Statistics and Analytics Master of Science

Biological Analytics Concentration Course Requirements

Required Core Areas (12-13 hours)

Statistical Methods Core (One of the following)

- ◊ STAT 5003/5001L Statistical Methods
- ◊ ESRM 6403 Educational Statistics and Data Processing
- ◊ SOCI 5013 Advanced Social Research
- ◊ AGST 5023 Principles of Experimentation

Regression Analysis Core (One of the following)

- ◊ STAT 5313 Regression Analysis
- ◊ ESRM 6423 Multiple Regression Techniques for Education
- ◊ INEG 5393 Applied Regression Analysis in Engineering
- ◊ SOCI 5313 Applied Data Analysis
- ◊ AGST 5713 Applied Regression Analysis for Agricultural Sciences

Multivariate Analysis Core (One of the following)

- ◊ STAT 5353 Methods of Multivariate Analysis
- ◊ ESRM 6453 Applied Multivariate Statistics
- ◊ AGST 504V (3 hours) Special Topics: Applied Multivariate Analysis

Experimental Design Core (One of the following)

- ◊ STAT 5373 Experimental Design
- ◊ ESRM 6413 Experimental Design in Education
- ◊ INEG 5333 Design of Industrial Experiments
- ◊ AGST 5014 Experimental Design

Required Track Courses (9 hours)

- ☐ CSCE 5013 Introduction to Cluster Computing
- ☐ BIOL 5153 Programming for Biologists
- ☐ ISYS 5723 Advanced Multivariate Analysis

Electives (9 hours)

Chosen by the student in consultation with advisor. Suggestions include: CSCE 5073 Data Mining, CSCE 5203 Advanced Database Management Systems, CSCE 5213 Bioinformatics, CSCE 5323 Computer Security, CSCE 5653 Network Security, GEOS 4553 Introduction to Raster GIS, GEOS 5553 Spatial Analysis Using Arc-GIS, GEOS 5593 Introduction to Geodatabases, ISYS 5503 Decision Support and Analytics, ISYS 5833 Data Management Systems, STAT 5113 Statistical Inference, STAT 5333 Analysis of Categorical Responses, STAT 5343 Stochastic Processes, STAT 5383 Time Series Analysis, and STAT 5413 Spatial Statistics.

Comprehensive Examination or Thesis

Typically, in the 4th semester either a comprehensive examination or thesis defense is scheduled in consultation with the advising committee. In the case of a thesis, 6 hours of STAN 600V would replace 2 elective courses.