

## Data Analysis Minor

### Courses in the Minor

The minor has four required courses totaling 12 credit hours, plus a 3-credit course selected from a small list of possibilities.

The four required courses are as follows:

- **MAT 111 Elementary Probability and Statistics.** No prerequisites; offered every semester.
- **CSC 303 Fundamentals of Data Computing.** Prerequisites: either MAT 111 or CSC 115 Computer Science I, or permission from the instructor prior to enrolling. It is offered every Fall semester.
- **MAT 125 Calculus I.** This is one of three seriously mathematical courses in the minor. It is offered every semester. As far as prerequisites are concerned, students should have a solid background in pre-calculus before attempting this course. If your Math ACT score is below 26, you might need to take MAT 123 Precalculus first, but note that MAT 123 is offered in Fall semesters only.
- **MAT 225 Calculus II.** This is the second of the three seriously mathematical courses in the major. It is offered every semester, and the prerequisite is MAT 125.
- **MAT 331 Probability Theory.** The prerequisite is MAT 225. This course is offered once every two years, in even-numbered Fall semesters.

In addition, the student must take one of the following two courses:

- **MAT 337 Applied Statistical Models.** The prerequisite is MAT 225, but you can also ask the instructor for permission to enroll the semester prior to the course. It is offered only once every two years, in odd-numbered Spring semesters.
- **ITMR 320: Databases.** This course is offered online through RIZE, a consortium in which we participate. The instructors are not Georgetown College faculty. The prerequisites are CSC 115 and CSC 215. It is offered every spring semester.

Note that since ITMR 320 has two prerequisites that are not themselves part of the Data Analysis minor, most students will want to complete MAT 337 Applied Statistical Models.

### Planning Your Courses

As you put together a multi-year completion plan for the minor, bear in mind that there are two long prerequisite chain:

- MAT 331 requires MAT 225 which requires MAT 125, and
- MAT 337 requires MAT 225 which requires MAT 125.

In addition, both MAT 331 and MAT 337 are offered only once every two years:

- MAT 331 is offered in even-numbered Fall semesters;
- MAT 337 is offered in odd-numbered Spring semesters.

This means that you MUST start your calculus early and take MAT 331 and MAT 337 as soon as possible.

### Sample Completion Sequences

If you begin in an even-numbered Fall semester, you could do this:

- Fall of Year One:
  - MAT 111 (F/S)
  - MAT 123 (if needed to prepare for MAT 125) (F)
- Spring of Year One
  - MAT 125 (F/S)
- Fall of Year Two
  - CSC 303 (F)
  - MAT 225 (F/S)
- Spring of Year Two
  - Free semester
- Fall of Year Three
  - MAT 331 (even F)
- Spring of Year Three
  - MAT 337 (odd S)

If you begin in an odd-numbered Fall semester, you could do this:

- Fall of Year One:
  - MAT 111 (F/S)
  - MAT 123 (if needed to prepare for MAT 125) (F)
- Spring of Year One
  - MAT 125 (F/S)
- Fall of Year Two

- CSC 303 (F)
  - MAT 225 (F/S)
- Spring of Year Two
  - Free semester
- Fall of Year Three
  - Free semester
- Spring of Year Three
  - Free semester
- Fall of Year Four:
  - MAT 331 (even F)
- Spring of Year Four
  - MAT 337 (odd S)

Note that if you begin in an odd-numbered Fall and you can complete both MAT 125 and MAT 225 (in the Fall and Spring respectively of your first year) then you could (in theory) finish everything in just two years. If you begin in an even Fall, however, you will need three years to complete the minor.