Financial Engineering and Risk Management

**FTEC 6002** Financial Engineering and Risk Management Internship (0 semester credit hours) Student gains experience and improves skills through appropriate developmental work assignments in a real business environment. Student must identify and submit specific business learning objectives at the beginning of the semester. The student must demonstrate exposure to the managerial perspective via involvement or observation. At semester end, student prepares an oral or poster presentation, or a written paper reflecting on the work experience. Student performance is evaluated by the work supervisor. Pass/Fail only. Department consent required. (0-0) S

**FTEC 6301** Financial Accounting Information and Analysis (3 semester credit hours) This course discusses the fundamental concepts of accounting and financial reporting as presented from the perspective of the outside investor, and so focuses on the construction, analysis, and projection of financial information. (3-0) Y

**FTEC 6302** Financial Markets and Institutions (3 semester credit hours) This course develops the fundamental concepts of finance by examining financial assets and their markets, their participants and their operation with emphasis on the valuation and management of different financial assets. (3-0) R

**FTEC 6303** Asset Pricing and Management (3 semester credit hours) The objective of this course is to examine and evaluate approaches to asset pricing and management. (3-0) R

**FTEC 6304** Corporate Finance and Risk Management (3 semester credit hours) This course focuses on corporate finance and corporate risk management. (3-0) Y

**FTEC 6305** Introduction to Mathematics in Finance (3 semester credit hours) The objective of this course is to introduce the essentials of mathematical finance and its applications. (3-0) R

**FTEC 6306** Advanced Mathematics in Finance (3 semester credit hours) This course focuses on numerical methods used in finance. (3-0) R

**FTEC 6310** Financial Information and Analytics (3 semester credit hours) This course develops the use of different software tools to collect, manage, and analyze data from different sources in order to solve financial problems. (3-0) Y

**FTEC 6311 (BUAN 6311)** Financial Technology I (3 semester credit hours) This course builds on financial information and analytics to understand and develop new financial technologies. Prerequisite: **FTEC 6310**. (3-0) Y

**FTEC 6312** Financial Technology II (3 semester credit hours) This course focuses on blockchain technologies and smart contracts, and their uses. (3-0) Y

**FTEC 6313** Cloud Computing and Cyber Security (3 semester credit hours) This course covers core issues in cloud computing and cyber security. (3-0) Y

**FTEC 6319** Mathematics for Financial Analytics (3 semester credit hours) This course develops the basic mathematical and statistical concepts used in business analytics and machine learning. (3-0) Y

**FTEC 6320** Statistical Methods for Financial Analytics (3 semester credit hours) This course develops the
fundamental statistical concepts and tools used in the analysis of financial data. (3-0) Y

**FTEC 6321** Advanced Statistical Methods for Financial Analytics (3 semester credit hours) This course develops and applies more advanced statistical concepts and tools to the analysis of financial data. Prerequisite: **FTEC 6320**. (3-0) Y

**FTEC 6331** Risk Evaluation and Management (3 semester credit hours) This course develops essential techniques for evaluating and managing the risks of various types of businesses. Prerequisites: **FTEC 6320** and **FTEC 6321**. (3-0) R

**FTEC 6334** Financial Applications of Machine Learning (3 semester credit hours) This course examines the use of machine learning techniques in finance. Prerequisite: **FTEC 6319**. (3-0) R

**FTEC 6V98** Financial Technology and Analytics Internship (1-9 semester credit hours) Student gains experience and improves skills through appropriate developmental work assignments in a real business environment. Student must identify and submit specific business learning objectives at the beginning of the semester. The student must demonstrate work on significant projects. At semester end, student prepares an assignment reflecting on the work experience. Student performance is evaluated by the work supervisor. Pass/Fail only. May be repeated for credit as topics vary (9 semester credit hours maximum). ([1-9]-0) R

**FTEC 6V99** Special Topics in Financial Technology and Analytics (1-9 semester credit hours) May be lecture, readings, or individualized study. May be repeated for credit as topics vary (9 semester credit hours maximum). Instructor consent required. ([1-9]-0) R