

Northwestern | Kellogg

Kellogg Certificate Program for Undergraduates Managerial Analytics & Financial Economics Prerequisite & Corequisite Requirements beginning 2023-24

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 the higher level course will fulfill the requirement.
- 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 230-1 *and*
- MATH 230-2

Option 2: MENU

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

Option 3: MENU Accelerated

- MATH 291-2 *and*
- MATH 291-3

Option 4: ISP

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

Option 5: MMSS

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

Option 6: McCormick

- MATH 228-1 or ES_APPM 252-1 (Honors) *and*
- 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* <i>or</i> | STAT 320-1* <i>or</i> | IEMS 302-0 <i>or</i> | CHEM_ENG 312-0** |
| MATH 310-1* <i>or</i> | STAT 383-0 (ISP) <i>or</i> | ELEC_ENG 302-0 <i>or</i> | |
| MATH 311-1* <i>or</i> | MATH 385-0 (MMSS) <i>or</i> | BMD_ENG 220-0** <i>or</i> | |

*MATH 226-0 is a prerequisite or corequisite for these courses; see the course catalog for more information.

**Students are not permitted to take BMD_ENG 220-0 or CHEM_ENG 312-0 in addition to IEMS 303-0. Only one of these options may satisfy its respective corequisite requirement.

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 Major or Minor

STAT 301-1 *and*

STAT 301-2 *and*

STAT 301-3

OR

STAT 303-1 *and*

STAT 303-2 *and*

STAT 303-3

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

Kellogg Certificate Course Prerequisites

The chart below lists the CPU courses and applicable prerequisites for each course. Students should familiarize themselves with these prerequisites prior to applying to the program and 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 equivalent prior to FE 310. Students who have not completed this prereq will be provided free online coursework 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 – Real Estate | FE | Prerequisite: FE 310 |
| MA 324-0: Operations & Supply Chain Strategy | MA | Prerequisite: FE 310 |
| MA 326-0: Topics – Analytics for Strategy | MA | Prerequisite: FE 310 |
| MA 328-0: Competitive Strategy and Industrial Structure | MA | Prerequisite: FE 310 AND Econ 381-1, MATH 386-1, IEMS 304-0, STAT 350-0, or equivalent course |