

# CIVIL ENGINEERING

## Plan of Study

Below is a sample plan of study that illustrates one way to achieve the program requirements. Any given student's plan of study may differ based on a variety of factors (e.g., advanced credit, placement exams, adding a minor). Enrolled students will work with their academic advisor; utilize the degree audit/planner to create a specific plan of study.

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
MA 111	Calculus I	5
PH 111	Physics I	4
PH 111L	Physics I Lab	0
HUM H190	First-Year Writing Seminar	4
RHIT 100	Foundations for Rose-Hulman Success	1
CE 101	Engineering Surveying	2
<b>Hours</b>		<b>16</b>
<b>Winter</b>		
MA 112	Calculus II	5
PH 112	Physics II	4
PH 112L	Physics II Lab	0
HUM H190	First-Year Writing Seminar	4
CE 111	Geographical Information Systems	2
EM 102	Graphical Communications for Civil Engineers	2
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
MA 113	Calculus III	5
EM 103	Introduction to Design	2
EM 120	Engineering Statics	4
HSSA Elective		4
<b>Hours</b>		<b>15</b>
<b>Sophomore</b>		
<b>Fall</b>		
MA 221	Matrix Algebra & Differential Equations I	4
EM 202	Dynamics	4
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Lab	1
HSSA Elective		4
<b>Hours</b>		<b>16</b>
<b>Winter</b>		
MA 222	Matrix Algebra & Differential Equations II	4
EM 203	Mechanics of Materials	4
CE 250	Sustainable Civil Engineering Design	2
CHEM 113	General Chemistry II	3
CHEM 113L	General Chemistry II Laboratory	1
Elective (Science) <sup>1</sup>		4
<b>Hours</b>		<b>18</b>
<b>Spring</b>		
MA 223	Engineering Statistics	4
EM 301	Fluid Mechanics	4
CE 310	Computer Applications in Civil Engineering	2
CE 320	Civil Engineering Materials	4
CE 380	Introduction to Transportation Engineering	4
<b>Hours</b>		<b>18</b>
<b>Junior</b>		
<b>Fall</b>		
CE 321	Structural Mechanics I	4
CE 336	Soil Mechanics	4

CE 205 or CHE 201	Thermodynamics or Conservation Principles and Balances	4
CE 371	Hydraulic Engineering	4
<b>Hours</b>		<b>16</b>
<b>Winter</b>		
ES 213 & 213L or CHE 202	Electrical Systems or Basic Chemical Process Calculations	4
CE 441	Construction Engineering	2
CE 432	Structural Design in Concrete I	3
CE 471	Water Resources Engineering	4
Elective (Science)		4
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
HSSA Elective		4
CE 431	Structural Design In Steel I	3
CE 460	Introduction to Environmental Engineering	4
ENGL H290	Technical & Professional Communication	4
CE 461	Environmental Engineering Laboratory	2
<b>Hours</b>		<b>17</b>
<b>Senior</b>		
<b>Fall</b>		
CE 486	Civil Engineering Design & Synthesis I	2
C.E. Elective <sup>2</sup>		4
CE 303	Engineering Economy	4
CE 450	Civil Engineering Codes & Regulations	4
<b>Hours</b>		<b>14</b>
<b>Winter</b>		
CE 487	Technical System Design & Synthesis	2
CE 488	Civil Engineering Design & Synthesis II	2
C.E. Elective <sup>2</sup>		4
Elective (Technical) <sup>3</sup>		4
HSSA Elective		4
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CE 489	Civil Engineering Design & Synthesis III	2
Free Elective <sup>4</sup>		4
HSSA Elective		4
HSSA Elective		4
CE 400	Career Preparation Seminar	0
<b>Hours</b>		<b>14</b>
<b>Total Hours</b>		<b>194</b>

<sup>1</sup> At least 4 hours of science elective must be in a natural science outside Chemistry or Physics.

<sup>2</sup> Student shall choose any 400 or 500 level CE elective course, designated with the "CE" prefix, as a CE Elective, in consultation with their advisor.

<sup>3</sup> Students shall choose, in consultation with their advisor, any four (4) credit course at the 200 level or higher in natural science, computer science, mathematics, biomathematics, engineering, engineering management, or multi-disciplinary studies as the Technical Elective.

<sup>4</sup> Free elective is a total of four credits which can be from a combination of courses.