

SUNY Oswego, College of Liberal Arts and Sciences  
Mathematics Department  
**Proposed Revisions to Mathematics (BA) Major**  
April 2015

**Revision 1: Capstone requirement clean-up**

Justification: Current description is confusing.

Overview: Core now includes a new 1-credit hour course MAT496: Capstone Project. (The course was approved by UCC on 2/25/15.) The requirements for this course are a paper and a talk. This allows us to remove the phrase "Includes a written and oral report" from the program description, as those are the requirements for MAT 496. Originally we required students to register for 1 hour of MAT499 with some of the options.

Changes in resources: None, as this is only a change in description, not in the actual requirements.

**Revision 2: Approved electives instead of Excluded electives**

Justification: Recently we have developed several new courses that serve as mathematics requirements for other programs (such as Mat 318, Mat 339, etc.) Because these courses duplicate material covered in other mathematics courses, we do not want them to count as electives for mathematics majors. Up till now, the program had a list of Excluded electives, but this had to be updated each time a new course was developed. It will be easier to add a new course to the list when appropriate. In addition, an elective that is not yet on the list can be approved by a program deviation.

Overview:

- a) Delete the sentence *Excluded mathematics courses are: MAT 304, 306, 307, 318, 339, and 392.*
- b) Insert:

*Approved electives: MAT 300, 303, 310, 320, 330, 332, 335, 348, 351, 353, 357, 358, 373, 379, 399, 409, 420, 430, 442, 447, 448, 454, 499*

Changes in resources: None

## Mathematics Major (BA)

Current (42-47 cr)

### A. Core Requirements (30-35 cr)

MAT 210 - Calculus I credit: 4  
MAT 215 - Introduction to Discrete Mathematics credit: 3  
MAT 220 - Calculus II credit: 4  
MAT 230 - Matrix Algebra credit: 3  
MAT 240 - Multivariable Calculus credit: 4  
MAT 330 - Introduction to Algebra credit: 3  
MAT 347 - Analysis A credit: 3  
MAT 354 - Mathematical Statistics A credit: 3

Select one option from the following:

Includes written and oral reports.

#### Option 1.

MAT 498 - Internship in Mathematics credit: 0 to 12  
MAT 499 - Independent Study credit: 1 to 3

#### Option 2.

ADO 420 - Student Teaching Grades 7-12 credit: 6  
MAT 499 - Independent Study credit: 1 to 3

#### Option 3.

MAT 499 - Independent Study credit: 1 to 3

#### Option 4.

MAT 499 - Independent Study credit: 1 to 3

An additional 400-level Mathematics course, instructor and advisor approval needed.

### B. Elective Requirements (9 cr)

Nine credit hours of 300- or 400-level mathematics courses, under advisement, three hours of which must be at the 400-level. Excluded courses are: MAT 304, 306, 307, 318, 339, and 392.

### C. Cognate Requirements (3 cr)

CSC 212 - Principles of Programming credit: 3

Note: A C- grade or better must be earned in all 200 level mathematics courses credited to the major.

New (43 – 46 cr)

### A. Core Requirements (31-34 cr)

MAT 210 - Calculus I credit: 4  
MAT 215 - Introduction to Discrete Mathematics credit: 3  
MAT 220 - Calculus II credit: 4  
MAT 230 - Matrix Algebra credit: 3  
MAT 240 - Multivariable Calculus credit: 4  
MAT 330 - Introduction to Algebra credit: 3  
MAT 347 - Analysis A credit: 3  
MAT 354 - Mathematical Statistics A credit: 3  
MAT 496 – Capstone Project credit: 1, taken concurrently with one of the following courses:

- MAT 498 - Internship in Mathematics credit: 3
- ADO 420 - Student Teaching Grades 7-12 credit: 6
- MAT 499 – Independent study credit:3
- An additional 400-level mathematics course (instructor and advisor approval needed) credit: 3

### B. Elective Requirements (9 cr)

Nine credit hours of 300- or 400-level mathematics courses, selected under advisement from the list of approved electives below, three hours of which must be at the 400-level.

Approved electives: MAT 300, 303, 310, 320, 332, 335, 348, 351, 353, 357, 358, 373, 379, 399, 409, 420, 430, 442, 447, 448, 454, 499

### C. Cognate Requirements (3 cr)

CSC 212 - Principles of Programming credit: 3

Note: A C- grade or better must be earned in all 200 level mathematics courses credited to the major.