Discipline-Specific Core Competencies for DLSPH MPH Program Stream in Epidemiology

General Area	Competency
A. Understanding the System	1. Describe public health and understand public health systems in relation to other health care systems (e.g. international)
	2. Describe legislation regarding public health privacy and personal health information
	3. Demonstrate a broad understanding of content areas such as the social determinants of health, occupational and environmental health, and healthy environments in general
B. Understanding Data Sources; Critical Appraisal	1. Identify existing data sources and gaps
	2. Demonstrate knowledge of available data sources and their applicability
	3. Evaluate strengths and weaknesses of available data
	4. Recognize sources of bias and validity when critically appraising research/ literature.
C. Databases, Technology, Surveillance	1. Explain the design and implementation of surveillance systems.
	2. Develop and manage databases
	3. Recognize the uses of technological systems (e.g. GIS) and literature databases (e.g. Medline)
	4. Operate/employ basic commands within statistical packages (e.g. SAS, SPSS, R, etc.)
	5. Identify key findings from surveillance data, draw conclusions, identify health threats
	6. Recognize and utilize evidence-based guidelines for surveillance
D. Epidemiologic methods	1. Describe population health status, determinants, risk factors, health care utilization
	2. Evaluate health outcomes and understand implications for population health
	3. Write a draft proposal for a study (which includes a study protocol, data collection instruments, proposed analysis, etc.)
	4. Conduct risk assessment (with guidance)
	5. Design basic analysis plan, sampling design, sample size estimation
	6. Describe the design and implementation of qualitative and quantitative research
	7. Design and interpret outbreak investigations, including disease clusters
	8. Prepare reports/publications suitable for peer review
	9. Apply ethical principles to data collection, management, dissemination
	10. Differentiate between and evaluate applicability of various study designs
E. Biostatistics, Data analysis	1. Use statistical methods to estimate measures of disease occurrence, risk, trends, association
	2. Use statistical methods to conduct multivariable hypothesis testing
F. Public Health Guidance	1. Provide epidemiological input to develop measurable outcomes for public health programs

	2. Identify public health interventions based on surveillance data
	3. Develop evidence-based interventions in response to epidemiologic findings, and advocate for their implementation, as appropriate
G. Communication, Health Promotion and Protection	1. Clearly communicate epidemiologic data, scientific literature to a variety of audiences in an appropriate format
	2. Demonstrate awareness of theories of health promotion, approaches to health protection
	3. Contribute epidemiologic data and input in emergency responses
	4. Recognize and utilize guidelines for control of acute public health events
	5. Apply basic principles of risk communication
H. Partnerships	1. Collaborate within interdisciplinary teams, contributing value/ knowledge and giving/ receiving feedback
I. Policy and Evaluation	1. Identify the policy relevance of a public health issue and integrate relevant data
	2. Support program and policy development with relevant data
	3. Make recommendations for action and further investigation
	4. Evaluate impact of an intervention on population health
J. Leadership and Management	1. Advocate on behalf of your team and research area in order to advance common public health goals, as appropriate
	2. Demonstrate professionalism (e.g. conduct work and interact with colleagues in an appropriate and acceptable manner)
	3. Set achievable and realistic goals for team (or working group).
	4. Develop strategies to motivate others to engage in collaborative problem solving, decision-making, and evaluation