

# Overarching MPH Degree Competencies

1. Describe basic concepts of probability, random variation and commonly used statistical probability distributions.
2. Apply common statistical methods for inference.
3. Describe how the allocation of social and community factors impacts the understanding of public health problems in urban and immigrant populations and guides community engaged research and practice.
4. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice at multiple levels.
5. Integrate and synthesize theory, evidence and local knowledge to inform the conceptualization, design and evaluation of health promotion programs in urban and immigrant settings.
6. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
7. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.
8. Describe a public health problem in terms of magnitude, person, time, and place, contextualized in urban and immigrant landscapes.
9. Evaluate the strengths and limitations of epidemiologic studies and reports, and draw appropriate inferences from epidemiologic data.
10. Identify the main components and issues of the organization, financing, policy formation, and delivery of healthcare and public health services in the US.
11. Describe the legal and ethical bases for public health and health services for improving the health of populations.

# Overarching MPH Competencies by Core Course

Divided Among 5 Core MPH Courses

## **BIOS 5200: Principles of Biostatistics**

1. Describe basic concepts of probability, random variation and commonly used statistical probability distributions.
2. Apply common statistical methods for inference.

## **CHSC 5200: Health Behavior and Risk Reduction**

1. Describe how the allocation of social and community factors impacts the understanding of public health problems in urban and immigrant populations and guides community engaged research and practice.
2. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice at multiple levels.
3. Integrate and synthesize theory, evidence and local knowledge to inform the conceptualization, design and evaluation of health promotion programs in urban and immigrant settings.

## **EOHS 5200: Issues in Environmental Health**

1. Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.
2. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety.

## **EPID 5200: Principles of Epidemiology**

1. Describe a public health problem in terms of magnitude, person, time, and place, contextualized in urban and immigrant landscapes.
2. Evaluate the strengths and limitations of epidemiologic studies and reports, and draw appropriate inferences from epidemiologic data.

## **HPMG 5206: Introduction to Health Policy and Management**

1. Identify the main components and issues of the organization, financing, policy formation, and delivery of healthcare and public health services in the US.
2. Describe the legal and ethical bases for public health and health services for improving the health of populations.

# MPH Biostatistics Concentration Competencies

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Demonstrate proficiency in constructing and managing databases from epidemiological studies using statistical software.
5. Apply knowledge of study design and statistical methods to critically appraise research literature.
6. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

# MPH Biostatistics Concentration Competencies

## BIOS 5201: Categorical Data Analysis

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Apply knowledge of study design and statistical methods to critically appraise research literature.
5. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

## BIOS 5202: Applied Regression Analysis

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# MPH Biostatistics Concentration Competencies (continued)

## BIOS 5203: Survival Analysis

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Apply knowledge of study design and statistical methods to critically appraise research literature.
5. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

## BIOS 5204: Statistical Computing

1. Demonstrate an understanding of the theoretical basis of statistical methods for inference.
2. Apply appropriate statistical methods for inference based on stated research hypotheses.
3. Demonstrate proficiency in using standard statistical software packages to perform data analyses.
4. Demonstrate proficiency in constructing and managing databases from epidemiological studies using statistical software.
5. Apply knowledge of study design and statistical methods to critically appraise research literature.
6. Demonstrate effective written and oral communication skills when describing biostatistical methods, results, and interpretation to different audiences of public health professionals.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# MPH Community Health Sciences Concentration Competencies

1. Recognize the importance of one's own standpoint and positions while working collaboratively with diverse communities and constituencies (e.g., organizations, agencies, practitioners, policymakers, and researchers).
2. Describe the roles of history, power, privileged, and structural inequality in driving health inequities in urban communities.
3. Critically apply traditional and contemporary methods and frameworks to evaluate the process, efficacy and sustainability of health promotion programs designed for urban and immigrant populations.
4. Effectively communicate (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.
5. Differentiate between linguistic competence, cultural competence, and health literacy and explain how increased education and awareness of each of these factors can influence the health of a population.
6. Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention for a specific community or population.
7. Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions in urban and immigrant populations.
8. Demonstrate an understanding of the interaction of race/ethnicity/gender, and health and disease.
9. Delineate how an individual/community can affect the development of health policy at a local, state, and federal level particularly in regards to gender, race, and sexual orientation.

# MPH Community Health Sciences Concentration Competencies

## CHSC 5202: Issues in the Health of Immigrant Populations

1. Differentiate between linguistic competence, cultural competence, and health literacy and explain how increased education and awareness of each of these factors can influence the health of a population
2. Cite examples of situations where consideration of culture-specific needs resulted in a more effective modification or adaptation of a health intervention for a specific community or population.

## CHSC 5203: Sex, Gender, Race, and Ethnicity in Health

1. Identify critical stakeholders for the planning, implementation and evaluation of public health programs, policies and interventions in urban and immigrant populations.
2. Demonstrate an understanding of the interaction of race/ethnicity/gender, and health and disease.
3. Delineate how an individual/community can affect the development of health policy at a local, state, and federal level particularly in regards to gender, race, and sexual orientation.

## CHSC 5205: Urban Health Issues

1. Recognize the importance of one's own standpoint and positions while working collaboratively with diverse communities and constituencies (e.g., organizations, agencies, practitioners, policymakers, and researchers).
2. Describe the roles of history, power, privileged, and structural inequality in driving health inequities in urban communities.

## CHSC 5206: Program, Planning, and Evaluation

1. Critically apply traditional and contemporary methods and frameworks to evaluate the process, efficacy and sustainability of health promotion programs designed for urban and immigrant populations.
2. Effectively communicate (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.

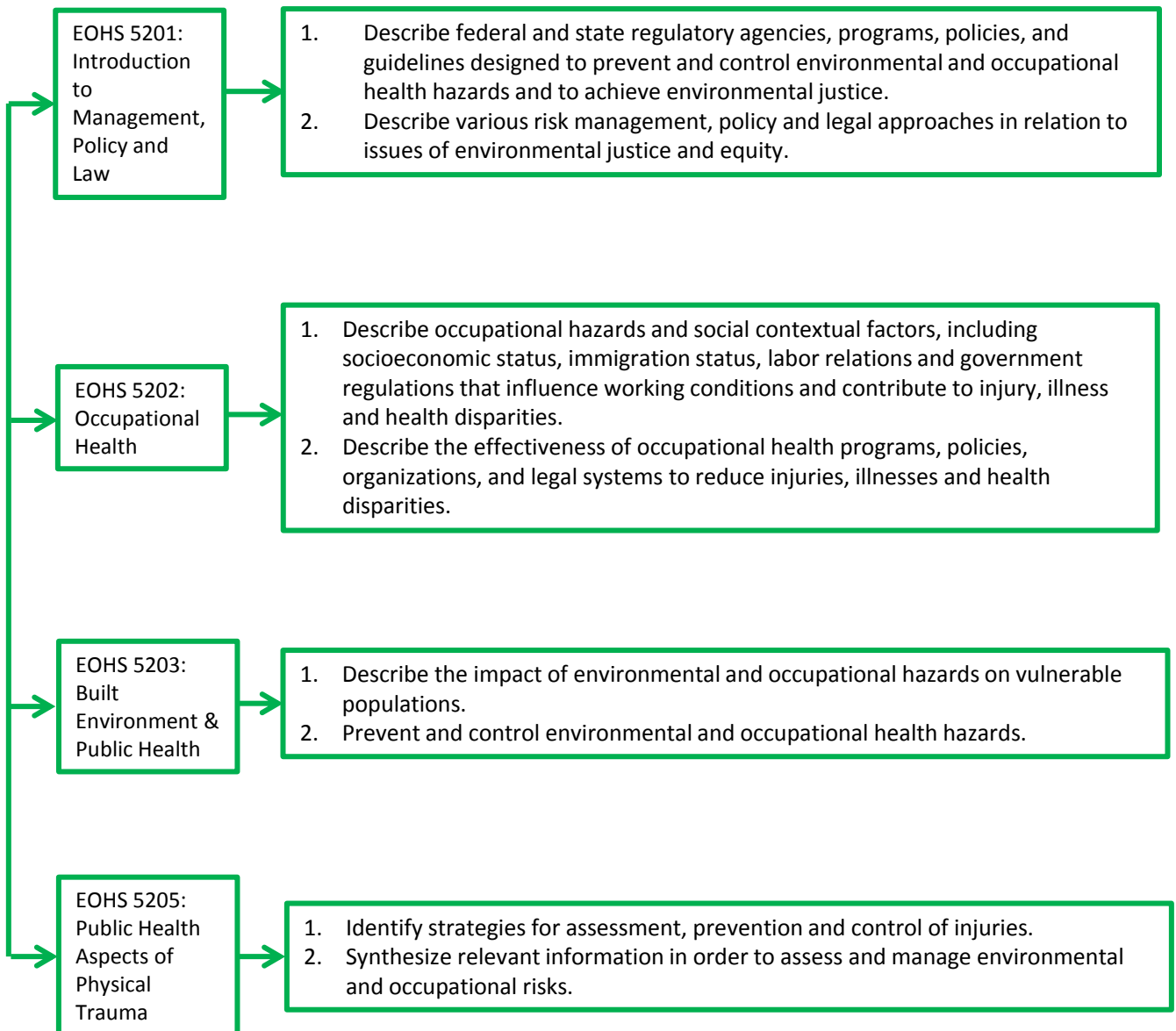
Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# MPH Environmental and Occupational Health Sciences Concentration Competencies

1. Describe federal and state regulatory agencies, programs, policies, and guidelines designed to prevent and control environmental and occupational health hazards and to achieve environmental justice.
2. Describe various risk management, policy and legal approaches in relation to issues of environmental justice and equity.
3. Describe occupational hazards and social contextual factors, including socioeconomic status, immigration status, labor relations and government regulations that influence working conditions and contribute to injury, illness and health disparities.
4. Describe the effectiveness of occupational health programs, policies, organizations, and legal systems to reduce injuries, illnesses and health disparities.
5. Describe the impact of environmental and occupational hazards on vulnerable populations.
6. Prevent and control environmental and occupational health hazards.
7. Identify strategies for assessment, prevention and control of injuries.
8. Synthesize relevant information in order to assess and manage environmental and occupational risks.



# MPH Environmental and Occupational Health Sciences Concentration Competencies



Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# MPH Epidemiology Concentration Competencies

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
3. Calculate epidemiologic measures of occurrence and association.
4. Describe trends and patterns of incidence and prevalence for major diseases and factors affecting health status of immigrant and urban populations, and indicate major etiologic and prognostic factors.
5. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
6. Explain the policy implications of epidemiologic research findings.
7. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
8. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.
9. Comprehend and apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.

# MPH Epidemiology Concentration Competencies

## EPID 5201: Epidemiologic Research Methods

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
3. Calculate epidemiologic measures of occurrence and association.
4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
5. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
6. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.
7. Comprehend and apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.

## EPID 5202: Infectious Disease Epidemiology

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Calculate epidemiologic measures of occurrence and association.
3. Describe trends and patterns of incidence and prevalence for major diseases and factors affecting health status of immigrant and urban populations, and indicate major etiologic and prognostic factors.
4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
5. Explain the policy implications of epidemiologic research findings.
6. Comprehend and apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# MPH Epidemiology Concentration Competencies (continued)

EPID 5203:  
Chronic  
Disease  
Epidemiology

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Calculate epidemiologic measures of occurrence and association.
3. Describe trends and patterns of incidence and prevalence for major diseases and factors affecting health status of immigrant and urban populations, and indicate major etiologic and prognostic factors.
4. Evaluate the strengths and weaknesses of major descriptive and analytic design strategies used in epidemiologic research.
5. Explain the policy implications of epidemiologic research findings.

EPID 5205:  
Epidemiologic  
Research  
Methods II

1. Identify types and sources of data used in epidemiologic research, emphasizing urban and immigrant health.
2. Develop a scientific hypothesis and design an appropriate epidemiologic study to assess the research question.
3. Calculate epidemiologic measures of occurrence and association.
4. Use statistical software packages for data processing, management, and descriptive and inferential analyses.
5. Effectively communicate epidemiologic research findings orally and in writing, to lay and professional audiences.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# MPH Health Policy and Management Concentration Competencies

1. Effectively manage health programs and projects .
2. Apply principles and methods of health policy development and analysis to the examination of key public health issues.
3. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
4. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
5. In collaboration with priority populations, identify, analyze, and respond to factors impacting the health of diverse communities.
6. Analyze the political context and the stakeholders that collectively serve to influence, shape, and implement policies.

# MPH Health Policy and Management Concentration Competencies

## HPMG 5202: Health Care Advocacy and Politics

1. Apply principles and methods of health policy development and analysis to the examination of key public health issues.
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
4. Analyze the political context and the stakeholders that collectively serve to influence, shape, and implement policies.

## HPMG 5203: Health Management Concepts

1. Effectively manage health programs and projects .
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
4. In collaboration with priority populations, identify, analyze, and respond to factors impacting the health of diverse communities.

## HPMG 5204: Access, Cost and Quality of Care

1. Apply principles and methods of health policy development and analysis to the examination of key public health issues.
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.
4. Analyze the political context and the stakeholders that collectively serve to influence, shape, and implement policies.

## HPMG 5207: Principles in Hospital Management

1. Effectively manage health programs and projects .
2. Advocate effectively for the needs of urban, immigrant, and other vulnerable populations in health policy and health services.
3. Communicate orally and in writing health policy and management issues using appropriate channels and technologies.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# Overarching DrPH Degree Competencies

1. Apply the theories and principles of biostatistics and epidemiology to the identification, classification and analysis of a public health issue.
2. Describe key characteristics of observational and experimental studies regarding subject selection, data collection, and analysis.
3. Synthesize and critically appraise published, public health research literature , specifically in urban and immigrant health.
4. Develop goals, timelines, funding alternatives, and other strategies for influencing policy initiatives.
5. Assess the impact of policy, including legislation, judicial opinions, and regulations, on population health.
6. Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies, and systems.
7. Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.
8. Demonstrate cultural sensitivity in conducting ethical data collection and analysis.
9. Analyze research design using qualitative data for program planning.

# Overarching DrPH Degree Competencies

Divided Among 4 Core DrPH Courses

## **BIOS 7200: Quantitative Research Methods for Public Health Practice**

1. Apply the theories and principles of biostatistics and epidemiology to the identification, classification and analysis of a public health issue.
2. Describe key characteristics of observational and experimental studies regarding subject selection, data collection, and analysis.
3. Synthesize and critically appraise published, public health research literature, specifically in urban and immigrant health.

## **PUBH 7200: Public Health Policy and Politics Seminar**

1. Develop goals, timelines, funding alternatives, and other strategies for influencing policy initiatives.
2. Assess the impact of policy, including legislation, judicial opinions, and regulations, on population health.

## **HPMG 7200: Public Health Management and Ethics**

1. Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies, and systems.
2. Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.

## **PUBH 7201: Study Design in Public Health**

1. Apply the theories and principles of biostatistics and epidemiology to the identification, classification and analysis of a public health issue.
2. Describe key characteristics of observational and experimental studies regarding subject selection, data collection, and analysis.
3. Synthesize and critically appraise published, public health research literature, specifically in urban and immigrant health.
4. Demonstrate cultural sensitivity in conducting ethical data collection and analysis.
5. Analyze research design using qualitative data for program planning.



# DrPH Community Health Sciences Competencies

1. Assess cultural, environmental, and social justice influences on the health of communities.
2. Demonstrate cultural sensitivity in ethical discourse and analysis.
3. Conduct community-engaged participatory intervention and research projects.
4. Effectively collaborate with communities, policy makers, and other relevant groups to design applied public health intervention and research projects.
5. Utilize planning models to apply theory and evidence to the planning of community-engaged public health intervention and research projects.
6. Using contemporary evaluation frameworks, articulate the strengths and limitations of experimental designs used to evaluate health promotion programs designed for urban and immigrant populations.
7. Identify diverse stakeholders (from private and public sectors) critical to the sustainability and institutionalization of health promotion programs in urban and immigrant settings.
8. Develop measurable evaluation goals and timelines required for the successful evaluation of health promotion programs in urban and immigrant settings.
9. Demonstrate leadership when communicating (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.
10. Using major concepts, methods and theories in the social and behavioral sciences, develop an in-depth understanding of a key public health issue within a community and design a program or intervention that will ameliorate this public health problem.
11. Effectively communicate efforts to design, implement, and manage an intervention aimed at an identified public health problem issue to diverse audiences.

# DrPH Community Health Sciences Competencies

## CHSC 7201: Qualitative Research Methods for Public Health Practice

1. Assess cultural, environmental, and social justice influences on the health of communities.
2. Demonstrate cultural sensitivity in ethical discourse and analysis.
3. Conduct community-engaged participatory intervention and research projects.

## CHSC 7202: Methods of Community Intervention and Research

1. Effectively collaborate with communities, policy makers, and other relevant groups to design applied public health intervention and research projects.
2. Utilize planning models to apply theory and evidence to the planning of community-engaged public health intervention and research projects.

## CHSC 7203: Program Evaluation: Theory, Practice, and Research

1. Using contemporary evaluation frameworks, articulate the strengths and limitations of experimental designs used to evaluate health promotion programs designed for urban and immigrant populations.
2. Identify diverse stakeholders (from private and public sectors) critical to the sustainability and institutionalization of health promotion programs in urban and immigrant settings.
3. Develop measurable evaluation goals and timelines required for the successful evaluation of health promotion programs in urban and immigrant settings.
4. Demonstrate leadership when communicating (in oral and written formats) logic models and evaluation frameworks central to health promotion programs to lay and professional audiences.

## CHSC 7204: Health Promotion Seminar

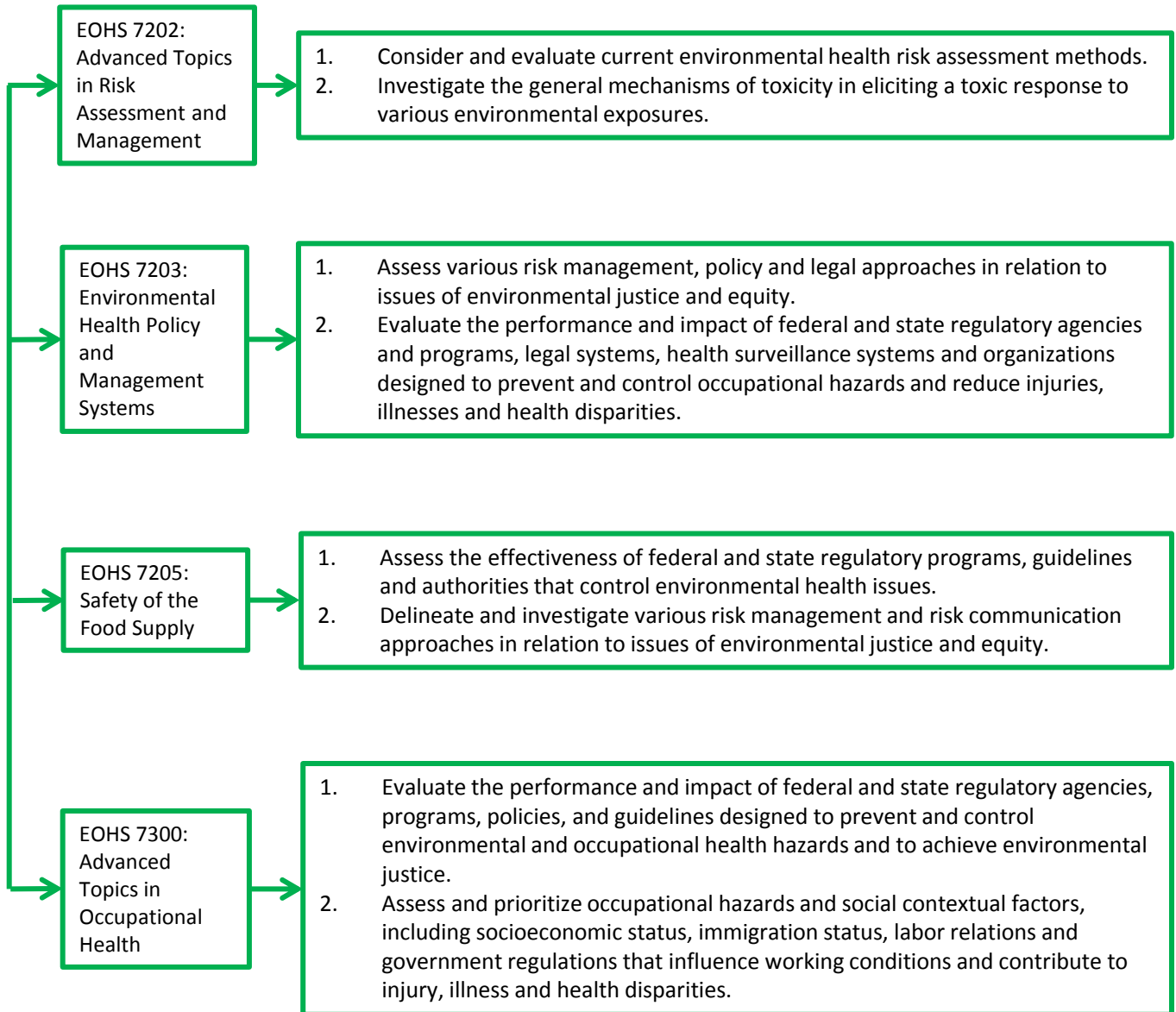
1. Using major concepts, methods and theories in the social and behavioral sciences, develop an in-depth understanding of a key public health issue within a community and design a program or intervention that will ameliorate this public health problem.
2. Effectively communicate efforts to design, implement, and manage an intervention aimed at an identified public health problem issue to diverse audiences.

Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# DrPH Environmental and Occupational Health Sciences Competencies

1. Consider and evaluate current environmental health risk assessment methods.
2. Investigate the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.
3. Assess various risk management, policy and legal approaches in relation to issues of environmental justice and equity.
4. Evaluate the performance and impact of federal and state regulatory agencies and programs, legal systems, health surveillance systems and organizations designed to prevent and control occupational hazards and reduce injuries, illnesses and health disparities.
5. Assess the effectiveness of federal and state regulatory programs, guidelines and authorities that control environmental health issues.
6. Delineate and investigate various risk management and risk communication approaches in relation to issues of environmental justice and equity.
7. Evaluate the performance and impact of federal and state regulatory agencies, programs, policies, and guidelines designed to prevent and control environmental and occupational health hazards and to achieve environmental justice.
8. Assess and prioritize occupational hazards and social contextual factors, including socioeconomic status, immigration status, labor relations and government regulations that influence working conditions and contribute to injury, illness and health disparities.

# DrPH Environmental and Occupational Health Sciences Competencies



Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.

# DrPH Epidemiology Competencies

1. Obtain key sources of public health data for advanced epidemiologic analyses.
2. Demonstrate expertise in epidemiologic study design and evaluation.
3. Prepare written and oral reports on public health research and communicate results to diverse public health constituencies.
4. Demonstrate mastery of the administrative, legal, ethical, and quality assurance dimensions of research and practice.
5. Apply appropriate methods and correctly interpret complex and multifaceted data analysis in determining risk factors that discriminate between health and disease.
6. Describe advanced topics in probability theory, random variation, and commonly used statistical probability distributions, with an emphasis in public health applications.
7. Demonstrate ability to apply probability theory within analytical methods that are commonly used in applied public health research.
8. Describe the public health applications of statistical inference.
9. Apply statistical inference theory within analytical methods that are commonly used in applied public health research.

# DrPH Epidemiology Competencies



Syllabus for each concentration core course lists competencies covered. Breaks down each competency into learning objectives.