Kellogg School of Management | Certificate Program for Undergraduates

NORTHWESTERN UNIVERSITY

Prerequisite Checklist for Managerial Anayltics Certificate

Revised 1/22/13

Students interested in applying for the Managerial Analytics Certificate must take prerequisite courses in five (5) subject areas. Each requirement is fulfilled when one of the Options listed under that requirement below is completed.

Notes:

1. Students do not have to complete all of their prerequisite courses by the time they apply in January, but should have completed all of them by the end of the spring quarter. Those who are accepted into the program and are still taking prerequisite courses during the spring term must receive a "B" or better in those courses in order to enter the program in the fall.
2. Many CPU prerequisite courses have their own prerequisites, which are set by the departments offering them. Please check the Undergraduate Catalog or the appropriate department for specifics.
3. Equal consideration is given to students who take non-honors courses.
4. Most pre-req courses are offered in both WCAS and McCormick, and students may take them in either or both schools.
5. Students are required to have a combined 3.0 average among all Certificate Program prerequisite courses in order to apply. Receiving a letter grade below a "B" in any individual course is acceptable, as long as the overall average of all your prerequisite courses is 3.0 or higher.

Requirement 1: Calculus and Linear Algebra

Option 1: Regular Math
- MATH 230-0 plus ☐
- MATH 234-0 plus ☐
- MATH 240-0 ☐

Option 2: MENU 290
- MATH 290-1 plus ☐
- MATH 290-2 plus ☐
- MATH 290-3 ☐

Option 3: MENU 291 Accelerated
- MATH 291-1 plus ☐
- MATH 291-2 plus ☐
- MATH 291-3 ☐

Option 4: ISP students only
- MATH 281-1 plus ☐
- MATH 281-2 plus ☐
- MATH 281-3 ☐

Option 5: MMSS students only
- MATH 285-1 plus ☐
- MATH 285-2 plus ☐
- MATH 285-3 ☐

Option 6: For McCormick students
- MATH 230-0 plus ☐
- MATH 234-0 ☐

One of the following combinations

1. *Honors Engineering Analysis*
   - GEN_ENG 206-1 plus ☐
   - GEN_ENG 206-2 ☐

   or
2. *Non Honors Engineering Analysis*
   - GEN_ENG 205-1 plus ☐
   - GEN_ENG 205-2 ☐

Option 7: For McCormick students
- Honors Calc. ES APPM 252-1 plus ☐
- Honors Calc. ES APPM 252-2 ☐

One of the following combinations:

1. *Honors Engineering Analysis*
   - GEN_ENG 206-1 plus ☐
   - GEN_ENG 206-2 ☐

   or
2. *Non Honors Engineering Analysis*
   - GEN_ENG 205-1 plus ☐
   - GEN_ENG 205-2 ☐

Requirement 2: Probability

Option 1:
- MATH 310-1 ☐

Option 2:
- STAT 320-1 ☐

Option 3: ISP students only
- STAT 383-0 ☐

Option 4: MMSS students only
- MATH 385-0 ☐

Option 5:
- IEMS 202-0 ☐

Option 6:
- EECS 302-0 ☐

Option 7:
- BMD_ENG 220-0 ☐

Option 8:
- CHEM_ENG 312-0 ☐

Requirement 3: Econometrics/Statistics

Option 1:
- ECON 381-1 ☐

Option 2: MMSS students only
- MATH 386-1 ☐

Option 3:
- IEMS 303-0 plus ☐
- IEMS 304-0* ☐

Option 4:
- STAT 320-2 plus ☐
- IEMS 304-0* ☐

Option 5:
- STAT 320-2 plus ☐
- STAT 350-0* ☐

* IEMS 304-0 or STAT 350-0 may be taken concurrently with the certificate courses.

Requirement 4: Microeconomics

Option 1:
- ECON 310-1 ☐

Option 2: MMSS students only
- MMSS 211-1 ☐

Requirement 5: Optimization

Option 1:
- MATH 368-0 ☐

Option 2:
- IEMS 313-0 ☐

Option 3:
- CHEM ENG 345-0 ☐