

College of Arts and Science
GRADUATION PLAN: Bachelor of Science in Mathematics for Mathematics Education Dual Majors

Name (Last, First)

Student Number

Date Form Filled

First College Semester Semester of Graduation Degree

Local Address (include email address)

Permanent Address

REQUIRED MATH COURSES

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|------------------------|--------------|--|
| MATH 1500 | Calculus I | | |
| MATH 1700 | Calculus II | | |
| MATH 2300 | Calculus III | | |
| MATH 4100 | Differential Equations | | |
| MATH 4140 | Matrix Theory | | |

Choose either MATH 4300 (Numerical Analysis), MATH 4500 (Applied Analysis), or MATH 4700 (Advanced Calculus of One Real Variable I).

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|-----------------|--------------|--|
| | | | |

Choose either MATH 4720 (Introduction to Abstract Algebra I) or MATH 4510 (Higher Algebra)

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|-----------------|--------------|--|
| | | | |

MATH CAPSTONE COURSES: Choose either MATH 4970 (Senior Seminar), MATH 4980 (Mathematics Problem Solving), or an Education Capstone Course. (Note: If Education Capstone is chosen then the student needs to choose four 4000-level Math electives.)

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|-----------------|--------------|--|
| | | | |

BASIC PROGRAMMING COURSES: Choose either CMP_SC 1040 (Introduction to Problem Solving and Programming) or CMP_SC 1050 (Algorithm Design and Programming I).

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|-----------------|--------------|--|
| | | | |

Choose either MATH 2320 (Discrete Mathematical Structures) or CMP_SC 2050 (Algorithm Design and Programming II)

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|-----------------|--------------|--|
| | | | |

4000 LEVEL MATH ELECTIVES

Choose three courses from the following list:

- MATH 4001: Topics, 3 hrs.
- MATH 4150: History of Mathematics, 3 hrs.
- MATH 4300: Numerical Analysis, 3 hrs.
- MATH 4310: Numerical Linear Algebra, 3 hrs.
- MATH 4315 (STAT 4710): Introduction to Mathematical Statistics, 3 hrs.
- MATH 4320 (STAT 4750): Introduction to Probability Theory, 3 hrs.
- MATH 4330: Theory of Numbers, 3 hrs.
- MATH 4335: College Geometry, 3 hrs.
- MATH 4345: Foundations of Geometry, 3 hrs.
- MATH 4350: Introduction to Non-Euclidean Geometry, 3 hrs.
- MATH 4355: Investment Science I, 3 hrs.
- MATH 4360: Actuarial Mathematics, 3 hrs.

- MATH 4400: Introduction to Topology, 3 hrs.
- MATH 4500: Applied Analysis, 3 hrs.
- MATH 4520 (STAT 4760): Statistical Inference, 3 hrs
- MATH 4540: Mathematical Modeling I, 3 hrs.
- MATH 4560: Nonlinear Dynamics, Chaos and Fractals, 3 hrs.
- MATH 4580: Mathematical Modeling II, 3 hrs.
- MATH 4590: Investment Science II, 3 hrs.
- MATH 4800: Advanced Calculus of One Real Variable II, 3 hrs.
- MATH 4900: Advanced Multivariable Calculus, 3 hrs.
- MATH 4920: Introduction to Abstract Linear Algebra, 3 hrs.
- MATH 4940: Introduction to Complex Variables, 3 hrs.
- MATH 4960: Special Readings, 3 hrs.
- MATH 4996: Honors in Mathematics, 2 hrs.

| COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|------------|-----------------|--------------|--|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

RELATED FIELD COURSES: A minimum of 10 hours from the following two groups (both groups must be represented).

Group 1: BIO_SC 1500 (General Biology), CHEM 1310 (General Chemistry I), CHEM 1320 (General Chemistry II), CHEM 1330 (General Chemistry III), PHYSICS 2750 (University Physics I) or PHYSICS 2760 (University Physics II).

| DEPT. | COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|-------|------------|-----------------|--------------|--|
| | | | | |
| | | | | |
| | | | | |

Group 2: 4000 level courses in Statistics and Computer Science.

| DEPT. | COURSE NO. | TITLE OF COURSE | CREDIT HOURS | |
|-------|------------|-----------------|--------------|--|
| | | | | |
| | | | | |
| | | | | |

Total hours:

Student _____ Date _____

Advisor _____ Date _____

Director of Undergraduate Studies _____ Date _____

A&S Dean _____ Date _____

ARTS & SCIENCE FOUNDATION REQUIREMENTS
(List courses already completed and those to be completed)

| BASIC SKILLS | TITLE OF COURSE | HOURS | TOTAL |
|---------------------|--|-------|-------|
| English Composition | ENGL 1000 Exposition and Argumentation | | |
| | | | |

Foreign Language: 12-13 hours or comparable proficiency required

Chinese I, II (12 hrs) Greek I, II, III (13 hrs) Japanese I, II (12 hrs) Portuguese I, II (12 hrs)
 French I, II, III (13 hrs) Hebrew I, II, III, IV (12 hrs) Korean I, II, III (13 hrs) Russian I, II (12 hrs)
 German I, II, III (13 hrs) Italian I, II (12 hrs) Latin I, II, III (13 hrs) Spanish I, II, III (13 hrs)

| FOREIGN LANGUAGE | TOTAL HOURS |
|------------------|-------------|
| | |

Foreign Language Alternative: 12 hours of courses from one area outside of mathematics in the 2000, or above, level

| DEPT. | COURSE # | TITLE OF COURSE | HOURS | TOTAL |
|-------|----------|-----------------|-------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

DEPTH OF STUDY

6 hours must be courses numbered 2000, or above, and taken in two of the following Breadth of Study fields: behavioral science, social sciences, humanities and fine arts.

BREADTH OF STUDY

Biological, Physical, and Mathematical Sciences: See Related Field Courses for Department of Mathematics Requirements.

Behavioral and Social Sciences: 9 hours and must include courses from both the behavioral and social sciences.

| DEPT. | COURSE # | TITLE OF COURSE | HOURS | TOTAL |
|-------|----------|-----------------|-------|-------|
| | | | | |
| | | | | |
| | | | | |

Humanities and Fine Arts: At least 9 hours and must include courses from at least two different areas.

| DEPT. | COURSE # | TITLE OF COURSE | HOURS | TOTAL |
|-------|----------|-----------------|-------|-------|
| | | | | |
| | | | | |
| | | | | |

Total hours:

WARNING: additional hours are needed for graduation.

After printing this form, have it signed and dated by your advisor and the Director of Undergraduate Studies (Professor Ian Aberbach, 201 Mathematical Sciences Building, 882-4898) in the spaces on the previous page. You will then need to make two photocopies of the signed form and make an appointment with an advisor in the Arts & Science Dean's Office (107 Lowry Hall, 882-6411) to turn in your completed form.