

## Degree Map

### A.S. in Mathematics – Catalog Year 2025-26

The A.S. degree in Mathematics is intended for students who plan to transfer to a 4-year college and university and pursue a bachelor's degree in mathematics or a related field. The number of credits you take each year will determine when you graduate. To graduate on time, you are strongly encouraged to enroll in at least 30 credits toward your degree during the calendar year, including fall and spring semesters and winter and summer sessions. This degree map is designed for students who place into **MA-441**. Additional degree maps are available for students who place into other levels of mathematics. Please see the degree website or your advisor for more information.

Courses in **Bold Text** are prerequisites for later courses or only offered in the Fall or Spring semester and should be taken where indicated in the sequence.

#### Fall Semester #1

| Courses  | Credits   | Prerequisites and Corequisites <sup>1</sup>   |
|--|-----------|---|
| <b>ENGL-101 English Composition I</b><br>(Required Core 1A: English Composition)                   | 3         | Complete developmental requirements in English or co-enroll in ENGL-99 or placement |
| <b>MA-441 Analytic Geometry and Calculus I<sup>2</sup></b><br>(Flexible Core 2E: Scientific World) | 4         | Prerequisite: MA-440 (C or better)  |
| One course from Required Core 1C: Life & Physical Sciences   | 3-4       | Check individual courses for prerequisites and corequisites                         |
| Science Laboratory course <sup>3</sup>   | 0-1       | Corequisite: 3-credit Science course in Required Core 1C                            |
| Major Electives – see list below <sup>4</sup>  | 3         | Check individual courses for prerequisites and corequisites                         |
| <b>Total credits for the term</b>  | <b>14</b> |   |

#### Spring Semester #1

| Courses   | Credits   | Prerequisites and Corequisites <sup>1</sup>                 |
|---|-----------|---|
| <b>ENGL-102 English Composition II</b><br>(Required Core 1A: English Composition)       | 3         | Prerequisite: ENGL-101 or placement                         |
| <b>MA-442 Analytic Geometry and Calculus II</b><br>(Flexible Core 2E: Scientific World) | 4         | Prerequisite: MA-441 (C or better)                          |
| MA-461 Linear Algebra   | 4         | Prerequisite: MA-441  |
| One course from Flexible Core 2A, 2B 2C, or 2D <sup>5</sup>                             | 3         | Check individual courses for prerequisites and corequisites |
| <b>Total credits for the term</b>   | <b>14</b> |   |

### Fall Semester #2

| Courses  | Credits   | Prerequisites and Corequisites <sup>1</sup>                 |
|--|-----------|---|
| <b>MA-443 Analytic Geometry and Calculus III</b><br>(Flexible Core 2E: Scientific World) | 4         | Prerequisite: MA-442 (C or better)                          |
| Major Electives – see list below <sup>4</sup>  | 6         | Check individual courses for prerequisites and corequisites |
| One course from Flexible Core 2A, 2B 2C, or 2D <sup>5</sup>                              | 3         | Check individual courses for prerequisites and corequisites |
| One course from Flexible Core 2A, 2B 2C, or 2D <sup>5</sup>                              | 3         | Check individual courses for prerequisites and corequisites |
| <b>Total credits for the term</b>  | <b>16</b> |   |

### Spring Semester #2

| Courses  | Credits   | Prerequisites and Corequisites <sup>1</sup>                                     |
|--|-----------|---|
| MA-451 Differential Equations or MA-481 Probability and Statistics | 3-4       | Prerequisite for MA-451: MA-443 (C or better)<br>Corequisite for MA-481: MA-442 |
| Major Electives – see list below <sup>4</sup>                      | 9-10      | Check individual courses for prerequisites and corequisites                     |
| One course from Flexible Core 2A, 2B 2C, or 2D <sup>5</sup>        | 3         | Check individual courses for prerequisites and corequisites                     |
| <b>Total credits for the term</b>                                  | <b>16</b> |   |
| <b>Total credits required for the degree</b>                       | <b>60</b> |   |

#### Notes:

1. Prerequisites for a course must be passed before taking the course. Corequisites must be passed before taking the course or taken in the same term as the course.
2. Students who place into mathematics at MA-441 will use that course to satisfy Required Core 1B, use MA-443 in the Flexible Core, and take an additional 4 credits of major elective courses to reach 60 credits.
3. Students who take a STEM variant for Required Core 1C have satisfied this requirement
4. Students planning to pursue Mathematics Education are recommended to take EDUC-101 and EDUC-240.
5. Students must complete one course from each of Flexible Core 2A, 2B, 2C, and 2D

All students must complete two (2) WI designated classes to fulfill degree requirements

**Major Elective Courses** – Complete at least 14 credits of these courses

| <b>Major Elective Courses</b>   | <b>Credits</b> | <b>Prerequisites and Corequisites</b>   |
|---|----------------|---|
| CS-100 Introduction to Computers and Programming                        | 3              | Complete developmental requirements in math and English   |
| CS-101 Algorithmic Problem Solving I                                    | 4              | Corequisite: MA-441   |
| CS-102 Spreadsheet Programming with MS Excel                            | 3              | Prerequisite: MA-119 (C or better)  |
| CS-103 Relational Databases   | 4              | Prerequisite: MA-119 (C or better)  |
| CS-201 Computer Organization and Assembly Language                      | 4              | Prerequisites: MA-441 and CS-101 (C or better)  |
| CS-203 Algorithmic Problem Solving II in C++                            | 4              | Prerequisites: MA-441 and CS-101 (C or better)  |
| CS-204 Algorithmic Problem Solving II in Java                           | 4              | Prerequisites: MA-441 and CS-101 (C or better)  |
| EDUC-101 Contemporary Education: Principles and Practices               | 4              | Complete developmental requirements in English or enroll in ENGL-101 and ENGL-99 at the same time |
| EDUC-240 Middle Childhood and Adolescent Learning and Development       | 3              | Prerequisite: EDUC-101  |
| MA-119 College Algebra  | 3              | Placement or co-enroll in MA-10ALP  |
| MA-121 Trigonometry   | 1              | Corequisite: MA-119   |
| MA-451 Differential Equations   | 4              | Prerequisite: MA-443 (C or better)  |
| MA-471 Introduction to Discrete Mathematics                             | 3              | Prerequisite: MA-440  |
| MA-481 Probability and Statistics                                       | 3              | Corequisite: MA-442   |
| MA-905 Undergraduate Research in Mathematics and/or Computer Science I  | 2              | Prerequisite: MA-440 or Departmental Permission   |
| MA-906 Undergraduate Research in Mathematics and/or Computer Science II | 2              | Prerequisite: MA-440 or Departmental Permission   |