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| **Catalog Year 2019-2020**BS, Mathematics | ***(For internal use only)***[ ]  *No change*[ ]  *UCC proposal* |

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is an efficient strategy only. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Elective, and university requirements (see pg.2) are based on Catalog Year.

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| **Course Subject and Title** | **Cr.**  | **Min.** **Grade** | **\*GE,** **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co Requisite** |
| Semester One |
| GE Objective 1: ENGL 1101 Writing and Rhetoric I | 3 | C- | GE | F, S, Su | Appropriate placement score |  |
| GE Objective 3: MATH 1170 Calculus I | 4 |  | GE | F, S, Su | Appropriate placement score |  |
| GE Objective 4: | 3 |  | GE | F, S, Su |  |  |
| GE Objective 6: | 3 |  | GE | F, S, Su |  |  |
| Free Electives | 1 |  |  |  |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Two |
| GE Objective 1: ENGL 1102 Writing and Rhetoric II | 3 | C- | GE | F, S, Su | ENGL 1101 or equivalent |  |
| MATH 1175 Calculus II | 4 |  |  | F, S, Su | Math 1170 |  |
| MATH 2240 Linear Algebra | 3 |  |  | F, S, Su | Math 1170 |  |
| GE Objective 7/8: CS 1181 Intro to CS & Programming I | 3 |  | GE | F, S | Math 1143 or Math 1147 | Math 1143 or Math 1147 |
| GE Objective 4: | 3 |  | GE | F, S, Su |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Three |
| MATH 2275 Calculus III | 4 |  |  | F, S | Math 1175 |  |
| MATH 2287 Foundations of Mathematics | 3 |  |  | D | Math 1170 |  |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, Su |  |  |
| GE Objective 5: No lab | 3 |  | GE | F, S, Su |  |  |
| Free Electives | 2 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Four |  |  |  |  |  |  |
| MATH 3326 Elementary Analysis | 3 |  | UM | F, S | Math 1175 and either Math 2240 or Math 2287 |  |
| MATH 3360 Differential Equations | 3 |  | UM | F, S | Math 1175; MATH 2240 or Math 2275 recommended |  |
| GE Objective 6: | 3 |  | GE | F, S, Su |  |  |
| GE Objective 9:  | 3 |  | GE | F, S, Su |  |  |
| Free Electives | 3 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Five |  |  |  |  |  |  |
| MATH 4407 Modern Algebra I  | 3 |  | UM | F | Math 2240 and math 2287 |  |
| MATH 3000 level course (3327, 3343, 3352, or 3362) | 3 |  | UM |  |  |  |
| MATH Sequence 1 course | 3 |  | UM |  | See Catalog |  |
| Free Electives | 6 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Six |  |  |  |  |  |  |
| MATH Sequence 1 course | 3 |  | UM |  | See Catalog |  |
| GE Objective 5: w/lab | 4 |  | GE | F, S, Su |  |  |
| Free Electives | 8 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Seven |  |  |  |  |  |  |
| MATH Sequence 2 course (or 4000 level MATH elective) | 3 |  | UM |  | See Catalog |  |
| MATH 4423 Intro to Real Analysis I | 3 |  | UM | F | Math 2240, Math 3326, Math 3360. |  |
| Upper Division Electives | 3 |  | UU |  |  |  |
| Free Electives  | 6 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Eight |  |  |  |  |  |  |
| MATH Sequence 2 course (or 4000 level MATH elective) | 3 |  | UM |  | See Catalog |  |
| Upper Division Free Electives | 6 |  | UU |  |  |  |
| Free Electives  | 6 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major\*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)  |

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| BS, Mathematics |
| **2019-2020 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **36 cr. min** |
| **MAJOR REQUIREMENTS** | **41** | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| **Mathematics Core:**  | **14** |  ENGL 1102 | 3 |
| MATH 1170 Calculus I (credits counted in GE) | 2. Oral Communication (3 cr. min) COMM 1101 | 3 |
| MATH 1175 Calculus II | 4 | 3. Mathematics (3 cr. min) MATH 1170 | 4 |
| MATH 2275 Calculus III | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| MATH 2240 Linear Algebra | 3 |  |  |
| MATH 3326 Elementary Analysis | 3 |  |  |
| ^^CS/INFO 1181 Comp Science & Programming I (credits counted in GE) | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| **Additional Required Courses** | **12** |  |  |
| MATH 2287 Foundations of Mathematics | 3 |  |  |
| MATH 3360 Differential Equations | 3 |  |  |
| *^MATH 4407 Modern Algebra I* | 3 | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| *^MATH 4423 Introduction to Real Analysis* | 3 |  |  |
| **15 additional credit hours, as follows:** | **15** |  |  |
| 3000 Level course - **select one course:** | 3 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| Math 3327 Vector Analysis |  | 7. Critical Thinking | CS 1181 | 3 |
| Math 3335 Elementary Number Theory |  | 8. Information Literacy  |
| Math 3343 Modern Geometry I |  | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| MATH 3352 Intro to Probability |  |  |  |
| MATH 3362 Intro to Complex Variables  |  | General Education Elective to reach 36 cr. min. **(if necessary)** |
| 4000 Level Credits – total of 12 credits: | 6-12 |   |  |
| **Complete 2** of the following **sequence**s:  |  |  |
| *MATH 4407* and 4408 Modern Algebra I, II  |  |  Total GE | 38 |
| *MATH 4423* and 4424 Intro to Real Analysis I, II  |  | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  *http://coursecat.isu.edu/undergraduate/programs/* |
| MATH 4441 and 4442 Intro to Numerical Analysis I, II  |  |
| MATH 4450 and 4451 Mathematical Statistics I, II  |  |  |  |
| **^4000 Level Electives may be needed depending on if the** | 0-6 | **MAP Credit Summary** | **CR** |
| **MATH sequence(s) above are selected.**  | Major  | 41 |
|  |  | General Education  | 38 |
|  |  | Upper Division Free Electives to reach 36 credits | 9 |
|  |  | Free Electives to reach 120 credits | 32 |
|  |  |  TOTAL | 120 |
|  |  |  |
|  |  | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
|  |  | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
|  |  | Minimum 15 cr. Upper Division in Major (0 cr. Associate) | x |
|  |  | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  | x |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) |  | x |
|  |  |  |
|  |  | ***MAP Completion Status (for internal use only)*** |
| **Advising Notes** |  | *Date* |
| ^^Two courses (ME 1165 and ME 2266) may be substituted for | *Department:*  |  |
| CS/INFO 1181. | *CAA or COT:* |  |
|  | *Registrar:*  |  |
|  | **Complete College American Momentum Year****Math and English course in first year-Specific GE MATH course identified****9 credits in the Major area in first year****15 credits each semester (or 30 in academic year)****Milestone courses** |
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 Form Revised 9.10.2019