

FINTECH ACADEMY (FTA)

FTA 3100. Foundations of Data Analytics. (3 Credits)

Credit Hours: (3-0-3) This course introduces a variety of modeling and analytic methods using data to describe, diagnose, predict, and prescribe real-world decisions and processes. Students will learn basic skills in Excel and R to prepare data to conduct statistical analyses, such as testing hypotheses and forecasting. Students will know how to import data and conduct regression analysis in Excel and R. They will have experience with Excel and R data visualization tools. They will learn about linear and nonlinear models and how to select a model that best fits the data based on the visual representation of past data and logical intuition. They will also learn about different spreadsheet modeling analyses for business outcomes, linear optimization models for business, and strategy-based decision analysis.

FTA 3200. Data Visualization & Analytics. (3 Credits)

Credit Hours: (3-0-3) The goal of the class is to teach students how to extract information from large datasets and present it via visual objects. The course is built with an emphasis on application where students will gain hands-on experience with various data visualization techniques. Students will use SAS Viya for Learners to manage and manipulate raw data to create visual stories that answer research and business questions. Students will also see a short introduction to Tableau as an alternative to SAS Visual Analytics. Students have the option to earn several SAS badges and certificates throughout the semester.

FTA 3360. Financial Mgmt & Digital Trans. (3 Credits)

Credit Hours: (3-0-3) This course provides an in-depth analysis and link between financial theory and the practice of corporate financial management. The course is designed to cover the traditional areas of capital budgeting, working capital management, business valuation, financial planning, options in corporate finance and international finance, as well as the prominent trends in finance such as FinTech, AI (Artificial Intelligence), and Big Data. The course has supplementary modules for introduction to FinTech and Data Curation (using SAS Viya: an AI, analytic, and data management platform running on a scalable, cloud-native architecture).

FTA 4000. Data Analysis-Fin & Economics. (3 Credits)

Credit Hours: (3-0-3) Analyzing data is essential part of business decisions, policy-making, in the world of finance, healthcare, logistics and it has changed virtually all areas of life. Data scientists, statisticians and economists who understand data can make a lasting impact on their companies, their field, and the world. This course will introduce students to the basics of analyzing data and how data can inform business or policy actions. The course also covers basic econometric methods such as linear regressions, and the most recent developments and issues in data science, such as Big Data, Machine Learning, and the impact of Artificial Intelligence. The course is built with an emphasis on application where students will learn statistical and analytical methods through case studies and datasets. The course utilizes SAS Studio (in SAS OnDemand for Academics) and MS Excel to dive deeply into multivariate regression models and logistic regressions with mainly cross-sectional and time series data. Students will manipulate data, estimate and evaluate models, interpret coefficients, test hypotheses, create basic graphs, and make forecasts and predictions. Students have the option to earn several SAS badges and certificates throughout the semester.

FTA 4001. Foundations of FinTech. (3 Credits)

Credit Hours: (3-0-3) Prerequisites: MGNT 3200 The financial services industries are changing rapidly with the emergence of financial technology (FinTech). The objective of the course is to provide students with an overview of FinTech and introductions to its applications in financial services, such as commercial and investment banking, digital investing, financial advising, and insurance. Students are expected to develop a broad understanding of the recent FinTech development and its impact on different parts of the financial world. Students will also have hands-on problem-solving experiences that can be useful in FinTech applications and innovation. Topics may include but are not limited to: blockchain and cryptocurrencies, smart contracting, payments, digital banking, P2P lending, crowdfunding, robo-advising, and InsurTech.

FTA 4002. Financial Technologies. (3 Credits)

Credit Hours: (3-0-3) Prerequisites: MGNT 3200 and MGNT 3400 This course examines the information and communications tools, technologies, and standards integral to consumer, merchant, and enterprise services in the payments and financial service sectors. Explores technology's role in reshaping FinTech businesses. Technologies span messaging, communication networks and gateways, core processing, mobile and online software, and application program interfaces (APIs). Includes the challenges, standards, and techniques associated with securing systems and data.

FTA 4003. Commercial Banking & FinTech. (3 Credits)

Credit Hours: (3-0-3) Prerequisites: MGNT 4601 The FinTech revolution is creating significant disruption to the traditional processes of managing and regulating financial institutions, especially banks. Digital technology is increasingly altering basic financial intermediation functions such as payment processing, risk management, information dissemination, price discovery, capital raising, and consumer expectations concerning access to funds and the timing of loan decisions. Understanding, assessing and forecasting FinTech's impact on banking is particularly important because proper management and oversight of financial institutions is essential to the efficient operation of the national, as well as global, economy. In this course, students will learn about the principles and practices of commercial bank management, bank regulation, and the tradeoffs between risk and return. Challenges presented by the FinTech evolution, including traditional and emergent competitors as well as demographic, social, and technology forces driving change in the industry, will be integrated throughout the entire course.

FTA 4005. Intro Financial Data Analytics. (3 Credits)

Credit Hours: (3-0-3) Prerequisites: MGNT 3200 and MGNT 3341 This course provides the foundation for financial data analytics used in business and FinTech applications. The objective of this course is for students to gain experience in analyzing financial data using modern machine learning techniques, statistical methods, and prediction models. Students will develop computational skills to perform data analysis using a modern statistical programming environment, and apply these skills to address a range of problems encountered by business firms, including those in the FinTech industry. The topics discussed include an introduction to R language, visualization of financial data, cluster analysis, simple and multiple linear regression, classification models, high dimension data analysis using Lasso, tree regression, and model assessment and selection using cross validation. Students will have hands-on experience in the development of data analytics applications to analyze real world financial problems.

FTA 4100. Intro Info. Secur. for FinTech. (3 Credits)

Credit Hours: (3-0-3) Prerequisites: MGNT 3200 and MGNT 3400 The purpose of this course is to introduce the business student to the rapidly evolving and critical international arenas of privacy, information security, and critical infrastructure. This course is designed to develop knowledge and skills for security of information and information systems within organizations. It focuses on concepts and methods associated with security across several systems platforms, including internal and Internet-facing systems. The course utilizes a world view to examine critical infrastructure concepts as well as techniques for assessing risk associated with accidental and intentional breaches of security in a global network. It introduces the associated issues of ethical uses of information and of privacy considerations.