

Northwestern | Kellogg

Kellogg Certificate Program for Undergraduates Managerial Analytics & Financial Economics Prerequisite & Corequisite Requirements beginning 2020-21

Students pursuing either of the Kellogg Certificates must complete a series of prerequisite and corequisite requirements. The prerequisite requirements must be completed prior to beginning the program. Students are encouraged to complete as many of the corequisite courses as possible prior to the start of the program, but will have one year from the start of the program to complete them.

Notes and Considerations:

- **For the 2020-21 Application Year, FE applicants may choose to complete these requirements or the old FE requirements, which have been “grandfathered” in** (see our website for more information).
- Some of the program prerequisite and corequisite requirements require the completion of multiple courses
- Many of the program prerequisites and corequisites have their own prerequisite courses. See the Course Catalog for more information
- Some of the certificate courses require that specific corequisite courses be completed prior to enrollment. Students should be sure to review these course prerequisites and take them into consideration during their course planning
- If Northwestern has awarded test credit, that credit will count as completion of the course. If a student tests into a higher level course, completing that course will fulfill the prerequisite.
- The middle 50% of students admitted to the MA and FE certificates in Spring 2020 had prerequisite GPAs between 3.23 and 3.93. Students who earn a 3.0 average or above in their prerequisite courses are encouraged to apply.

Prerequisites: Must be completed prior to winter quarter of the year you apply

Applicants must complete the below prerequisite courses no later than the fall quarter immediately preceding the January application deadline to ensure that the prerequisite grades are reviewed during the application review process

Prerequisite Requirement 1: Calculus and Linear Algebra

Complete one of the below options:

Option 1: Regular Math

- ☐ MATH 230-0 or MATH 230-1 *and*
- ☐ MATH 234-0 or MATH 230-2 *and*
- ☐ MATH 240-0

Option 4: ISP

- ☐ MATH 281-1 *and*
- ☐ MATH 281-2 *and*
- ☐ MATH 281-3

Option 2: MENU

- ☐ MATH 290-1 *and*
- ☐ MATH 290-2 *and*
- ☐ MATH 290-3

Option 5: MMSS

- ☐ MATH 285-1 *and*
- ☐ MATH 285-2 *and*
- ☐ MATH 285-3

Option 3: MENU Accelerated

- ☐ MATH 291-1 *and*
- ☐ MATH 291-2 *and*
- ☐ MATH 291-3

Option 6: McCormick

- ☐ MATH 230-0 or MATH 228-1 or ES_APPM 252-1 (Honors) *and*
- ☐ MATH 234-0 or MATH 228-2 or ES_APPM 252-2 (Honors) *and*
- ☐ GEN_ENG 205-1 or GEN_ENG 206-1

Prerequisite Requirement 2: Microeconomics

☐ **Complete one of the following courses:**

ECON 310-1 *or*
MMSS 211-1 (MMSS only)

Kellogg Certificate Program for Undergraduates

Managerial Analytics & Financial Economics

Corequisites: Must be completed within one year of entering program

Corequisite Requirement 1: Probability

☐ **Complete one of the following courses:**

MATH 314-0* or

STAT 320-1* or

IEMS 202-0 or

BMD_ENG 220-0 or

MATH 310-1* or

STAT 383-0 (ISP) or

ELEC_ENG 302-0 or

CHEM_ENG 312-0

MATH 311-1* or

MATH 385-0 (MMSS) or

EECS 302-0 or

*MATH 226-0 is a prerequisite for these courses beginning in Fall 2020

Corequisite Requirement 2: Econometrics/Statistics

Complete one of the below options:

Option 1

☐ ECON 381-1

Option 3

☐ IEMS 303-0 and

☐ IEMS 304-0

Option 5

☐ STAT 320-2 and

☐ STAT 350-0

Option 2: MMSS

☐ MATH 386-1

Option 4

☐ STAT 320-2 and

☐ IEMS 304-0 and

Option 6

☐ STAT 383-0 (ISP only) and

☐ STAT 350-0 or IEMS 304

Corequisite Requirement 3: Optimization

☐ **Complete one of the following courses:**

MATH 368-0 or

IEMS 313-0 or

CHEM_ENG 345-0

Managerial Analytics (MA) and Financial Economics (FE) Course Prerequisites

The chart below lists each of CPU courses and which courses, if any, are prerequisites for the course. Students should familiarize themselves with these prerequisites prior to applying to the program and ensure that they plan their coursework accordingly.

Course	Course Prerequisites
FE 310-0: Principles of Finance (MA & FE)	Must have experience with linear regressions. Students who have not completed ECON 381-1, MATH 386-1, IEMS 303-0, IEMS 304-0, STAT 350-0, or an equivalent course covering linear regressions should complete a free virtual course on linear regressions prior to the first day of the FE 310. Virtual course details provided during CPU orientation.
FE 312-0: Investments (FE)	Prerequisite: FE 310; Corequisite: ECON 381-1, MATH 386-1, IEMS 304-0, STAT 350-0, or equivalent course
FE 314-0: Derivatives (FE)	Prerequisite: FE 310; Corequisite: Complete one of the courses listed in the table titled "Corequisite Requirement 1: Probability"
FE-316: Topics in Financial Economics – Derivatives II (FE)	FE 314
MA 322-0: Pricing (MA)	FE 310
MA 324-0: Operations & Supply Chain Strategy (MA)	FE 310
MA 326-0: Topics in Managerial Analytics - Analytics for Strategy (MA)	FE 310
MA 328: Competitive Strategy and Industrial Structure (MA)	FE 310 AND Econ 381-1, MATH 386-1, IEMS 304-0, STAT 350-0, or equivalent course