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Uconn online masters

FNCE 5710 - Introduction to Financial Models (3 credits) This course is a quantitative introduction to time, risk, and arbitrage valuation models used in equity, credit, and derivatives markets. Covered models include discounted cash flow models, equity valuation models, asset pricing models, term structure models, binomial trees and other derivatives models. Other covered topics include: the theory of active portfolio management, portfolio performance evaluation, elements of financial risk management, the efficient market hypothesis, the behavioral finance critique, and technical analysis. Students new to Finance are encouraged to complete the online Bloomberg's BML very early in the course or, preferably, before taking the course, for an introduction and overview of financial markets and institutions. (no pre-req.) **FNCE 5711 - Foundations of Fintech (3 credits)** This course provides an overview of Fintech. It consists of three modules. Module A: Fintech's four thematic areas: Paying for goods and services, Savings and investment products, Credit and loan products, and Managing risk. Module B: Fintech's four enabling technologies: Distributed computing, AI and big data, Cryptography and Blockchain. Module C: Fintech's four perspectives: The disruptive companies, The incumbent financial institution, Societal effects and regulatory responses, and the private equity investor. (no pre-req.) **FNCE 5712 - Fintech Economics & Business Models (3 credits)** This course addresses the economics within the Fintech ecosystem, its various business models, and value creation with emphasis on the competitive landscape in Payments, Wealth management, Crowdfunding and Lending. Topics include contract theory and game theory. (pre-req. FNCE 5710 and 5711) **FNCE 5720 - Cryptocurrencies (1.5 credits)** This course examines the BTC ecosystem, XRP, ETH, tokens and ICOs and CBCC. (Pre-req. OPIM 5513) **OPIM 5603 - Statistics in Business Analytics (3 credits)** Advanced level exploration of statistical techniques for data analysis. Students study the concepts of population and sample; discuss the difference between population parameters and sample statistics, and how to draw an inference from known sample statistics to usually unknown population parameters. Topics will focus on rigorous statistical estimation and testing. Prepares students with the skills needed to work with data using analytics software. **OPIM 5604 - Predictive Modeling (3 credits)** Introduces the techniques of predictive modeling in a data-rich business environment. Covers the process of formulating business objectives, data selection, preparation, and partition to successfully design, build, evaluate and implement predictive models for a variety of practical business applications. Predictive models such as neural networks, decision trees, Bayesian classification, and others will be studied. The course emphasizes the relationship of each step to a company's specific business needs, goals and objectives. The focus on the business goal highlights how the process is both powerful and practical. (Co req OPIM 5603) **OPIM 5512 - Data Science using Python (3 credits)** Data science concepts using the Python programming language. Data wrangling and management using Pandas; visualization using Matplotlib; fundamentals of matrix algebra and regression, with illustrations using Numpy; machine learning, focusing on fundamental concepts, classification, and information extraction. (Pre req 5604) **OPIM 5513 - Blockchain (1.5 credits)** This course examines the foundations of blockchain technology from multiple perspectives, including engineering, law, and economics. The course will cover blockchain technologies, distributed ledger technology, cryptocurrencies (e.g., Bitcoin), and their applications, implementation, and security concerns. Students will learn how these systems work; analyze the security and regulation issues relating to blockchain technologies, and understand the impact of blockchain technologies on financial services and other industries. The student will get a detailed picture of blockchain business networks' components and structures, such as ledgers, smart contracts, consensus, certificate authorities, security, roles, transaction processes, participants, and fabrics. Other Electives Acctg, Mktg, Mgmt, from MBA curriculum **FNCE 5721 - Blockchain Applications (3 credits)** This course expands on PKC, data structures, Consensus algorithms, data structures - Merkle trees Consensus Algorithms. Explores uses of blockchain as a GPT technology. (pre-req. FNCE 5711, 5720, OPIM 5513). **FNCE 5722 - Algorithmic and High Frequency trading (3 credits)** Quantitative trading models implemented on computer systems for automatic execution. Examines popular trading strategies. Emphasizes hands-on experience; students will use Python to write, back test, and refine strategies. Focus on finance machines and automatic bots as essentials part of the current trading infrastructure in the U.S. market. Exposes students to the world of high frequency trading and market making. Intent is to be less theoretical but more practical so that students will experience firsthand some of the issues that high frequency trading system operators have. (Pre-req. FNCE 5710, Co-req OPIM 5512) **FNCE 5757 - FinTech Workshop (3 credits)** Students apply fintech skills learnt to identify a potentially disruptive venture in the financial services industry. Students will formulate a comprehensive professional business plan and proposal. Elements of valuations in the venture capital markets are discussed. (Pre-req. 5712) **FNCE 5352 (FRM) - Financial Programming and Modeling (3 credits)** This course will introduce the students to a wide variety of algorithms that are used in machine learning applications. Students will code a few algorithms completely and learn to use software packages that implement others. Models will include neural networks, decision trees, naïve Bayes classifier, support vector classification, support vector machines, feature selection and random forests, deep learning, and others. Instruction and assignments will use the R and Python programming ecosystems. Students will be exposed to Machine Learning at scale using the Keras and TensorFlow libraries. Throughout the course, special attention will be given to applications of these algorithms to finance. (Pre-req. FNCE 5710, Co-req. OPIM 5512)) **FNCE 5353 (FRM) - Financial Modeling with C# (3 credits)** The goal of this course is to introduce the student to financial models within the framework of a C# deployment. It is meant to fully prepare the student for a work environment. This course will cover the gamut of C#, giving the student fluency in programming financial applications. It will introduce modelling and data structures as well. Financial applications begin with simple interest rate calculations and progress through option pricing models. Applications focus on numerical methods. All code will be written in C#. (Pre-req. FNCE 5710, OPIM 5604) **OPIM 5514 - Mobile Application Development (3 credits)** The focus of this course is to use cross-platform mobile application development technologies to develop mobile apps for both iOS and Android systems. Students will learn how to plan and create their own mobile apps. Graphical User Interface (GUI) design skills as well as programming logics will be taught and emphasized throughout the course. Upon completion of this course, students should be able to use the programming skills they learn to develop useful and user-friendly mobile apps for both iOS and Android devices. **OPIM 5272 - Data Management and Process Modeling (3 credits)** Introduces common techniques for relational data management, including conceptual modeling, table design and Structured Query Language (SQL). Additionally covers topics from business process re-engineering, with a focus on process modeling and how process improvement influences favorable database design. **OPIM 5501 - Visual Analytics (3 credits)** Explores techniques and best practices in visualizing data. From simple cross tabs to more complex multi-dimensional analysis, explores why particular data visualizations can better illustrate patterns and correlations inherent in the data itself. Examines cognitive function and its role in data visualization designs; showing that data visualization can reveal answers and questions alike. Utilizing state of the art software, the use of parameters, filters, calculated variables, color, space and motion to visually articulate the data are surveyed. The use of dashboards to quickly reveal data-driven information that has daily relevance to executives, managers, supervisors and line personnel are investigated. Common pitfalls in visualization design and why less is often more are considered. (Pre req OPIM 5604) **OPIM 5509 - Introduction to Deep Learning (3 credits)** Introduction to topics related to deep learning and will build on your previous experience in predictive analytics. Use of neural networks for a host of data and applications – including time series data, text data, geospatial data, and image data. (Pre req OPIM 5604) **OPIM 5671 - Data Mining and Business Intelligence (3 credits)** Discusses data mining techniques that can be utilized to effectively sift through large volumes of operational data and extract actionable information and knowledge (meaningful patterns, trends, and anomalies) to help optimize businesses and significantly improve bottom lines. The course is practically oriented with a focus of applying various data analytical techniques in various business domains such as customer profiling and segmentation, database marketing, credit rating, fraud detection, click-stream Web mining, and component failure predictions. (Pre req OPIM 5604 or BADM 5604) **100% Online, 30-Credit Master's Degree in Research Methods, Measurement, and Evaluation (RMME)** Focus on Program Evaluation, Psychometrics, & Research Methods Earning a degree in Research Methods, Measurement, and Evaluation will prepare you to formulate concrete research and evaluation questions, select appropriate research designs and evaluation methods to investigate these questions, construct research and evaluation tools to collect high-quality data, use statistics to analyze gathered data, and interpret quantitative data analyses to inform decision making and policy. The University of Connecticut's Master's of Arts in Research Methods, Measurement, and Evaluation (RMME MA) is a 100%-online, 30 credit-hour program consisting of 6 core courses paired with 4 electives. Offered through the Neag School of Education's Educational Psychology Department, the RMME MA places extensive focus on research methods, techniques, and practices; quantitative data analysis; educational measurement; and program or policy evaluation. The RMME MA program is designed to create versatile practitioners, capable of engaging in multiple fields across disciplines. Both intellectually stimulating and rigorous, this 100% online, research-based degree promotes the use of Research Methods, Measurement, and Evaluation skills through a blend of theoretical knowledge and hands-on applications to facilitate research and program evaluation practice. You will learn measurement, data analysis, and evaluation techniques used daily in schools, industry and corporate environments, military entities, federal or state/local governments, and other formal or informal educational settings. The RMME program's outstanding faculty are committed to providing: Well-organized, interactive online course curricula with clear learning objectives and expectations Exposure to a diverse array of theories and practices within the fields of research and evaluation Student-faculty interaction that encourages your professional development Support in building a network of classmates & peers with whom you will continue to connect into the future The Research Methods, Measurement & Evaluation online master's degree program is designed for educators and various practitioners ranging from corporate training & learning designers through sales force management seeking program evaluation expertise. Further, it is an ideal option for recent college graduates currently in or entering the workforce, who want to increase their professional marketability and/or move into the research side of education. RMME's asynchronous, online coursework focuses on current and emerging topics in areas related to: Classical and modern measurement theory and applications Instrument development Quantitative research methods Program evaluation Applied statistics Educational assessment Return on Investment (ROI) Assessment, and more! Credits earned in UConn's online RMME master's degree program are transferable to UConn's Program Evaluation Online Graduate Certificate program! Apply Today Request Information Information Session