

Northwestern | Kellogg

Kellogg Certificate Program for Undergraduates Managerial Analytics & Financial Economics Pre-requisite & Co-requisite Requirements beginning 2020-21

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

Notes and Considerations:

- Some of the program prerequisite and corequisite requirements listed below require the completion of two courses to fulfill the requirement
- Many of the program prerequisite and corequisite courses have their own prerequisite courses. Some of these prerequisites are listed below. See the Course Catalog for a complete list.
- Some of the certificate courses require that specific program corequisite courses be completed prior to or concurrently with enrollment in the course. Students should be sure to review these course prerequisites and corequisites 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 requirement.
- 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.

Program Prerequisites

Applicants should complete the below prerequisite courses by the fall quarter immediately preceding the January application deadline to ensure that the prerequisite grades are reviewed during the application review process. One of the prerequisite courses may be completed during winter quarter of the application year.

Prerequisite Requirement 1: Calculus

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

Option 4: ISP

- MATH 281-1 *and*
- MATH 281-2

Option 2: MENU

- MATH 290-2 *and*
- MATH 290-3

Option 5: MMSS

- MATH 285-2 *and*
- MATH 285-3

Option 3: MENU Accelerated

- 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)

Prerequisite Requirement 2: Microeconomics

Complete one of the following courses:

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

*ECON 201, and ECON 202 are prerequisites for ECON 310-1

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Program Corequisites: Complete within one year of beginning the certificate

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 or corequisite for these courses; see the course catalog for more information.

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 7: Data Science Minor

STAT 301-1 and
 STAT 301-2 and
 STAT 301-3

Option 2: MMSS

MATH 386-1

Option 4

STAT 320-2 and
 IEMS 304-0

Option 6

STAT 383-0 (ISP only) and
 STAT 350-0 or IEMS 304

Only plan to use this option if you have been admitted to the minor

Kellogg Certificate Course Prerequisites

The chart below lists each of the MA 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.

MA Course	Certificate	Course Prerequisites & Corequisites
FE 310-0: Principles of Finance	FE & MA	Must be familiar with linear regressions. Students should complete ECON 381-1, MATH 386-1, IEMS 304-0, STAT 350-0, or an equivalent course covering linear regressions prior to FE 310. Students who have not taken one of these courses will be provided with a free online course that they should complete prior to FE 310 (over spring break).
FE 312-0: Investments	FE	Prerequisite: FE 310 Corequisite (may be taken concurrently with FE 312): ECON 381-1, MATH 386-1, IEMS 304-0, STAT 350-0, or equivalent course
FE 314-0: Derivatives I	FE	Prerequisite: FE 310 Corequisite (may be taken concurrently with FE 314): Probability course – complete one of the courses listed in the table titled “Corequisite Requirement 1: Probability”
FE 316-0: Topics in Financial Economics – Derivatives II	FE	Prerequisite: FE 314
MA 324-0: Operations & Supply Chain Strategy	MA	Prerequisite: FE 310
MA 326-0: Topics in Managerial Analytics - Analytics for Strategy	MA	Prerequisite: FE 310
MA 328-0: Competitive Strategy and Industrial Structure	MA (not offered in 2020-21)	Prerequisite: FE 310 AND Econ 381-1, MATH 386-1, IEMS 304-0, STAT 350-0, or equivalent course
MA 322-0: Pricing	MA (only offered in 2020-21)	Prerequisite: FE 310