**Catalog Year 2018-2019**

B.S., Mathematics

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.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Subject and Title** | **Cr.** | **Min. Grade** | **\*GE,**  **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co Requisite** | | |
| Semester One | | | | | | | | |
| GE Objective 3: MATH 1170 Calculus I | 4 |  | GE | F, S, Su | Math 1144 or Math 1147 |  | | |
| GE Objective 1: ENGL 1101 English Composition | 3 |  | GE | F, S, Su | Appropriate placement score |  | | |
| GE Objective 4: | 3 |  | GE | F, S, Su |  |  | | |
| GE Objective 6: | 3 |  | GE | F, S, Su |  |  | | |
| Electives | 1 |  |  |  |  |  | | |
| Total | 14 |  |  |  |  |  | | |
| Semester Two | | | | | | | | |
| MATH 1175 Calculus II | 4 |  |  | F, S, Su | Math 1170 |  | | |
| MATH 2240 Linear Algebra | 3 |  |  | F, S, Su | Math 1170 |  | | |
| GE Objective 7: CS 1181 Intro to CS & Programming I | 3 |  | GE | F, S | Math 1143 or Math 1147 | Math 1143 or Math 1147 | | |
| GE Objective 1: ENGL 1102 Critical Reading & Writing | 3 |  | GE | F, S, Su | ENGL 1101 or (1101P) or equivalent |  | | |
| 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 |  |  | | |
| 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 |  |  | | |
| 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 |  | | |
| Electives | 6 |  |  |  |  |  | | |
|  |  |  |  |  |  |  | | |
| Total | 15 |  |  |  |  |  | | |
| Semester Six |  |  |  |  |  |  | | |
| MATH Sequence 1 course | 3 |  | UM |  | See Catalog |  | | |
| GE Objective 5: w/lab | 4 |  | UM |  |  |  | | |
| Electives | 8 |  | GE | F, S, Su |  |  | | |
|  |  |  |  |  |  |  | | |
| 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 |  |  |  | | |
| Electives | 6 |  |  |  |  |  | | |
|  |  |  |  |  |  |  | | |
| Total | 15 |  |  |  |  |  | | |
| Semester Eight | 15 |  |  |  |  |  | | |
| MATH Sequence 2 course (or 4000 level MATH elective) | 3 |  | UM |  | See Catalog |  | | |
| Upper Division Electives | 6 |  | UU |  |  |  | | |
| 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.) | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **2018-2019 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. Spoken English (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 1181 Intro 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; Math 3335 Elementary Number Theory;  Math 3343 Modern Geometry I; | | 7. Critical Thinking CS 181 Intro to CS & Programming I | | | 3 |
| MATH 3352 Intro to Probability; MATH 3362 Intro to Complex Variables | | 8. Information Literacy | | |
| 4000 Level Credits – total of 12 credits: | 6-12 | 9. Cultural Diversity **(1 course; 3 cr. min)** | | | |
| **Complete 2** of the following **sequence**s: | |  | | |  |
| ^*MATH 4407* and 4408 Modern Algebra I, II (double count, 3 credits)  ^*MATH 4423* and 4424 Intro to Real Analysis I, II (double count, 3 credits) | | General Education Elective to reach 36 cr. min. **(if necessary)** | | | |
| -MATH 4441 and 4442 Intro to Numerical Analysis I, II (3, 3 credits)  -MATH 4450 and 4451 Mathematical Statistics I, II (3, 3, credits) | |  | | |  |
| ***4000 Level Electives may be needed depending on if the “^” MATH*** | *0-6* | Total GE | | | 38 |
| ***sequence(s) above are selected.*** |  | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/) | | | |
|  |  |
|  |  |  | | | |
|  |  | **MAP Credit Summary** | | | **CR** |
|  |  | Major | | | 41 |
|  |  | General Education | | | 38 |
|  |  | Free Electives to reach 120 credits | | | 41 |
|  |  | TOTAL | | | 120 |
|  |  |  | | | |
|  |  |
|  |  | **Graduation Requirement Minimum Credit Checklist** | | **Confirmed** | |
|  |  | Minimum 36 cr. General Education Objectives (15 cr. AAS) | | Yes | |
|  |  | Minimum 16 cr. Upper Division in Major (0 cr. Associate) | | Yes | |
|  |  | Minimum 36 cr. Upper Division Overall (0 cr. Associate) | | Yes | |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) | | Yes | |
|  |  |  | | | |
| **Advising Notes** | | ***MAP Completion Status (for internal use only)*** | | | |
| **^^Two courses (ME 1165 and ME 2266) may be**  **substituted for CS 1181.** | |  | *Date* | | |
|  | | *Department:* | 3.8.2018 RF | | |
|  | | *CAA or COT:* | 9.19. 2017 JH 3.7.2018 SF | | |
|  | | *Registrar:* |  | | |
|  | |  | | | |
|  | |
|  | |
|  | |

Form Revised 1.24.2018