Epidemiology Program Competencies

**Epidemiology MPH Competencies**

MPH 1 - Describe the historical context of epidemiology.

MPH 2 - Describe public health concerns in terms of magnitude, people affected, time, and location.

MPH 3 - Apply basic terminology and definitions of epidemiology.

MPH 4 - Calculate epidemiology measures and interpret them.

MPH 5 - Identify key sources of data and data collection methodologies for epidemiologic purposes.

MPH 6 - Explain the importance of epidemiology for informing scientific and ethical Principles of public health concerns.

MPH 7 - Explain ethical Principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.

MPH 8 - Evaluate the strengths and limitations of epidemiologic reports.

MPH 9 - Describe the Principles and limitations of public health screening Programs.

**Clinical & Translational Science MSPH Competencies**

EPI-MPH 1 - Describe the historical context of epidemiology.

EPI-MPH 2 - Describe public health concerns in terms of magnitude, people affected, time, and location.

EPI-MPH 3 - Apply basic terminology and definitions of epidemiology.

EPI-MPH 4 - Calculate epidemiology measures and interpret them.

EPI-MPH 5 - Identify key sources of data and data collection methodologies for epidemiologic purposes.

EPI-MPH 6 - Explain the importance of epidemiology for informing scientific and ethical Principles of public health concerns.

EPI-MPH 7 - Explain ethical Principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.

EPI-MPH 8 - Evaluate the strengths and limitations of epidemiologic reports.

EPI-MPH 9 - Describe the Principles and limitations of public health screening Programs.
EPI-MSPH 1 - Develop a research project that a research committee can review for scientific validity and feasibility.

EPI-MSPH 2 - Conduct a research project under the guidance of senior investigators.

EPI-MSPH 3 - Write a manuscript reporting research background, methods, results, discussion, and conclusions to be presented to a research committee.

EPI-MSPH 4 - Explain the principles of designing observational and intervention studies.

EPI-MSPH 5 - Describe the principles, goals, and conduct of clinical trials.

**Pharmacoepidemiology & Comparative Effectiveness Research MSPH Competencies**

EPI-MPH 1 - Describe the historical context of epidemiology.

EPI-MPH 2 - Describe public health concerns in terms of magnitude, people affected, time, and location.

EPI-MPH 3 - Apply basic terminology and definitions of epidemiology.

EPI-MPH 4 - Calculate epidemiology measures and interpret them.

EPI-MPH 5 - Identify key sources of data and data collection methodologies for epidemiologic purposes.

EPI-MPH 6 - Explain the importance of epidemiology for informing scientific and ethical principles of public health concerns.

EPI-MPH 7 - Explain ethical principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.

EPI-MPH 8 - Evaluate the strengths and limitations of epidemiologic reports.

EPI-MPH 9 - Describe the principles and limitations of public health screening Programs.

EPI-MSPH 1 - Develop a research project that a research committee can review for scientific validity and feasibility.

EPI-MSPH 2 - Conduct a research project under the guidance of senior investigators.

EPI-MSPH 3 - Write a manuscript reporting research background, methods, results, discussion, and conclusions to be presented to a research committee.

EPI-MSPH 6 - Describe the principles, goals, and conduct of pharmacoepidemiology and comparative effectiveness research.
**Applied Epidemiology MSPH Competencies**

**EPI-MPH 1** - Describe the historical context of epidemiology.

**EPI-MPH 2** - Describe public health concerns in terms of magnitude, people affected, time, and location.

**EPI-MPH 3** - Apply basic terminology and definitions of epidemiology.

**EPI-MPH 4** - Calculate epidemiology measures and interpret them.

**EPI-MPH 5** - Identify key sources of data and data collection methodologies for epidemiologic purposes.

**EPI-MPH 6** - Explain the importance of epidemiology for informing scientific and ethical Principles of public health concerns.

**EPI-MPH 7** - Explain ethical Principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data.

**EPI-MPH 8** - Evaluate the strengths and limitations of epidemiologic reports.

**EPI-MPH 9** - Describe the Principles and limitations of public health screening Programs.

**EPI-MSMH 1** - Develop a research project that a research committee can review for scientific validity and feasibility.

**EPI-MSMH 2** - Conduct a research project under the guidance of senior investigators.

**EPI-MSMH 3** - Write a manuscript reporting research background, methods, results, discussion, and conclusions to be presented to a research committee.

---

**Epidemiology PhD Competencies**

**PhD EPI 1** - Critique epidemiologic studies and reports, with regard to design choice, precision, bias, confounding, and ethical issues.

**PhD EPI 2** - Demonstrate expertise in the statistical basis for the analysis of epidemiologic data.

**PhD EPI 3** - Write the design, methods, and results of an epidemiologic study.

**PhD EPI 4** - Demonstrate ability to teach epidemiologic concepts to master’s and undergraduate-level students.

**PhD EPI 5** - Formulate novel and innovative study questions and hypotheses and test them using epidemiological methods.

**PhD EPI 6** - Develop a dissertation research proposal with detailed background, study design, data collection plan and analyses for carrying out an epidemiologic study.

**PhD EPI 7** - Conduct a dissertation research project from design through analysis and interpretation, with oral presentation of results and preparation of a publishable manuscript(s).