

Northwestern | Kellogg

Kellogg Certificate Program for Undergraduates Managerial Analytics Prerequisites & Corequisite Requirements

Students pursuing the Managerial Analytics certificate 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:

- Some of the program prerequisite and corequisite requirements require the completion of multiple courses
- Many of the program prerequisites have their own prerequisite courses. Check the Course Catalog for more information
- Some of the certificate courses require that specific corequisite courses be completed prior to enrollment (see back for course list). 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 2019 had a combined prerequisite and corequisite GPAs between 3.3 and 3.8. Students who have earned 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)

Northwestern | Kellogg

Kellogg Certificate Program for Undergraduates Managerial Analytics

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 3

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) 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	Course Prerequisites
FE 310-0: Principles of Finance	Must have experience with linear regressions. Students who have not yet completed ECON 381-1, MATH 386-1, IEMS 303-0, IEMS 304-0, STAT 350-0, or an equivalent course that covers linear regressions, must complete a free online course covering linear regressions prior to the first day of the course. Online course information will be provided during CPU orientation.
MA 324-0: Operations & Supply Chain Strategy	N/A
MA 326-0: Topics in Managerial Analytics - Analytics for Strategy	N/A
MA 328: Competitive Strategy and Industrial Structure	Econ 381-1