STATISTICS (ST)

ST 590 Internship in Statistics (1 credit)
This one-credit course is a unique opportunity that allows students to explore a certain career path, learn valuable workplace skills, broaden their knowledge about a particular area of business analytics, and gives students the chance to add value to their internship by applying their business analytics knowledge. The essence of the internship for Credit Program is that students continue to learn as they work. To a large degree, the education they receive from the internship is up to them. It is based on the quality of the position they have found and the decisions they make once on the job (e.g., asking for certain opportunities). The Business Analytics internship for credit course grants one credit for successfully fulfilling this field-based learning experience, which includes working a minimum of 120 hours at an organization suitable for the individual students field learning experience, and completing the specific requirements outlined below during the internship.
Typically Offered: As needed

ST 625 Quantitative Analysis for Business (3 credits)
Pre-Req: GR 521, GR 521D, or GR 521P
This course provides students with an in-depth coverage of simple and multiple linear regression methods and, as time permits, an introduction to the analysis of time series data. Simple and multiple linear regression techniques are covered, including the use of transformations such as squares and logarithms, the modeling of interactions, and how to handle problems resulting from heteroscedasticy and multicollinearity. Issues surrounding outlying and influential observations are also covered. The art and science of model building are demonstrated with the help of cases. Autocorrelation is then considered, and an introduction to the ARIMA modeling of times series is provided. The course makes use of statistical packages such as SAS, JMP, R or SPSS.

Typically Offered: Fall and Spring

ST 635 Intermediate Statistical Modeling for Business (3 credits)
Pre-Req: ST 625 or instructor permission
This course focuses on statistical modeling situations dependent on multiple variables, as commonly found in many business applications. Typical topics covered are logistic regression, cluster analysis, factor analysis, decision trees, and other multivariate topics as time permits. Applications of these methodologies range from market analytics (e.g., direct mail response and customer segmentation) to finance and health informatics. A central objective of the course is for participants to be able to determine the appropriate multivariate methodology based on the research objectives and available data, carry out the analysis and interpret the results. This course makes use of statistical packages such as SAS, JMP, R or SPSS, along with more specialized software.

Typically Offered: Fall and Spring

ST 700 Directed Study in Statistics (3 credits)
A Directed Study is designed for highly qualified students who, under the direction of a member of the sponsoring academic department, engage in an agreed-upon, in-depth independent examination, investigation or analysis of a specialized topic.

Typically Offered: As needed

ST 701 Internship in Business Data Analysis (3 credits)
Pre-Req: ST 625
This course provides an opportunity for students to apply quantitative and data analysis skills in a live employment environment, serving as a quantitative analyst. With help from the internship coordinator, students identify a suitable internship and meet regularly with the internship coordinator. Students prepare a paper that discusses the internship experience and demonstrates at least one specific case analyzed during the internship period. The course can be used either as a Business Analytics concentration elective with permission of the Business Analytics coordinator, or as a Distribution elective.

Typically Offered: As needed

ST 755 Special Topics in Business Analytics (3 credits)
This course explores current or emerging applications of business analytics in real-world contexts. Topics vary by semester and emphasize the use of analytical tools and thinking to support data-informed decision-making. The course may be conducted in a seminar format, with students actively engaged in developing and presenting course materials.

Typically Offered: As needed