STA 115/Statistics 1 course unit 
(every semester)
This course introduces the students to statistical ideas and concepts with an emphasis on the interpretation of data and the communication of statistical results. Topics include sampling, surveys, experimental designs, observational studies, data exploration, chance phenomena, and methods of statistical inference. Students who have already received credit for STA 215 cannot receive credit for this course.

STA 215/Statistical Inference 1 course unit 
(every semester) 
Prerequisite: MAT 125 or MAT 127
A comprehensive introduction to descriptive statistics and the essential ideas of probability. Students will study foundations of classical parametric inference: point estimation, confidence intervals, hypothesis testing and common statistical techniques including simple regression and correlation. Examples will be drawn from a variety of social and natural sciences.

STA 303/Design of Experiments 1 course unit 
(every third semester) 
Prerequisites: STA 215
An introduction to problems and techniques inherent to the design and analysis of experiments. There are broad applications across numerous disciplines in the sciences and the humanities. Topics include: analysis of variance, blocking, general factorial models, nested designs, confounding and fractional replication. A statistical software package will be used throughout the course (SAS, SPSS or MINITAB).

STA 304/Sampling and Nonparametric Statistics 1 course unit 
(every third semester) 
Prerequisites: STA 215
This course introduces students to the use of sampling theory, the design and analysis of sample surveys, and robust statistical tests that are applicable in a wide range of real-world applications. Topics include: stratified sampling, cluster sampling, quota sampling, questionnaire design, and k-sample tests for paired and unpaired data.

STA 305/Regression Analysis 1 course unit 
(every fall) 
Prerequisites: STA 215
Regression concepts and techniques as a synthesis of theory, methods and applications. Topics include: multiple regression, interactions, partial and multiple correlation, polynomial regression and logistic regression and time series analysis. A statistical software package will be used throughout the course (SAS, SPSS, or MINITAB).

STA 306/Applied Multivariate Analysis 1 course unit 
(every third semester) 
Prerequisites: STA 215
An introduction to a variety of multivariate statistical methods as aids to analyzing and interpreting large data sets. These methods will have general applications across a wide range of client disciplines. Topics include: principal components analysis, cluster analysis, discriminant analysis, multi-dimensional scaling and correspondence analysis. A statistical software package will be used throughout the course (SAS, SPSS or MINITAB).

STA 307/Data Mining and Predictive Modeling 1 course unit 
(every spring) 
Prerequisites: BIO 352 or ECO 231 or MAT 316 or PSY 303 or (CSC 320 and STA 215)
An introduction to Data Mining and Predictive Modeling. Topics include decision trees, link functions, logic regression, neural networks, TreeNet, support vector machine, text mining, association rules (market basket analysis), and link analysis.
STA 314/Statistical Quality Control
(occasionally)
Prerequisites: STA 215
Course description: An introduction to the theory and application of statistical quality control. Topics include variables control charts (X̄, R, and s), attributes control charts (p, np, c, and u), and non-Shewhart type charts (CUSUM, MA, and EWMA); rational subgrouping, Average Run Length, and O-C curves.

STA 318/Operations Research
(spring odd years)
Prerequisite: MAT 316
An introduction to that portion of Operations Research which deals with probabilistic techniques. Topics include: forecasting, queuing models, inventory control and simulation. Students will become conversant with a number of operations research software packages.

STA 390/Statistics Specific Research Course
variable course units

STA 391/Independent Study in Statistics
variable course units

STA 392/Guided Study in Statistics
variable course units

STA 393/Independent Research in Statistics
variable course units

STA 394/Seminar in Statistics
(occasionally)
Prerequisite: STA 215
A flexible course in which the content is selected from topics in statistics. This is an elective course designed to enrich the background of the students as well as to bridge the gap between undergraduate statistics and graduate statistics.
STA 498/Capstone  
(every spring)  
Prerequisite: Senior standing  
Intensive study of topics or applications in statistics. Verbal presentation and written paper required.