

BIOSTATISTICS PROGRAM COMPETENCIES

MASTER OF SCIENCE COMPETENCIES

MS-BST 1: Apply descriptive and inferential methodologies according to the type of study design for answering a particular research question.

MS-BST 2: Understand issues of data collection, analysis and study management.

MS-BST 3: Propose and complete research project appropriate for addressing a specific research question in statistics or in an applied field.

MS-BST 4: Effectively communicate research results orally and in writing across the spectrum of scientific venues.

MS-BST 5: Critically evaluate published research.

MASTER OF SCIENCE IN PUBLIC HEALTH COMPETENCIES

MSPH-BST 1: Design, conduct, and evaluate research studies.

MSPH-BST 2: Understand issues of data collection, analysis and study management.

MSPH-BST 3: Demonstrate an understanding of the ethics of scientific research.

MSPH-BST 4: Formulate a proposal for a research study, present it, and revise it appropriately for implementation.

MSPH-BST 5: Effectively communicate research results orally and in writing across the spectrum of scientific venues.

MSPH-BST 6: Critically evaluate published research.

MSPH-BST 7: Demonstrate application of biostatistics in an area of specialization.

DOCTOR OF PUBLIC HEALTH COMPETENCIES

UAB SOPH Core DrPH Competencies

DRPH 1: Demonstrate in-depth understanding of the core areas of public health theory, policy, and practice.

DRPH 2: Analyze policy issues and challenges in public health using credible research designs and statistical methods.

DRPH 3: Research relevant literature and synthesize the findings.

DRPH 4: Evaluate information to develop appropriate strategies to address public health challenges in an area of specialization.

DRPH 5: Implement interventions to address public health challenges.

DRPH 6: Demonstrate skill in oral and written communication to varied audiences.

Biostatistics DrPH Competencies

DrPH-BST 1: Apply advanced biostatistical techniques to public health research.

DrPH-BST 2: Identify and critically evaluate biostatistical techniques in an area of specialization.

DrPH-BST 3: Effectively design a public health research proposal, design and manage the database, and perform the analysis of the research in a public health area of specialization.

DrPH-BST 4: Demonstrate an understanding of probability, estimation, and inference as applied to design and analysis of public health research.

DrPH-BST 5: Effectively communicate the public health implications of an applied biostatistical analysis.

DOCTOR OF PHILOSOPHY COMPETENCIES

PHD-BST 1: Explain the theoretical justifications for statistical methodologies.

PHD-BST 2: Apply statistical techniques with rigorous evaluation of any required distributional assumptions.

PHD-BST 3: Design scientific investigations with collaborators.

PHD-BST 4: Critically evaluate the statistical literature relevant to a specific statistical method or design.

PHD-BST 5: Write publishable articles that advance public health and/or statistical theory/methodology.