

B.S. Civil Engineering

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A Major Academic Plan (MAP) illustrates an efficient path toward completing this degree in four years and includes only required courses and credits. A list of Major, General Education, and Elective credits, as well as a summary of credit categories, are shown on page two of each MAP. Individual customization of the MAP is generally expected to occur. For example, math remediation, English remediation, number of credits attempted per semester, or the addition of a Minor program will require the student and advisor to make adjustments to the original MAP.

Use the MAP:

- to understand the structure of a degree
- as a guide to complete a degree in four years
- as a checklist for graduation requirements
- to identify course sequences
- to structure elective credits for additional academic opportunities (e.g. Associate Degree, Minor, Study Abroad, Second Major)

Sample Degree MAP. Course sequence should be adjusted for individual needs. See your faculty/departmental advisor.

First Semester

Course	Credits	Grade
GE Objective 1: ENGL 1102 Critical Reading and Writing	3	
GE Objective 3: MATH 1170 Calculus I	4	
GE Objective 5: CHEM 1111, 1111L Gen Chem I and Lab	5	
GE Objective 5: Either GEOL 1101, 1101L Physical Geology Or BIOL 1100, 1100L Concepts Biology	4	
Total	16	

Second Semester

Course	Credits	Grade
MATH 1175 Calculus II	4	
PHYS 2211 Engineering Physics I	4	
ME 1165 Structured Programming	2	
CE 1105 Engineering Graphics	2	
**GE Objective (choose one course to satisfy GE Objectives)	3	
**GE Objective (choose one course to satisfy GE Objectives)	3	
Total	18	

Third Semester

Course	Credits	Grade
CE/ME 2210 Engineering Statics	3	
MATH 3352 Introduction to Probability	3	
MATH 2240 Linear Algebra	3	
CE 2200 Civil Engineering Tools	1	
GE Objective 2: COMM 1101 Principles of Speech	3	
**GE Objective (choose one course to satisfy GE Objectives)	3	
Total	16	

Fourth Semester

Course	Credits	Grade
ME 2220 Engineering Dynamics	3	
CE/ME 3350 Mechanics of Materials	3	
MATH 3360 Differential Equations	3	
CE 3332 Basic Geotechnics	3	
CE 3337 Geotechnics Lab	1	
**GE Objective (choose one course to satisfy GE Objectives)	3	
Total	16	

Fifth Semester

Course	Credits	Grade
CE 3362 Structural Analysis	3	
CE 3366 Civil Engineering Materials	2	
CE 3367 Civil Engineering Materials Lab	1	
CE 3301 Surveying	3	
CE 3361 Engineering Economics	3	
CE 4434 Geotechnical Design	3	
Total	15	

Sixth Semester

Course	Credits	Grade
CE/ME 3341 Fluid Mechanics	3	
CE 3351 Engineering Hydrology	3	
ENVE 4408 Water & Wastewater Quality	3	
Either CE 4462 Steel Structures ☐ or CE 4464 Concrete Structures	3	
**GE Objective (choose one course to satisfy GE Objectives)	3	
Total	15	

Seventh Semester

Course	Credits	Grade
ENVE 4410 Intro Environmental Engineering	3	
CE 4435 Hydraulic Design	3	
CE 4496A Project Design I	3	
CE Technical Elective	3	
CE Technical Elective	3	
Total	15	

Eighth Semester

Course	Credits	Grade
CE 4436 Transportation Engineering	3	
CE 4496B Project Design II	3	
CE Technical Elective	3	
CE Technical Elective	3	
**GE Objective (choose one course to satisfy GE Objectives)	3	
Total	15	

Date Approved by Department: September 4, 2014

Notes:

1. Degree Maps demonstrate a **recommended configuration** of required courses to complete a degree in four years.
2. 15 credits each semester of required courses is recommended.
3. Students may need to (or choose to) customize the Degree Map to their needs.
4. Students must register for the appropriate English and math courses according to their placement test (ACT, SAT, COMPASS) results.
5. Students should enroll in English and math courses each semester until General Education Objectives 1 (English) & 3 (Math) have been satisfied.
6. Students are advised to refer to the course description in the current online catalog (<http://coursecat.isu.edu>) for the semester a course will be offered (e.g. F = Fall or S = Spring).
7. Completion of **red bolded** Gateway/Milestone courses as outlined is considered a critical component of MAP sequencing.
8. Refer to the link below for GE Objective course choices:

[2014-2015 General Education \(Objectives\)](#)

B.S. Civil Engineering Catalog Year 2014.15

UNIVERSITY and DEGREE REQUIREMENTS	CREDITS
MAJOR REQUIREMENTS TOTAL	89
GENERAL EDUCATION TOTAL	37
Additional credits to reach 120 (e.g. Minor, electives)	0
Total Credits (must include 36 Upper Division credits)	126
<i>Upper Division Credits are those numbered as 3000 or 4000</i>	
CE MAJOR REQUIREMENTS (102cr required minus 13cr counted in GE)	89
CE 1105 Engineering Graphics	2
CE/ME 2210 Engineering Statics	3
CE 2200 Civil Engineering Tools	1
CE 3301 Surveying	3
CE 3332 Basic Geotechnics	3
CE 3337 Geotechnics Lab	1
CE/ME 3341 Fluid Mechanics	3
CE/ME 3350 Mechanics of Materials	3
CE 3351 Engineering Hydrology	3
CE 3361 Engineering Economics	3
CE 3362 Structural Analysis	3
CE 3366 Civil Engineering Materials	2
CE 3367 Civil Engineering Materials Lab	1
CE 4434 Geotechnical Design	3
CE 4435 Hydraulic Design	3
CE 4436 Transportation Engineering	3
CE 4462 Steel Structures or CE 4464 Concrete Structures	3
CE 4496A Project Design I	3
CE 4496B Project Design II	3
CHEM 1111 and Lab General Chemistry (5 credits counted in Objective 5)	
ENVE 4408 Water & Wastewater Quality	3
ENVE 4410 Introduction to Environmental Engineering	3
Either GEOL 1101 and Lab or Biol 1101 and Lab (4 credits counted in Objective 5)	
MATH 1170 Calculus I (4 credits counted in Objective 3)	
MATH 1175 Calculus II	4
MATH 2240 Linear Algebra	3
MATH 3352 Introduction to Probability	3
MATH 3360 Differential Equations	3
ME 1165 Structured Programming	2
ME 2220 Dynamics	3
PHYS 2211 Engineering Physics I	4
CE Technical Electives	12
2014-2015 GENERAL EDUCATION OBJECTIVES	Minimum
Satisfy Objectives 1, 2, 3, 4, 5, 6, (7 or 8) and 9	37
1. Written English ENGL 1102	3
2. Spoken English COMM 1101	3
3. Mathematics MATH 1170	4
4. Humanities, Fine Arts, Foreign Language (Two Courses; two categories)	
5. Natural Sciences (Two lectures, one lab; two different course prefixes)	
CHEM 1111 General Chemistry I and Lab	5
Either GEOL 1101, 1101L OR BIOL 1100, 1100L	4
6. Behavioral and Social Science (Two Courses; two different prefixes)	
One Course from EITHER Objective 7 OR 8	
7. Critical Thinking	
8. Information Literacy	
9. Cultural Diversity (One Course)	
Additional coursework from any Objectives area to reach 36 credits	

Catalog Year 2014.15

Undergraduate Catalog

<http://coursecat.isu.edu/>

Department website

<http://enr.isu.edu/cee/>

Admission Requirements to Major - None

General Education

[2014-2015 General Education \(Objectives\)](#)

Career Links for Civil Engineering

<http://careers.asce.org/jobs>

<http://www.engineerjobs.com/jobs/civil-engineering/>

<http://www.engineering.com/Jobs/tabid/5120/Default.aspx>

<http://www.simplyhired.com/k-entry-level-civil-engineer-civil-engineer-jobs.html>

Electives are unspecified course requirements; student choice; 1000 to 4000 course level

Discipline Specific Electives are unspecified requirements that must come from a particular discipline (e.g. BIOL Elective)

Upper Division Electives are unspecified requirements within

Use the Guide to determine English and Math Course Placement

www.isu.edu/advising/docs/English&MathPlacement.pdf

When math and English remediation is indicated, the student will enroll in a

Co-Requisite Course Model (i.e. "Plus" courses).

ENGL 1101P English Composition Plus - 4 credits. Includes 1 credit student section for intensive supplemental instruction

MATH 1108P Intermediate Algebra Plus - 3 credits. Includes on additional hour per week of intensive supplemental instruction.