

# K CERTIFICATE PROGRAM FOR UNDERGRADUATES

## PURPOSE OF CERTIFICATE

- Prepare students for careers in financial services, consulting, and any field that analyzes data to make decisions
- Learn about business analytics, strategic models and tools, and business applications
- Study 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

## AT A GLANCE

- Two certificates offered: 1) Financial Economics and 2) Managerial Analytics
- Four MBA-level courses, taught by Kellogg faculty
- May take the courses over one or two years
- Curriculum is quantitative in nature and requires advanced math knowledge and skills
- Students must certain prerequisite courses before participating in the program; prerequisites are considered part of the knowledge base of the program (*See reverse side for prerequisite details*)
- Open to all NU students, regardless of school or major, who are on track to complete the prerequisite courses by the fall program start date
- Dedicated career advisor who provides custom-tailored support and resources
- Application required; must be current NU undergraduate student to apply

### FINANCIAL ECONOMICS

### MANAGERIAL ANALYTICS

**Eligibility** Open to all Northwestern students who have taken prerequisite courses in:

- Advanced Calculus & Linear Algebra
- Probability
- Econometrics
- Microeconomics

Open to all Northwestern students who have taken prerequisite courses in:

- Advanced Calculus & Linear Algebra
- Probability
- Statistics or Econometrics
- Microeconomics
- Optimization

**Focuses on** Corporate finance, capital markets, securities pricing

Business analytics skills in the context of finance, operations and strategy discussions

**Courses**

- Principles of Finance
- Investments
- Derivatives
- Topics in Financial Economics

- Principles of Finance
- Competitive Strategy
- Operations and Supply Chain Strategy
- Topics in Managerial Analytics

## ADMISSIONS

- Accept about 50 students in each certificate every year (maximum total of 100)
- Applications due during winter quarter; admission decisions made during spring quarter
- Admission decisions based on application form, grades, faculty reference, resume and a brief essay
- A (minimum) combined 3.0 average among all prerequisite courses is required to be considered for admission

LEARN MORE ABOUT THE CERTIFICATE PROGRAM FOR UNDERGRADUATES:

[kellogg.northwestern.edu/certificate](http://kellogg.northwestern.edu/certificate)

[kelloggundergrad@northwestern.edu](mailto:kelloggundergrad@northwestern.edu)

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NORTHWESTERN UNIVERSITY

**Kellogg**  
School of Management *inspiring growth*

# KELLOGG CERTIFICATE PROGRAM FOR UNDERGRADUATES

## PREREQUISITE COURSES

To be eligible for the CPU, students must complete certain prerequisite courses in the subjects listed below. A (minimum) combined 3.0 average among all prerequisite courses is required to be considered for admission.

Please be aware that most of CPU prerequisite courses have their own prerequisites courses, so check the Undergraduate Catalog and/or ask the appropriate department for details. Completing the prerequisites generally takes two years (freshman and sophomore).

### Calculus & Linear Algebra

#### FINANCIAL ECONOMICS & MANAGERIAL ANALYTICS REQUIREMENT

- Option 1: MATH 230, 234 and 240
- Option 2: MATH 290-1, 2, 3 (MENU)
- Option 3: MATH 291-1, 2, 3 (MENU accelerated)
- Option 4: MATH 281-1, 2, 3 (for ISP students)
- Option 5: MATH 285-1, 2, 3 (for MMSS students)
- Option 6: MATH 230, 234 **AND**  
GEN\_ENG 205-1 & 2 or GEN\_ENG 206-1 & 2
- Option 7: Honors Calculus ES-APPM 252-1 & 2 **AND**  
GEN\_ENG 205-1 & 2 or GEN\_ENG 206-1 & 2

### Probability

#### FINANCIAL ECONOMICS & MANAGERIAL ANALYTICS REQUIREMENT

- |                      |                           |
|----------------------|---------------------------|
| Option 1: MATH 314-0 | Option 6: MATH 385-0      |
| Option 2: MATH 310-0 | Option 7: IEMS 202-0      |
| Option 3: MATH 311-1 | Option 8: EECS 302-0      |
| Option 4: STAT 320-1 | Option 9: BMD_ENG 220-0   |
| Option 5: STAT 383-0 | Option 10: CHEM_ENG 312-0 |

### Econometrics / Statistics

#### FINANCIAL ECONOMICS REQUIREMENT

- Option 1: ECON 381-1\* & 2
- Option 2: MATH 386-1 & 2  
(for MMSS students)

*\*Check the Economics Department Website FAQ for Econ 381-1 prerequisite requirement*

#### MANAGERIAL ANALYTICS REQUIREMENT

- Option 1: ECON 381-1\*
- Option 2: MATH 386-1
- Option 3: IEMS 303 & 304\*\*
- Option 4: STAT 320-2 and IEMS 304\*\*
- Option 5: STAT 320-2 and STAT 350-0\*\*

*\*\*IEMS 304 or STAT 350 may be taken concurrently with CPU courses*

### Microeconomics

#### FINANCIAL ECONOMICS & MANAGERIAL ANALYTICS REQUIREMENT

- Option 1: ECON 310-1
- Option 2: MMSS 211-1 (for MMSS students)

### Optimization

#### MANAGERIAL ANALYTICS REQUIREMENT ONLY

*Not required for FE certificate*

- Option 1: MATH 368-0
- Option 2: IEMS 313-0
- Option 3: CHEM\_ENG 345-0