Students interested in applying for the Financial Economics Certificate must take prerequisite courses in four (4) 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 and
    MATH 234-0 and
    MATH 240-0
Option 2: MENU 290
    MATH 290-1 and
    MATH 290-2 and
    MATH 290-3
Option 3: MENU 291 Accelerated
    MATH 291-1 and
    MATH 291-2 and
    MATH 291-3
Option 4: ISP students only
    MATH 281-1 and
    MATH281-2 and
    MATH 281-3
```

Option 5: MMSS students only

## MATH 285-1 and

MATH 285-2 and
MATH 285-3

Option 6: For McCormick students
MATH 230-0 and
MATH 234-0 and

One of the following combinations:

1. Honors Engineering Analysis

GEN_ENG 206-1 and
GEN_ENG 206-2
or
2. Non Honors Engineering Analysis

GEN_ENG 205-1 and
GEN_ENG 205-2

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

One of the following combinations:

1. Honors Engineering Analysis

GEN_ENG 206-1 and
GEN_ENG 206-2
or
2. Non Honors Engineering Analysis

GEN_ENG 205-1 and
GEN_ENG 205-2

| Requirement 2: Probability |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Option 1: |  | Option 4: ISP students only |  | Option 7: |  |
| MATH 310-1 | $\square$ | STAT 383-0 | $\square$ | EECS 302-0 | $\square$ |
| Option 2: | $\square$ | Option 5: MMSS students only |  | Option 8: |  |
| MATH 311-1 |  | MATH 385-0 | $\square$ | BMD_ENG 220-0 |  |
| Option 3: |  | Option 6: |  | Option 9: |  |
| STAT 320-1 | $\square$ | IEMS 202-0 | $\square$ | CHEM_ENG 312-0 | $\square$ |
|  |  |  |  | Option 10: |  |
|  |  |  |  | MATH 314-0* | $\square$ |

* MATH 314 ("Probability and Statistics for Econometrics") is a new course, designed to prepare students for ECON 381-1 and 2.

| Requirement 3: Econometrics |  |
| :--- | :--- |
| Option 1: |  |
| ECON 381-1 and | $\square$ |
| ECON 381-2 |  |
|  |  |
| Option 2: MMSS students only |  |
| MATH 386-1 and | $\square$ |
| MATH 386-2 | $\square$ |

## Requirement 4: Microeconomics

## Option 1:

ECON 310-1

Option 2: MMSS students only MMSS 211-1

Certificate Program for Undergraduates

## Prerequisite Checklist for Managerial Anayltics Certificate

Revised 11/18/13

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 | Option 5: MMSS students only |  | Option 7: For McCormick students |  |
| MATH 230-0 and $\square$ | MATH 285-1 and | $\square$ | Honors Calc. ES APPM 252-1 and | $\square$ |
| MATH 234-0 and | MATH 285-2 and | $\square$ | Honors Calc. ES APPM 252-2 and | $\square$ |
| MATH 240-0 | MATH 285-3 | $\square$ |  |  |
|  |  |  | One of the following combinations: |  |
| Option 2: MENU 290 | Option 6: For McCormick students |  | 1. Honors Engineering Analysis |  |
| MATH 290-1 and $\square$ | MATH 230-0 and | $\square$ | GEN_ENG 206-1 and | $\square$ |
| MATH 290-2 and $\square$ | MATH 234-0 and | $\square$ | GEN_ENG 206-2 | $\square$ |
| MATH 290-3 $\quad$ - |  |  | or |  |
|  | One of the following combinations: |  | 2. Non Honors Engineering Analysis |  |
| Option 3: MENU 291 Accelerated | 1. Honors Engineering Analysis |  | GEN_ENG 205-1 and | $\square$ |
| MATH 291-1 and $\square$ | GEN_ENG 206-1 and | $\square$ | GEN_ENG 205-2 | $\square$ |
| MATH 291-2 and $\square$ | GEN_ENG 206-2 | $\square$ |  |  |
| MATH 291-3 | or |  |  |  |
|  | 2. Non Honors Engineering Analysis |  |  |  |
| Option 4: ISP students only | GEN_ENG 205-1 and | $\square$ |  |  |
| MATH 281-1 and $\square$ | GEN_ENG 205-2 | $\square$ |  |  |
| MATH 281-2 and $\square$ |  |  |  |  |
| MATH 281-3 |  |  |  |  |


| Requirement 2: Probability |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Option 1: |  | Option 4: ISP students only |  | Option 7: |  |
| MATH 310-1 | $\square$ | STAT 383-0 | $\square$ | EECS 302-0 | $\square$ |
| Option 2: |  | Option 5: MMSS students only |  | Option 8: |  |
| MATH 311-1 | $\square$ | MATH 385-0 | $\square$ | BMD_ENG 220-0 |  |
| Option 3: | $\square$ | Option 6: |  | Option 9: |  |
| STAT 320-1 | $\square$ | IEMS 202-0 | $\square$ | CHEM_ENG 312-0 | $\square$ |
|  |  |  |  | Option 10: MATH 314-0* | $\square$ |

MATH 314 ("Probability and Statistics for Econometrics") is a new course, designed to prepare students for ECON 381-1 and 2.


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

| Requirement 4: Microeconomics |  |
| :--- | :--- |
| $\frac{\text { Option 1: }}{\text { ECON 310-1 }}$ |  |
| $\frac{\text { Option 2: MMSS students only }}{\text { MMSS 211-1 }}$ |  |

Requirement 5: Optimization

Option 1:
MATH 368-0
Option 2:
IEMS 313-0

Option 3: CHEM ENG 345-0
$\square$

