College of Arts and Science: Graduation Plan for Bachelor of Science in Mathematics
for Mathematics/Math Education Dual Majors

You may file a Graduation Plan in Math after completion of English 1000 and Math 2300. You must have an overall GPA of 2.5 or above, and a GPA in Math courses used for the degree of 2.5 or above. All Math courses used for the major must be passed with a C- grade or above.

Name (Last, first): Pawprint:
Student Number: Expected Graduation Semester: Date:

Required Math Courses

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Cr. hrs.</th>
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<tbody>
<tr>
<td>MATH 1500</td>
<td>Calculus I</td>
<td>5</td>
<td>MATH 3000</td>
<td>Intro to Adv Math</td>
<td>3</td>
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<tr>
<td>MATH 1700</td>
<td>Calculus II</td>
<td>5</td>
<td>MATH 4100</td>
<td>Differential Equations</td>
<td>3</td>
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<tr>
<td>MATH 2300</td>
<td>Calculus III</td>
<td>3</td>
<td>MATH 4140</td>
<td>Matrix Theory</td>
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Choose one of: MATH 4300 (Numerical Analysis), MATH 4500 (Applied Analysis), MATH 4700 (Adv Calc of One Real Var I)
Choose one of: MATH 4510 (Higher Algebra), or MATH 4720 (Introduction to Abstract Algebra)

4000 LEVEL MATH ELECTIVES

Choose 4 or more courses from the list below (all are 3 credit courses)

- MATH 4150 History of Mathematics
- MATH 4400 Intro to Topology
- MATH 4300 Numerical Analysis
- MATH 4500 Applied Analysis
- MATH 4310 Numerical Linear Algebra
- STAT 4760/MATH 4520 Statistical Inference
- MATH 4540 Mathematical Modeling I
- STAT 4710/MATH 4315 Intro to Probability Theory
- STAT 4750/MATH 4320 Math. of Financial Derivatives II
- MATH 4330 Theory of Numbers
- MATH 4900 Adv Multivariable Calculus
- MATH 4350 Intro to Non-Euclidean Geometry
- MATH 4920 Intro to Abstract Linear Algebra
- MATH 4355 Math. of Financial Derivatives I
- MATH 4940 Intro to Complex Variables

Other 4000+ MATH courses as approved by the Undergraduate Mathematics Advisor (MATH 4060/4070/4080 may not be used as Math Electives).

Indicate 4 course numbers for your electives (MATH 4300/4500 may be used here only if not chosen above):

1. 
2. 
3. 
4. 

RELATED FIELD COURSES

A minimum of 10 hours (total) from the two groups below. You must have at least one course in each group.

**Group 1 (Science):** BIO.SC 1500 (General Biology), CHEM 1320 (College Chemistry I), CHEM 1330 (College Chemistry II), PHYSCS 2750 (University Physics I), PHYSCS 2760 (University Physics II) The Bio and Physics courses are 5 credits each. Chem 1320 and 1330 are 4 credits each.

Group 1 courses (Dept and Number): 

**Group 2:** 4000 level courses in Statistics and/or Computer Science You may use one course cross-listed in Math and Statistics to count as both a Group 2 course and as a 4000 level Math elective.

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BASIC PROGRAMMING REQUIREMENT (circle one)

INFOTC 1040 (Intro to Problem Solving and Programming), or CMP SC 1050 (Algorithm Design and Programming I).

SIGNATURES

Student __________________________________________ Date ________________

Undergraduate Mathematics Advisor ______________________________________ Date ________________

Dean of A & S ______________________________________ Date ________________

After filling out this form, have it signed and dated by the Undergraduate Mathematics Advisor (Dustin Belt, 201 Math Sciences Bldg., 573-882-4898). Make two photocopies of the signed form. Then make an appointment to file a grad plan in Math with the A&S Advising Office (107 Lowry Hall, 573-882-6411). Bring all three copies to this appointment to get the Dean’s stamp.

Last updated: 4/2018
ARTS & SCIENCE FOUNDATION REQUIREMENTS

Please see [http://generaleducation.missouri.edu/courses/](http://generaleducation.missouri.edu/courses/) for a searchable web page. You may check which courses are general education courses, and see which College (e.g., A&S), the course is taught in. This information is important for the A&S DEPTH requirement below.

ENGLISH COMPOSITION REQUIREMENT You must complete ENGLSH 1000, Exposition and Argumentation.

FOREIGN LANGUAGE OR ALTERNATIVE You may complete this requirement in one of four ways: being a non-native English speaker, 4 years of a language in high school, complete a language sequence at MU, or complete the Foreign Language Alternative.

- □ Check if you are a non-native English speaker, or
- □ Check if you completed 4 years of a foreign language in high school (in this case, no credit hours from that language at the introductory level may be used toward graduation), or
- □ Check if you will complete a Foreign Language at MU, and circle one:
  - Chinese, French, German, Greek, Hebrew, Italian, Japanese, Korean, Latin, Portuguese, Russian, Spanish, or
- □ Check if you will complete a Foreign Language Alternative (12 hours of courses from one area outside of Mathematics at the 2000 level or above — this must be approved by the Undergraduate Mathematics Advisor). List courses in the table.

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BREADTH OF STUDY

Behavioral and Social Sciences:
9 hours combined, with at least one behavioral science and one social science. At most one course may be a non A&S course.

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Humanities and Fine Arts:
9 hours from at least two different departments. At most one course may be a non A&S course.

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DEPTH OF STUDY

6 hours of courses (total) from at least 2 of the 3 categories below. These must be 2000 level (or above) general education courses, and at least one must be taught by a department in A&S. These courses may also be listed in the BREADTH section.

- Social Science: ____________________________
- Behavioral Science: ________________________
- Humanities and Fine Arts: __________________

AMERICAN HISTORY OR GOVERNMENT REQUIREMENT

See [http://generaleducation.missouri.edu/requirements/](http://generaleducation.missouri.edu/requirements/) for courses available. This course may also be listed as a Social Science BREADTH and/or DEPTH course.

MO govt’ course: ____________________________

A&S DIVERSITY REQUIREMENT (DI)-For students beginning college Fall 2017 or later

See [https://coas.missouri.edu/diversity-intensive-course-list](https://coas.missouri.edu/diversity-intensive-course-list) for courses available. This course may also be listed as a BREADTH and/or DEPTH course.

DI course: _________________________________

ADDITIONAL A&S AND MU REQUIREMENTS

- Writing Intensive requirement: You must have two WI courses. Math 3000 will be your WI course in your major. The other may be anywhere in the curriculum (e.g., a course satisfying your BREADTH requirement). Please see [http://generaleducation.missouri.edu/requirements/writing.php](http://generaleducation.missouri.edu/requirements/writing.php) for more information.
- 30 of the last 36 hours must be taken as MU courses.
- GPA requirements for graduation: A 2.0 cumulative, in the major, in any minor, in the final 30 hours, and in the final 60 hours.
- 120 hours of degree applicable credits (132 if you are getting a dual degree).