**CURRICULUM OVERVIEW**

The program, like the changing finance industry itself, is incredibly flexible. As a Financial Analytics student, you’ll work closely with a faculty advisor, who will help you choose a set of courses that are best aligned with your career goals.

**FOUNDATIONAL COURSES**

Choose one of the following.
- Introduction to Financial Engineering
- Introduction to Financial Risk Management
- Pricing and Hedging
- Probability Theory for Financial Engineering
- Introduction to Stochastic Calculus for Finance
- Financial Statement Analysis

**CORE COURSES**

- Introduction to Bloomberg and Thomson Reuters (1 credit)
- Introduction to R (1 credit)
- Introduction to Python for Financial Applications (1 credit)
- Foundations of Financial Data Science (2 credits)
- Practical Aspects of Database Design (1 credit)
- Applied Statistics with Applications in Finance

**DATA VISUALIZATION**

Choose one of the following.
- Data Visualization Applications
- 2D Data Visualization Programming for Financial Applications

**TIME SERIES**

Choose one of the following.
- Time Series in Finance
- Time Series Analysis
- Financial Econometrics
- Multivariate Statistics and Advanced Time Series in Finance

**MACHINE LEARNING**

Choose one of the following.
- Statistical Learning in Finance
- Statistical Learning and Analytics
- Machine Learning in Finance

**BIG DATA**

Choose one of the following.
- Financial Technology
- Big Data Analytics

**OPTIMIZATION**

Choose one of the following.
- Portfolio Theory and Applications
- Optimization Models and Methods in Finance
- Nonlinear Optimization

**CAPSTONE**

Your degree culminates in a capstone course, where you’ll work on real projects given by companies through internships or research projects produced by faculty with industry partners.

**HANLON FINANCIAL SYSTEMS CENTER**

Classes in the Financial Analytics program make generous use of the high-tech Hanlon Financial Systems Center and its two labs, which offer the latest in data analysis and visualization tools. The Hanlon Center allows for the analysis of real-time and historical data sets from Bloomberg and others, with the computing and processing power required to work with incredibly vast amounts of information with speed. Courses prepare students to make better decisions about finance, from portfolio management to risk assessment, confidently and quickly.

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Today’s technology-intensive finance industry is eagerly seeking analysts who bring statistical and programming skills to banks, hedge funds and wealth management offices. The master’s in Financial Analytics will teach you to apply your physics, statistics or engineering skills in the finance industry.

**Please note:** Certain online courses may only be available during particular semesters. Consult your advisor for complete details.

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