

# BIostatISTICS (MEDICINE)

## Program Information

### Doctor of Philosophy

The biostatistics doctoral program requires a minimum of 90 semester credits beyond the bachelor's degree. All students must complete a minimum of 54 credits of biostatistics/statistics course work (30 credits can be transferred from a previously earned Master of Science program if applicable), 6 credits of public health course work, 3 credits of a consulting requirement, 6 credits of the cognate requirement, and 21 credits of dissertation work.

All graduates of the program are expected to be able to

- Conduct independent research in the development of new biostatistical methodology
- Engage in successful collaborations with investigators in new quantitative fields
- Write statistical methodology papers for peer-reviewed statistical and biostatistical journals
- Write collaborative papers for peer-reviewed subject matter journals
- Compete successfully for research and teaching positions in academic institutions, federal and state agencies, or private institutions

Specific course requirements are described at the program website <http://biostat.ufl.edu/education/phd-in-biostatistics/>.

### Master of Science

The Master of Science in Biostatistics Program in the Department of Biostatistics requires a minimum of 36 post-baccalaureate credit hours. The program is designed to facilitate students' development of a strong theoretical foundation in biostatistics, broad-based understanding of biostatistical methods, and expertise in a cognate field. A typical student will be enrolled full-time for two years. Upon successful completion of the program, graduates will be awarded an M.S. degree in biostatistics. We currently offer the Master of Science program in both traditional (campus) and online learning delivery methods.

The principal goal of the M.S. program is to prepare highly qualified individuals for future Ph.D. training and for careers in biostatistics practice. This training is conducted in the innovative and interdisciplinary public health culture of the college of public health and health professions and the college of medicine and will produce graduates who will help address the shortage of biostatisticians. We expect our graduates to be highly competitive in three primary settings: academic university-based settings, industry, and federal agencies that involve research and/or public health practice.

Specific course requirements are described at the program website <http://biostat.ufl.edu/education/ms-in-biostatistics/> (Campus) and <http://biostat.ufl.edu/education/msonline/> (Online).

### Degrees Offered

#### Degrees with a Major in Biostatistics

- Doctor of Philosophy
- Master of Science

Requirements for these degrees are given in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

### Courses

#### Biostatistics Departmental Courses

Code	Title	Credits
GMS 6827	Advanced Clinical Trial Methods	3
PHC 6020	Clinical Trial Methods	3
PHC 6022	Design and Conduct of Clinical Trials	3
PHC 6050C	Biostatistical Methods I	3
PHC 6051	Biostatistical Methods II	3
PHC 6059	Introduction to Applied Survival Analysis	3
PHC 6063	Biostatistical Consulting	3
PHC 6064	Survey of Advanced Biostatistical Methods for the Health Sciences	3
PHC 6075	Biostatistical Literacy	3
PHC 6084	Bayesian Biostatistical Methods	3
PHC 6088	Statistical Analysis of Genetic Data	3
PHC 6089	Public Health Computing	3
PHC 6092	Introduction to Biostatistical Theory	3
PHC 6097	Statistical Learning with Applications in Health Sciences	3
PHC 6099	Programing Basics for Biostatistics	3
PHC 6790	Biostatistical Methods Using SAS	3
PHC 6791	Data Visualization in the Health Sciences	3
PHC 6937	Special Topics in Public Health	1-6
PHC 7056	Analysis of Longitudinal Data	3
PHC 7066	Large Sample Theory	3
PHC 7068	Biostatistical Computing	3
PHC 7090	Advanced Biostatistical Methods I	3
PHC 7091	Advanced Biostatistical Methods II	3
PHC 7095	Advanced Statistical Learning for Biostatistics	3
PHC 7925	Biostatistics Journal Club	1-3
PHC 7979	Advanced Research	1-12
PHC 7980	Research for Doctoral Dissertation	1-15
STA 6177	Applied Survival Analysis	3
STA 6707	Analysis of Multivariate Data	3
STA 7179	Survival Analysis	3

#### College of Medicine Courses

Code	Title	Credits
GMS 5905	Special Topics in Biomedical Sciences	1-4
GMS 6001	Fundamentals of Biomedical Sciences I	5
GMS 6003	Fundamentals of Graduate Research and Professional Development	1
GMS 6090	Research in Medical Sciences	1-10
GMS 6096	Introduction to NIH Grant Writing for Biomedical Sciences	1
GMS 6405	Fundamentals of Endocrine Physiology	1
GMS 6406	Fundamentals of Pulmonary/Respiratory Physiology	1
GMS 6408	Fundamentals of Renal Physiology	1
GMS 6411	Fundamentals of Cardiovascular Physiology	1
GMS 6415	Fundamentals of Gastrointestinal Physiology	1
GMS 6491	Journal Club in Physiology	1
GMS 6780	Addiction: Neuroscience and Trends	3
GMS 6865	Quantitative Literacy for Translational Research	2
GMS 6875	Ethical and Policy Issues in Clinical Research	2

GMS 6895	CTS Journal Club	1
GMS 6903	Manuscript and Abstract Writing for Clinician/Scientists	2
GMS 6905	Independent Studies in Medical Sciences	1-10
GMS 6910	Supervised Research	1-5
GMS 6940	Supervised Teaching	1-5
GMS 6971	Research for Master's Thesis	1-15
GMS 7093	Introduction to Clinical and Translational Research	2
GMS 7877	Responsible Conduct of Biomedical Research	1
GMS 7944	Practicum in Biomedical Science Education	3
GMS 7950	Fundamentals of Biomedical Science Education	2
GMS 7979	Advanced Research	1-12
GMS 7980	Research for Doctoral Dissertation	1-15

**Student Learning Outcomes**

**Biostatistics (PHD)**

SLO 1 Knowledge  
 Communicate the underpinning of biostatistics concepts and methods

SLO 2 Skills  
 Identify, research, and acquire new biostatistical concepts and methods on one's own

SLO 3 Skills  
 Develop and apply new biostatistical concepts and methods independently

SLO 4 Professional Behavior  
 Display ethical behaviors, cultural sensitivity, teamwork, conduct and communications

SLO 5 Professional Behavior  
 Participation in academic conferences to disseminate knowledge and represent the university

**Biostatistics (MS)**

SLO 1 Knowledge  
 Communicate the underpinning of biostatistics concepts and methods

SLO 2 Skills  
 Apply biostatistical concepts and methods, interpret results, communicate

SLO 3 Professional Behavior  
 Display ethical behaviors, cultural sensitivity, teamwork, conduct and communications