INFORMATICS AND ANALYTICS FOUNDATIONS (IAF)

IAF 600X Experimental Course 1-6
This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

IAF 601 Introduction to Data Analytics-Methods and Approaches 3
Managing, manipulating, and analyzing structured/unstructured data to understand relationships and generate useful insights. Principles such as programming for analytics, data visualization, statistical modeling, database design, high performance computing are discussed.
**Prerequisites:** Programming and statistics experience. M.S. in Informatics and Analytics student or permission of instructor required.

IAF 602 Statistical Methods for Data Analytics 3
Introduction to fundamental statistical techniques for data analytics such as hypothesis testing, data transformation, estimation, confidence intervals, regressions models, ANOVA, multivariate analysis, non-parametric methods, and design of experiments.
**Notes:** Same as STA 602. Prerequisite: Student in the M.S. in Informatics and Analytics or the M.S. in Applied Statistics program or permission of instructor.

IAF 603 Preparing Data for Analytics 3
Students are exposed to current approaches, techniques and best practices for collecting, cleaning and normalizing data, processing, storing, managing, securing and preparing structured and unstructured big data sets for analytics.
**Prerequisites:** Programming and statistics experience. M.S. in Informatics and Analytics student or permission of instructor required.

IAF 604 Machine Learning and Predictive Analytics 3
Introduction to machine learning and predictive analytics for Big Data. Some key components include deep learning, supervised, unsupervised models, regression, inductive learning, and time series analysis.
**Prerequisites:** M.S. in Informatics and Analytics student with a grade of C or better in IAF 601 and IAF 603 or permission of instructor.

IAF 605 Data Visualization 3
Data are analyzed to answer questions. Students are exposed to concepts and techniques to understand analytics results and appropriately infer relationships to answer questions and visualize results using contemporary techniques.
**Prerequisites:** M.S. in Informatics and Analytics student or permission of instructor required.

IAF 606 Solving Problems with Data Analytics 3
How data analytics is used to solve applied problems in varied contexts. Students will learn how to choose appropriate methodologies, manage data, conduct analyses and report results.
**Prerequisites:** Student in the M.S. in Informatics and Analytics or the M.S. in Applied Statistics program with a grade of C or better in IAF 601 and IAF 602 or permission of instructor.
**Notes:** Same as STA 606.

IAF 690 Directed Study in Informatics and Analytics 1-3
Directed study in a topic related to Informatics and Analytics.

IAF 695 Practicum 3
Directed practical experience in a professional setting in the student’s area of interest within Informatics and Analytics.
**Prerequisites:** At least 15 credit hours of IAF courses.