

**Certificate Program for Undergraduates in Financial Economics and Managerial Analytics – Fast Facts**

**Purpose of Certificate Program**

- Prepare students for careers in financial services and consulting
- Teach financial, analytical, and strategic models used to make business decisions
- Learn about different business scenarios including mergers and acquisitions, evaluation, asset management, new products, strategy formulation, supply chain design, and pricing
- Develop critical thinking and business application skills

**Fast Facts**

- Two certificates offered: 1) Financial Economics (FE) and 2) Managerial Analytics (MA)
- Each certificate consists of four courses, taught at advanced level by Kellogg faculty
- Optional summer internship or research project can be secured
- Career services counselor works exclusively with certificate students
- Rigorous prerequisite courses required in calculus and linear algebra, probability, statistics/econometrics, and microeconomics; students interested in the MA certificate must also take a course in optimization (see next page for prerequisite details)
- Both certificates open to all NU students who satisfy or will satisfy the course prerequisites by the fall of enrollment
- Application required; must already be NU undergraduate student to apply

**About the Certificates**

Certificate	Courses	What you might do with this knowledge after college
<p><b><u>Financial Economics</u></b></p> <ul style="list-style-type: none"> <li>• Focus on corporate finance, capital markets and securities pricing</li> <li>• All NU students who meet the prerequisites can apply, regardless of school or major</li> </ul>	<ul style="list-style-type: none"> <li>• Principles of Finance</li> <li>• Investments</li> <li>• Derivatives</li> <li>• Topics in Financial Economics (this year, fixed income)</li> </ul>	<ul style="list-style-type: none"> <li>• Perform cash-flow analyses and build financial models</li> <li>• Obtain, finance, and compare capital structure choices</li> <li>• Analyze potential mergers and acquisitions</li> <li>• Assist in capital budgeting and capital allocation decisions</li> <li>• Assist in portfolio investment and asset management</li> <li>• Perform risk management strategies</li> <li>• Research cash flow and valuation estimates</li> <li>• Support client interactions with analysis and presentations</li> </ul>
<p><b><u>Managerial Analytics</u></b></p> <ul style="list-style-type: none"> <li>• Focus on applying business analytical skills in context of finance, marketing, operations and strategy decisions</li> <li>• All NU students who meet the prerequisites can apply, regardless of school or major</li> </ul>	<ul style="list-style-type: none"> <li>• Analytical Decision Modeling</li> <li>• Principles of Finance</li> <li>• Pricing</li> <li>• Operations and Supply Chain Strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze business decisions using modeling techniques</li> <li>• Analyze potential mergers and acquisitions</li> <li>• Develop investment decisions in supply chain networks</li> <li>• Analyze and optimize supply chain networks</li> <li>• Support pricing decisions through analysis</li> <li>• Conduct statistical analysis of current trends in business practices, products and industry competition</li> <li>• Use spreadsheets and statistical software to analyze sales and operations and develop forecasts</li> <li>• Support client interactions with analysis and presentations</li> </ul>

**Admission**

- Applications due during winter quarter; most students apply during their sophomore year, but many apply during junior year
- Accept about 50 students in each certificate (maximum total of 100 total each year)
- Application decisions based on application form, grades, two faculty references and a brief essay

**More Information**

- [kellogg.northwestern.edu/certificate](http://kellogg.northwestern.edu/certificate)
- Carol Henes, director. 847-467-0601, [c-henes@kellogg.northwestern.edu](mailto:c-henes@kellogg.northwestern.edu)

**Kellogg School of Management Certificate Program for Undergraduates - Prerequisites**

To be eligible for **the Financial Economics (FE) Certificate** students must complete several prerequisite courses in the following four academic areas: calculus and linear algebra, probability, statistics and econometrics, and microeconomics. **The Managerial Analytics (MA) Certificate** requires prerequisite courses in the same four areas, plus a course in optimization. There are different ways to meet these requirements, and the most common ones are shown below. Students should have completed most of the prerequisites when they apply. Any remaining prerequisite courses should be successfully completed (“B” or better) during the spring or summer quarter prior to entering the program in the fall. Some of the prerequisite courses listed below have their own prerequisites that are determined by the department offering them. Interested students should check the Undergraduate Catalog or appropriate school or department for specifics.

**FINANCIAL ECONOMICS CERTIFICATE**

<b>1. Calculus and Linear Algebra Requirement</b>
<b>A. WCAS Courses Accepted</b>
Math 290-1+2+3 (MENU) <b>OR</b>
Math 291-1+2+3 (MENU Accelerated) <b>OR</b>
Math 281-1+2+3 (ISP) <b>OR</b>
Math 285-1+2+3 (MMSS) <b>OR</b>
Math 230 + 234 + 240 <b>OR</b>
<b>B. McCormick Courses Accepted</b>
Honors Calc. ES APPM 252-1 + 2 <b>OR</b>
Honors GEN_ENG 206-1+2+3+4 <b>OR</b>
Non Honors GEN_ENG 205-1+2+3+4
<b>2. Probability Requirement</b>
<b>A. WCAS Courses Accepted</b>
Math 310-1 <b>OR</b>
Math 383 (ISP) <b>OR</b>
Math 385 (MMSS) <b>OR</b>
<b>B. McCormick Courses Accepted</b>
IEMS 202 <b>OR</b>
EECS 302
<b>3. Econometrics/Statistics Requirement</b>
<b>WCAS Courses ONLY meet this requirement</b>
Econ 381-1+2 <b>OR</b>
Math 386-1+2 (MMSS)
<b>4. Microeconomics Requirement</b>
<b>WCAS Courses ONLY meet this requirement</b>
Econ 310-1 <b>OR</b>
MMSS 211-1

**MANAGERIAL ANALYTICS CERTIFICATE**

<b>1. Calculus and Linear Algebra Requirement</b>
<b>A. WCAS Courses Accepted</b>
Math 290-1+2+3 (MENU) <b>OR</b>
Math 291-1 +2+3 (MENU Accelerated) <b>OR</b>
Math 281-1+2+3 (ISP) <b>OR</b>
Math 285-1+2+3 (MMSS) <b>OR</b>
Math 230 +234+240 <b>OR</b>
<b>B. McCormick Courses Accepted</b>
Honors Calc. ES APPM 252-1+2 <b>OR</b>
Honors GEN_ENG 206-1+2+3+4 <b>OR</b>
Non Honors GEN_ENG 205-1+2+3+4
<b>2. Probability Requirement</b>
<b>A. WCAS Courses Accepted</b>
Math 310-1 <b>OR</b>
Math 383 (ISP) <b>OR</b>
Math 385 (MMSS) <b>OR</b>
<b>B. McCormick Courses Accepted</b>
IEMS 202 <b>OR</b>
EECS 302
<b>3. Econometrics/Statistics Requirement</b>
<b>A. WCAS Courses Accepted</b>
Econ 381-1 <b>OR</b>
Math 386-1 <b>OR</b>
<b>B. McCormick Course Accepted</b>
IEMS 303
<b>4. Microeconomics Requirement</b>
<b>WCAS Courses ONLY meet this requirement</b>
Econ 310-1 <b>OR</b>
MMSS 211-1
<b>5. Optimization Requirement</b>
<b>A. WCAS Course Accepted</b>
Math 368-0 <b>OR</b>
<b>B. McCormick Course Accepted</b>
IEMS 313
Students who participate in the MA Certificate must also take IEMS 304 concurrently with their certificate courses (if they haven’t taken it before entering the program). MA students who took Econ 381-1 or Math 386-1 (MMSS) do not have to take the second course of those sequences.