

BIostatISTICS, MS

The Master of Science in Biostatistics educates students in the basic methods of mathematical and applied statistics for health data analysis. Through courses in epidemiology and related subjects, students become familiar with the general areas of public health to which statistical methodologies may be applied. Coursework includes mathematical statistics and probability theory, applied and theoretical multivariate methods, stochastic processes, basic epidemiology, and demography, enabling the student to assist in the application of statistical theory to applied statistical problems.

Program Competencies

- Apply descriptive and inferential methodology based on study design in solving research questions.
- Use the principles of probability and mathematical statistics to guide the selection and application of data analysis methods.
- Develop studies for experimental and observational projects to address specific research questions.

Requirements

The MS Degree in Biostatistics requires a total of 42 credits that includes:

Course ID	Title	Credits
Biostatistics Course Requirements		
SPHL 6020	Foundations in Public Health	3
BIOS 6040	Intermediate Biostatistics	3
BIOS 7040	Statistical Inference I	3
BIOS 7050	Statistical Inference II	3
BIOS 7060	Regression Analysis	3
BIOS 7080	Design of Experiments	3
BIOS 7150	Categorical Data Analysis	3
SPHL 6060	Epidemiology for Public Health	3
BIOS 9980	Master's Thesis Research	0
Select two of the following three courses:		6
BIOS 7220	Nonparametric Statistics	
BIOS 7250	Principles of Sampling	
BIOS 7400	Clinical Trials	
Elective Courses		
Select 12 credits of Biostatistics and other relevant elective courses at the 6000 or higher level		12
Total Credit Hours		42

Master's Thesis

Students must successfully complete a thesis. Students register in BIOS 9980 Master's Thesis Research (0 c.h.). The thesis is a supervised work of scholarship in statistical methodology. The results will be presented in writing. The project will be supervised by a thesis director who is a faculty member of the Biostatistics Department and approved by at least one other member of the Biostatistics faculty. The master's thesis must be completed within a year of completion of the required courses.

MS in Biostatistics Model Schedule

This is an example of a course schedule for a Fall start. Students work with their faculty and student success advisors to create a course schedule tailored to meet their individual needs.

Year 1		Credit Hours
Fall		
BIOS 6040	Intermediate Biostatistics	3
SPHL 6060	Epidemiology for Public Health	3
BIOS 7040	Statistical Inference I	3
SPHL 6020	Foundations in Public Health	3
Credit Hours		12

Spring

BIOS 7060	Regression Analysis	3
BIOS 7080	Design of Experiments	3
BIOS 7050	Statistical Inference II	3
Selective		3

Credit Hours	12
---------------------	-----------

Year 2
Fall

BIOS 7150	Categorical Data Analysis	3
Selective or Elective		3
Elective		3
BIOS 9980	Master's Thesis Research	0

Credit Hours	9
---------------------	----------

Spring

Selective or Elective		3
Elective		3
Elective		3
BIOS 9980	Master's Thesis Research	0

Credit Hours	9
---------------------	----------

Total Credit Hours	42
---------------------------	-----------

Program String and Field of Study: PHMS_GR, BIOS

Contact

To learn more about the department, visit <https://sph.tulane.edu/bios/home> (<https://sph.tulane.edu/bios/home/>).