FINANCIAL TECH (FTA)

FTA 2400 Intro to Financial Technology   3 Credits
This course introduces the fundamentals of Financial Technology. It explores what new financial technologies are emerging and how the technological advances in data analytics are enabling the innovation in the financial industry. It also examines new services and business models in various area of banking, insurance and financial asset management.

FTA 2410 Coding for Fin Tech   3 Credits
This course covers the design and development of dynamic, data-driven financial applications using client and server-side architecture. It focuses on various application development techniques for user and mobile friendly design. It also introduces how to develop financial applications conforming to the industry standards.

FTA 2420 Data Analytics for Fin Tech   3 Credits
This course introduces core statistical skills and data analytics techniques used to manipulate and analyze financial datasets. Students will learn how to interpret outcome from data analysis for efficient and effective decision-making, consumer/business intelligence, problem identification and forecasting.

FTA 2430   Cyber Security for Fin Tech   3 Credits
This course covers cyber security principles of financial technologies. Students will learn about threats, vulnerabilities, risks, and the controls to handle them. The course will introduce legal, ethical, and compliance issues that arise when working with financial infrastructure in a global economy

FTA 2440 Financial Technologies & Svc   3 Credits
This course covers the foundations of financial technologies and services. It focuses on the usage of technology that powers financial ecosystems, digital finance platforms, mobile payments, and digital asset management. Students will explore the characteristics and functions of electronic and mobile payment systems.

FTA 3055 Innovative Solutions Fin Tech   3 Credits
This course examines cases of new and emerging services and business models in the financial industry. It also focuses on how to identify business opportunities in FinTech and analyze business feasibility and sustainability. Students examine business models in FinTech.

FTA 3810 Payment Processing   3 Credits
This course focuses on the payment process ecosystem, lifecycle, regulation, security, fraud protection, and payment networks. The student will learn the products and services of the payments, fraud and risk reduction strategies, and roles & responsibilities of card issuers, acquirers, merchants, and strategies for maximizing card usage while minimizing loss associated with card use. The student will also learn about payments negotiations, risk management, customer relationships, principles of authorization, settlement, chargeback, and procedures, strategies, and best practices for acquiring merchants.

FTA 3850 Digital Payments Security   3 Credits
This course examines security issues in the Payments vertical. Students explore application security addressing the challenges and weak points of applications, learn the tools and techniques of machine learning as a defensive security strategy overcoming the continuous automatic attack generated by machines, and engage in hands-on practice in penetration testing. Payments framework and standards including NIST cybersecurity framework, ISO 27001 information security management, and Payment Card Industry Data Security Standards (PCI DSS) will be discussed. Administration of the information security function including strategic planning process, policies, procedures, and staffing functions necessary to organize and administer ongoing security functions will be discussed. In addition, fraud, regulation, security practices, security architecture, competitive intelligence, and operating environments are emphasized throughout the course.

FTA 3860 Emerging Payment Technologies   3 Credits
Electronic payments are the life blood of e-Commerce. They are expanding rapidly and changing because of the pervasive use of electronic devices, whose use is not confined to consumer transactions. The course covers a wide variety of electronic payment mechanisms used to make payments worldwide. The course is designed to stimulate creative thinking about the use of new technologies in the movement of money, from small peer-to-peer transactions through the largest interbank payments. Even though everyone is familiar with money on a day-to-day basis, very few people understand how money actually moves. Payments are complex because they usually involve at least five parties -- in addition to the buyer and seller there are also the buyer's bank, the seller's bank and the country's central bank, and this does not even include service providers who transmit payment data and aggregate transactions. The buyer and seller must communicate with each other concerning the transaction, then instructions must be transmitted to the buyer's bank, which then takes action at the central bank to cause money to appear in the seller's account in the seller's bank. When different currencies are involved, the central banks of two countries are involved. Every payment system must provide for secure communication of payment orders. The course covers banking systems, e-payment security, foreign exchange, Internet banking, wireless payments, stored-value cards, micropayments, peer-to-peer payments, large-scale B2B payments and the future of money.

FTA 3890 Experiential Learning   3 Credits
Students engage in a team-based interactive virtual experiential learning with a collaborating industry partner to gain on-the-job experience. A virtual collaboration platform is used to enroll, onboard, empathize, reboot, experiment, and deliver business solutions for client problems. Students get mentored, trained, and practice on tools and techniques used in industry. Student progress is tracked using a feedback loop to improve their learning. Prototyping and experimentation are encouraged to understand "real world" issues. Partner companies share their anonymized dataset, tools and techniques. Coaching activities including design thinking, backlog management, and business modeling are used in this course.

FTA 4001 Foundations of Fin Tech   3 Credits

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, roboadvising, and InsurTech.

FTA 4002 Financial Technologies   3 Credits

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 in Fin Tech   3 Credits

The FinTech revolution is creating significant disruption to the traditional processes of managing and regulating financial institutions, especially banks. 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 revolution, 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 to Financial Data Analyt   3 Credits

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.

FTA 4050 Fin Tech Apprenticeship   6 Credits

The FinTech revolution is creating significant disruption to the financial services sector. Understanding, assessing and forecasting FinTech's impact on financial services is particularly important because of the role of financial services in the global, economy. The course is designed to prepare you for the workforce. You will acquire skills, competencies, understanding and work experience beyond you could gain otherwise. The course covers interviewing and job preparation skills, soft skills, oral and written skills, technical skills reinforcement, apprenticeship and presentation skills.

FTA 4100 Intro to Info Security Fin Tec   3 Credits

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.

FTA 4110 Intro to Program for Fin Tech   3 Credits

This course builds upon the student's foundation of programming principles through the introduction of a programming language such as Python and going through other introductory topics of programming for Fintech technologies. Topics covered in this course are divided into 4 groups: (1) Basic of Python and OOP basics, (2) Advanced Python and OOP, GUI Development (3) Data Programming using Python and (4) Introductory programming for FinTech technologies