public health implications of research on a poster and verbally to an audience of public health professionals

PhD in Environmental Health Sciences

Upon completion of the PhD degree, the graduate will be able to:
• Utilize advanced methods in exposure assessment of environmental contaminants
• Interpret advanced methods in exposure assessment of environmental contaminants
• Describe mechanisms of toxic action and how physiological and other factors can modify effects of environmental toxicants
• Use advanced epidemiological methods to examine associations between environmental factors and disease
• Use risk assessment tools to describe the risks associated with various environmental exposures
• Design novel research projects to examine key challenges in field
• Identify the ethical issues involved in the responsible conduct of research
• Teach graduate course content in environmental health sciences
• Disseminate research findings in multiple formats
Department of Epidemiology

MPH in Epidemiology

Upon completion of the MPH degree, the graduate will be able to:
• Describe public health problems in terms of magnitude, time, place, person and their associated risk factors
• Identify principles and limitations of epidemiologic screening programs
• Identify major epidemiologic problems of importance
• Identify key sources of data for epidemiologic purposes
• Formulate a research question
• Differentiate between descriptive and analytic epidemiologic methods
• Critically evaluate the strengths and weaknesses of different study designs with respect to a given research question
• Calculate basic epidemiologic measures
• Implement methods of data cleaning and documentation for epidemiologic data sets
• Conduct basic epidemiologic analyses using linear, logistic, Cox and Poisson regression
• Fit Epidemiologic Models
• Interpret epidemiologic results in a causal framework
• Evaluate the strengths and weaknesses of the epidemiologic literature
• Utilize information technology tools and statistical programming packages in preparing scientific reports
• Communicate epidemiologic information in a scientific report
• Recognize potential ethical and legal issues in epidemiologic studies

MPH in Global Epidemiology

Upon completion of the MPH degree, the graduate will be able to:
• Describe public health problems in terms of magnitude, time, place, person and their associated risk factors
• Identify principles and limitations of epidemiologic screening programs
• Identify major epidemiologic problems of importance
• Describe major global health priorities and the reasons for their prioritization
• Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
• Assess the major forces that influence the health of populations around the world
• Design programs, policies, and/or interventions intended to improve health services and health status of individuals, communities and populations
• Critique major global priorities and the reason for their prioritization
• Identify key sources of data for epidemiologic purposes
• Formulate a research question
• Differentiate between descriptive and analytic epidemiologic methods
• Critically evaluate the strengths and weaknesses of different study designs with respect to a given research question
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• Conduct basic epidemiologic analyses using linear, logistic, Cox and Poisson regression
• Fit epidemiologic models
• Interpret epidemiologic results in a causal framework
• Evaluate the strengths and weaknesses of the epidemiologic literature
• Utilize information technology tools and statistical programming packages in preparing scientific reports
Communicate epidemiologic information in a scientific report
Communicate the key methods, findings, and public health implications of research on a poster and verbally to an audience of public health professionals
Recognize potential ethical and legal issues in epidemiologic studies

MSPH in Epidemiology

Upon completion of the MSPH degree, the graduate will be able to:

- Describe public health problems in terms of magnitude, time, place, person and their associated risk factors
- Identify principles and limitations of epidemiologic screening programs
- Identify major epidemiologic problems of importance
- Identify key sources of data for epidemiologic purposes
- Formulate a research question
- Differentiate between descriptive and analytic epidemiologic methods
- Critically evaluate the strengths and weaknesses of different study designs with respect to a given research question
- Calculate basic epidemiologic measures
- Implement methods of data cleaning and documentation for epidemiologic data sets
- Conduct basic epidemiologic analyses using linear, logistic, Cox and Poisson regression
- Fit Epidemiologic Models
- Interpret epidemiologic results in a causal framework
- Implement causal models for different case-control designs in appropriate fashion
- Analyze advanced case-control and other innovative study designs
- Apply SAS procedures MIXED, GENMOD, GLIMMIX and NLMIXED in the analysis of correlated epidemiologic data
- Conduct epidemiologic studies using longitudinal/correlated data
- Demonstrate mastery of advanced analytic epidemiologic methods
- Evaluate the strengths and weaknesses of the epidemiologic literature
- Utilize information technology tools and statistical programming packages in preparing scientific reports
- Communicate epidemiologic information in a scientific report
- Recognize potential ethical and legal issues in epidemiologic studies

MSPH in Global Epidemiology

Upon completion of the MSPH degree, the graduate will be able to:

- Describe public health problems in terms of magnitude, time, place, person and their associated risk factors
- Identify principles and limitations of epidemiologic screening programs
- Identify major epidemiologic problems of importance
- Describe major global health priorities and the reasons for their prioritization
- Identify key sources of data for epidemiologic purposes
- Formulate a research question
- Differentiate between descriptive and analytic epidemiologic methods
- Critically evaluate the strengths and weaknesses of different study designs with respect to a given research question
- Calculate basic epidemiologic measures
- Implement methods of data cleaning and documentation for epidemiologic data sets
- Implement causal models for different case-control designs in appropriate fashion
- Analyze advanced case-control and other innovative study designs
• Apply SAS procedures MIXED, GENMOD, GLIMMIX, and NLMIXED in the analysis of correlated epidemiologic data
• Conduct epidemiologic studies using longitudinal/correlated data
• Demonstrate mastery of advanced analytic epidemiologic methods
• Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
• Assess the major forces that influence the health of populations around the world
• Design programs, policies, and/or interventions intended to improve health services and health status of individuals, communities and populations
• Critique major global priorities and the reason for their prioritization
• Conduct basic epidemiologic analyses using linear, logistic, Cox and Poisson regression
• Fit epidemiologic models
• Interpret epidemiologic results in a causal framework
• Evaluate the strengths and weaknesses of the epidemiologic literature
• Utilize information technology tools and statistical programming packages in preparing scientific reports
• Communicate epidemiologic information in a scientific report
• Communicate the key methods, findings, and public health implications of research on a poster and verbally to an audience of public health professionals
• Recognize potential ethical and legal issues in epidemiologic studies

PhD in Epidemiology

Upon completion of the PhD degree, the graduate will be able to:
• Critically evaluate scientific literature
• Synthesize scientific literature findings across studies, balancing limitations and contributions of each study
• Render an informed judgment on the state of knowledge in an area of public health
• Articulate research questions that advance scientific knowledge about the topic
• Conduct an advanced, original research project in the student’s discipline:
  a. Formulate a research question
  b. Describe the public health significance of the question
  c. Identify an appropriate study population
  d. Identify strengths and limitations to different possible study designs
  e. Evaluate issues related to casual inference including potential sources of bias and ways to limit these biases
• Participate in data collection through one or more of the following: developing a questionnaire, piloting a study instrument, recruiting study participants, etc.
• Apply quantitative and reasoning skills, as well as content-area knowledge to analyze data from epidemiological studies:
  a. Apply appropriate analytic techniques to control for bias
  b. Calculate measures of disease frequencies and estimates of effect (both from contingency tables and using models)
  c. Conduct epidemiologic analysis using linear, logistic, Cox and Poisson regression
  d. Interpret analytic results in a casual framework
  e. Identify when consultation with an expert is needed
• Present and communicate epidemiologic findings clearly, in writing and orally, to students, professionals and the public:
  a. Prepare and submit an abstract for scientific meeting
  b. Deliver and oral presentation to professional colleagues
  c. Prepare and submit a manuscript for peer-reviewed journal, including revising and responding to peer-reviewed comments
d. Provide peer-reviewed feedback on other manuscripts

- In collaboration with faculty, develop a proposal for extramural research funding:
  a. Identify appropriate funding opportunities
  b. Develop general and specific aims, background significance and research narrative
  c. Participate in developing and assembling other proposal components including budgets, biosketches and human subject protection

- Teach epidemiologic concepts to students and peers
- Complete training on the basic principles of ethics in human subjects research
- Recognize potential ethical issues in epidemiologic studies
- Prepare an application to an Institutional Review Board
- Utilize information technology tools which are critical to scientific productivity:
  a. Scientific literature databases and search engines (e.g., PubMed, Web of Science, Google Scholar)
  b. Reference management software (e.g., Endnote, Refman, QUOSA)
  c. Statistical analysis software (e.g., Stata, SAS, R)

Department of Health Policy and Management

MPH in Health Policy

Upon completion of the MPH, the graduate will be able to:
- Describe how the organization and financing of health services influence access, quality and cost
- Apply management principles to planning, organizing, leading and controlling health care enterprises
- Apply skills in financial accounting to healthcare administration decisions
- Apply principles of health economics in analyzing the behavior of healthcare market stakeholders
- Conduct economic evaluations of health services
- Utilize public finance theory to assess the impact of proposals to reform the financing and delivery of health services
- Incorporate legal principles in the administration of health services
- Prepare health policy briefings suitable for the range of policy stakeholders involved with the formulation and implementation of a health policy under consideration by decision makers
- Design an advocacy strategy for the development and implementation of a health policy

MPH in Health Management

Upon completion of the MPH, the graduate will be able to:
- Describe how the organization and financing of health services influence access, quality and cost
- Apply management principles to planning, organizing, leading and controlling health care enterprises
- Apply skills in financial accounting to healthcare administration decisions
- Apply analytic tools and theories to guide the management of financial assets in healthcare organizations
- Apply principles of health economics in analyzing the behavior of healthcare market stakeholders
- Incorporate human resources management principles in administering healthcare organizations
- Apply marketing concepts in the design of health services
- Incorporate legal principles in the administration of health services
- Be prepared to assume supervisory-level general management responsibilities in a health services delivery organization
- Execute both an operations management and a strategic management analysis in the role of a health services consultant
MSPH in Health Policy and Health Services Research

Upon completion of the MSPH, the graduate will be able to:

- Describe how the organization and financing of health services influence access, quality and cost
- Apply principles of health economics in analyzing the behavior of healthcare market stakeholders
- Conduct economic evaluations of health services
- Utilize public finance theory to assess the impact of proposals to reform the financing and delivery of health services
- Conduct a health services or health policy research investigation using quantitative analytic techniques
- Function as a team collaborator in the development and/or execution of a health services research investigation

PhD in Health Services Research and Health Policy

Upon completion of the PhD, the graduate will be able to:

- Apply economic concepts, theories and methods to the framing and analysis of research questions in health services and policy
- Apply political science concepts and theories and statistical techniques to the framing and analysis of research questions in health services and policy
- Describe major problems in health services and policy that are currently the subject of empirical investigations
- Apply advanced mathematical and theoretical economics to describe physician and hospital behavior, personal health decisions, the functioning of health insurance markets and related policy-relevant matters
- Effectively teach concepts and methods of health services and health policy research to students
- Design a health services or health policy research proposal involving both qualitative and mixed methods approaches
- Conduct a health services or health policy research activity investigation suitable for peer-reviewed publication as an independent researcher
- Function as an interdisciplinary team collaborator in the design and conducting of a health services or health policy research investigation

Certificate in Mental Health

Upon completion of the certificate, the graduate will be able to:

- Epidemiologically describe the burden of mental illness on society—US and global populations
- Describe the major theories on the etiology of mental illness or categories of mental illness
- Evaluate empirical evidence on social determinants of mental illnesses or categories of mental illness
- Describe how cultural differences affect the experience of mental illness and the seeking of health services
- Identify population-based interventions that would reduce the onset of mental illnesses or categories of mental illness
- Describe how populations in the US receive and finance mental health services
- Identify policy initiatives that would improve access to mental health services in the US
- Identify gaps in coverage for mental health services in the US and global settings and their consequences for mental health
Hubert Department of Global Health

MPH in Global Health with a concentration in Infectious Diseases

Upon completion of the MPH, the graduate will be able to:

- Assess the major forces that influence the health of populations around the world
- Critique major global priorities and the reasons for their prioritization
- Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
- Design programs, policies and/or interventions intended to improve health services and health status of individuals, communities, and populations
- Conduct research, including formulation of specific research aim, conducting a literature review and formulating a hypothesis and selecting appropriate methodologies related to the emphasis.
- Compose a written scientific thesis that is consistent with department guidelines and relevant writing style sources
- Present the key methods, findings and public health implications of research on a poster and verbally communicate to an audience of public health professionals
- Explain the science of infectious disease including types of organisms, mechanisms of pathogenesis, host response and susceptibility
- Apply principles of infectious disease epidemiology, laboratory detection and clinical strategies to identify specific infectious pathogens and diseases
- Interpret the geographic and demographic distributions and morbidities and mortalities of major infections in the US and globally
- Implement strategies to prevent and control infectious diseases
- Appraise the environmental, behavioral and social factors that contribute to the emergence, re-emergence, and persistence of infectious diseases
- Develop and maintain surveillance for infectious diseases

MPH in Global Health with a concentration in Sexual and Reproductive Health and Population Studies

Upon completion of the MPH, the graduate will be able to:

- Assess the major forces that influence the health of populations around the world
- Critique major global priorities and the reasons for their prioritization
- Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
- Design programs, policies and/or interventions intended to improve health services and health status of individuals, communities, and populations
- Conduct research, including formulation of specific research aim, conducting a literature review and formulating a hypothesis and selecting appropriate methodologies related to the emphasis.
- Compose a written scientific thesis that is consistent with department guidelines and relevant writing style sources
- Present the key methods, findings and public health implications of research on a poster and verbally communicate to an audience of public health professionals
- Critique current population, sexual, reproductive health policies and programs at local, national and global levels.
- Discern quality and appropriateness of data sources to measure sexual, reproductive health and population issues.
- Apply demographic, epidemiologic and anthropologic methods to measure population change and population patterns at local, national and global levels.
- Develop a policy, project or program to address a sexual, reproductive health or population problem.
- Propose recommendations to improve sexual, reproductive health or population change issue.
• Compare the theoretical, use effectiveness and relative cost of different methods of fertility regulation
• Compare the patterns and determinants of use of fertility regulations methods

**MPH in Global Health with a concentration in Public Nutrition**

Upon completion of the MPH, the graduate will be able to:
• Assess the major forces that influence the health of populations around the world
• Critique major global priorities and the reasons for their prioritization
• Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
• Design programs, policies and/or interventions intended to improve health services and health status of individuals, communities, and populations
• Conduct research, including formulation of specific research aim, conducting a literature review and formulating a hypothesis and selecting appropriate methodologies related to the emphasis.
• Compose a written scientific thesis that is consistent with department guidelines and relevant writing style sources
• Present the key methods, findings and public health implications of research on a poster and verbally communicate to an audience of public health professionals
• Assess the nutritional status of individuals using anthropometric, diet and biochemical methods
• Calculate the magnitude, distribution and trends of nutrition problems in populations
• Evaluate the causes and consequences of under- and over-nutrition in populations
• Critique the evidence base for the efficacy and effectiveness of nutrition programs and policies
• Develop innovative approaches to address nutrition problems
• Manage public health nutrition programs

**MPH in Global Health with a concentration in Community Health and Development**

Upon completion of the MPH, the graduate will be able to:
• Assess the major forces that influence the health of populations around the world
• Critique major global priorities and the reasons for their prioritization
• Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
• Design programs, policies and/or interventions intended to improve health services and health status of individuals, communities, and populations
• Conduct research, including formulation of specific research aim, conducting a literature review and formulating a hypothesis and selecting appropriate methodologies related to the emphasis.
• Compose a written scientific thesis that is consistent with department guidelines and relevant writing style sources
• Present the key methods, findings and public health implications of research on a poster and verbally communicate to an audience of public health professionals
• Assess health needs and assets of communities
• Design programs that mobilize community assets for social and behavioral change
• Manage the resources of organizations working at the community, local, regional or national level in health or development.
• Assess personal management and leadership styles.
• Operate in partnership with local, national and international organizations engaged in the health and social sectors
• Develop systems to monitor progress toward targets, objectives, and goals
• Evaluate programs and their operational components
MSPH in Global Health with a concentration in Public Nutrition

Upon completion of the MSPH, the graduate will be able to:

- Assess the major forces that influence the health of populations around the world
- Critique major global priorities and the reasons for their prioritization
- Critique the evidence for improving health delivery systems and health status of individuals, communities and populations around the world
- Design programs, policies and/or interventions intended to improve health services and health status of individuals, communities, and populations
- Conduct research, including formulation of specific research aim, conducting a literature review and formulating a hypothesis and selecting appropriate methodologies related to the emphasis.
- Compose a written scientific thesis that is consistent with department guidelines and relevant writing style sources
- Present the key methods, findings and public health implications of research on a poster and verbally communicate to an audience of public health professionals
- Assess the nutritional status of individuals using anthropometric, diet and biochemical methods
- Calculate the magnitude, distribution and trends of nutrition problems in populations
- Evaluate the causes and consequences of under- and over-nutrition in populations
- Critique the evidence base for the efficacy and effectiveness of nutrition programs and policies
- Develop innovative approaches to address nutrition problems
- Conduct rigorous nutrition research

Certificate in Complex Humanitarian Emergencies (CHE)

Upon completion of the certificate, the graduate will be able to:

- Describe a complex humanitarian crisis in terms of magnitude, person, time and place
- Calculate basic epidemiology measures
- Evaluate the strengths and limitations of epidemiological data within the context of CHE
- Develop public health programs and strategies responsive to the diverse cultural values and traditions of the community being served
- Identify internal and external problems that may affect the delivery of essential public health services in a CHE
- Collaborate with communication and informatics specialists in the process of design, implementation and evaluation of public health programs in CHE

Career MPH Program

MPH in Applied Public Health Informatics

Upon completion of the MPH, the graduate will be able to:

- Support development of strategic direction for public health informatics within the enterprise
- Participate in development of knowledge management tools for the enterprise
- Use informatics standards
- Ensure that knowledge, information and data needs of a project or program users and stakeholders are met
- Support information system development, procurement and implementation that meet public health program needs
- Manage IT operations related to project or program (for public health agencies with internal IT operations)
- Monitor IT operations managed by external organizations
- Communicate with cross-disciplinary leaders and team members
- Evaluate information systems and applications
- Participate in applied public health informatics research for new insights and innovative solutions to health problems
- Contribute to development of public health information systems that are interoperable with other relevant information systems
- Support use of informatics to integrate clinical health, environmental risk and population health
- Implement solutions that ensure confidentiality, security and integrity while maximizing availability of information for public health
- Conduct education and training in public health informatics

**MPH in Prevention Science**

Upon completion of the MPH, the graduate will be able to:
- Assess individual and community agency needs and assets
- Plan public health interventions and programs
- Implement public health interventions and programs
- Oversee the management and fiscal procedures of public health interventions and programs
- Assess the effects of public health interventions and programs
- Incorporate the use of technology and public health informatics in professional practice
- Develop communication strategies for public health interventions and programs
- Make community-specific inferences from quantitative and qualitative data
- Describe the ethical and the policy implications on program operations that result from public health decision making
- Contribute to the science base of public health
- Contribute to the professional and leadership development of oneself and to the larger public health field

**MPH in Healthcare Outcomes**

Upon completion of the MPH, the graduate will be able to:
- Conduct a clinically-oriented outcomes study using basic quantitative analytic techniques
- Function as a team collaborator in the development and/or execution of a clinically oriented outcomes study
- Articulate the differences among activity, process and outcomes measures to peers, clients or patients
- Articulate health and disease concepts in evidence based medicine terms.
- Use analytic tools in the development, design and implementation of an outcomes study.
- Evaluate the strengths and weaknesses of standard outcome measures used in health services research and clinical practice.
- Articulate ethical issues related to health services outcomes research.
- Translate outcomes study results into “best practices” to be implemented in practice situations.
- Manage information systems for collection, retrieval and use of data for decision making.

**MPH in Applied Epidemiology**

Upon completion of the MPH, the graduate will be able to:
- Describe public health problems in terms of magnitude, time, place, person and their associated risk factors
- Identify principles and limitations of epidemiologic screening programs
• Identify major epidemiologic problems of importance
• Apply basic principles of public health surveillance in the practice of public health
• Identify key sources of data for epidemiologic purposes
• Formulate a research question
• Differentiate between descriptive and analytic epidemiologic methods
• Evaluate the strengths and weaknesses of different study designs with respect to a given research question
• Calculate basic epidemiologic measures
• Implement methods of data cleaning and documentation for epidemiologic data sets
• Conduct basic epidemiologic research using multivariable models (e.g., linear, logistic, Cox and Poisson regression)
• Fit epidemiologic models
• Interpret epidemiologic results in a causal framework
• Evaluate the strengths and weaknesses of the epidemiologic literature
• Utilize information technology tools and statistical programming packages in preparing scientific reports
• Communicate epidemiologic information in a scientific report
• Recognize potential ethical and legal issues in epidemiologic studies