

**CIVIL ENGINEERING MAJOR**  
**Program Tracking Sheet**  
 Effective for students entering AY 2022-2023

Name:	Class Year:
Advisor:	2 <sup>nd</sup> Major:

**NOTES:** Minimum total academic credit = 15 units  
 Residency Req.: Min. of 8 units must be completed at WPI

**HUMANITIES AND ARTS (6/3 unit)**  
 All 5 HUA courses must be completed before beginning the Inquiry Seminar or Practicum.

<b>Depth Component</b>				
Students must complete at least three thematically-related courses prior to the culminating Inquiry Seminar or Practicum in the same thematic area. At least one of the three courses should be at the 2000-level or above.				
	Course	Term	Grade	Units
1				1/3
2				1/3
3				1/3
4	HU 3900 or HU 3910			1/3

<b>Breadth Component</b>				
Students must take at least one course outside the grouping in which they complete their depth component. To identify breadth, courses are grouped in the following manner.				
i. art/art history, drama/theatre, and music (AR, EN/TH, MU);				
ii. foreign languages (AB, CN, EN, GN, SP);				
iii. literature and writing rhetoric (EN, WR, RH);				
iv. history and international studies (HI, HU, INTL);				
v. philosophy and religion (PY, RE).				
Exception: May take all six courses in a foreign language				
5				1/3
<b>Humanities Elective</b>				
6				1/3

<b>PHYSICAL EDUCATION (4 PE classes = 1/3 unit)</b>				
7				1/12
				1/12
				1/12
				1/12

<b>SOCIAL SCIENCE (2/3 unit) ECON, ENV, GOV, PSY, SD, SOC, SS, STS, DEV and ID2050</b>				
8				1/3
9				1/3

<b>THE INTERACTIVE QUALIFYING PROJECT (1 unit)</b>				
10				1/3
11				1/3
12				1/3

<b>FREE ELECTIVES (1 unit)</b>				
13				1/3
14				1/3
15				1/3

<b>MATHEMATICS AND BASIC SCIENCE (4 units)</b>				
<b>MATHEMATICS (7/3 units) Courses with prefix: MA</b>				
Must include differential and integral calculus, differential equations, and probability and statistics.				
16	MA 1020/1021 (Calculus 1)			1/3
17	MA 1120/1022 (Calculus 2)			1/3
18	MA 1023 (Calculus 3)			1/3
19	MA 1024 (Calculus 4)			1/3
20	MA 2051 (Differential Equations)			1/3
21	MA 2611 (Statistics)			1/3
22	MA 2621 (Probability)			1/3

<b>BASIC SCIENCE (4/3 units)</b>				
Must include at least 1/3 unit in physics (PH), 2/3 unit in chemistry (CH), and 1/3 unit in an additional science area (BB or GE).				
23	PH			1/3
24	CH			1/3
25	CH			1/3
26	BB or GE			1/3

<b>ADDITIONAL MATHEMATICS AND BASIC SCIENCE (1/3 units)</b>				
Must include 1/3 unit elective from BB, CH, GE, MA, PH, or FY courses that satisfy BB, CH, GE, MA or PH				
27				1/3

<b>ENGINEERING SCIENCE AND DESIGN (6 units)</b>				
<b>FUNDAMENTAL ENGINEERING SCIENCE (6/3 units)</b>				
Must include 2/3 units in solid mechanics, 1/3 unit in soil mechanics, 1/3 unit in fluid mechanics, and 2/3 units of engineering science from the following list: CE 2002, ES 2001, ES 2503, ES 2800, ES 3001, and ES 3002.				
28	Solid mechanics (CE 2000/ES 2501)			1/3
29	Solid mechanics (CE 2001/ES 2502)			1/3
30	Soil mechanics (CE 3041)			1/3
31	Fluid mechanics (ES 3004)			1/3
32	Engineering science			
33	Engineering science			

<b>CIVIL ENGINEERING – CORE (4/3 units)</b>				
Must include 4/3 units in Core Civil Engineering, including Structural Engineering, Project Management, Transportation Engineering, and Environmental Engineering (fulfilled by CE 3010, CE 3020, CE 3050, CE 3059).				
34	Structural engineering (CE 3010)			1/3
35	Project management (CE 3020)			1/3
36	Transportation engineering (CE 3050)			1/3
37	Environmental engineering (CE 3059)			1/3

<b>CIVIL ENGINEERING – DEPTH (3/3 units)</b>				
Must include 3/3 units of civil engineering depth courses at the 3000-level or above (fulfilled by all CE courses not listed elsewhere, with at least 2/3 from one sub-discipline – see catalog for more information on course options).				
38				1/3
39				1/3
40				1/3

<b>CIVIL ENGINEERING LABORATORY EXPERIENCE (2/3 unit)</b>				
Must include 2/3 units of civil engineering laboratory experience (fulfilled by CE 2020, CE 3026, CE 4054, CE 4060).				
41				1/3
42				1/3

<b>MAJOR QUALIFYING PROJECT &amp; CAPSTONE DESIGN EXPERIENCE (3/3 units MQP; 1/3 unit capstone design experience)</b>				
43				1/3
44				1/3
45				1/3

## CIVIL ENGINEERING PROGRAM CHART

STUDENTS EARNING AN ABET-ACCREDITED B.S. DEGREE IN CIVIL ENGINEERING MUST COMPLETE 15 UNITS OF STUDY, DISTRIBUTED AS FOLLOWS:

UNIVERSITY REQUIREMENTS (4 units)			
Humanities and Arts	Interactive Qualifying Project	Social Sciences	Physical Education
2 units	1 unit	2/3 unit	1/3 unit
See WPI Requirements			

FREE ELECTIVES (1 unit)
Free Electives
1 unit
Students are encouraged to consider additional CE courses (e.g., CE 1030, CE 3030, CE breadth) or other engineering courses.

MATHEMATICS AND BASIC SCIENCE (4 units)							
Differential & Integral Calculus	Differential Equations	Statistics	Probability	Chemistry	Physics	Additional Science	Math/ Science Elective
4/3 unit	1/3 unit	1/3 unit	1/3 unit	2/3 unit	1/3 unit	1/3 unit	1/3 unit
MA 1020/1021 MA 1022 MA 1023 MA 1024	MA 2051	MA 2611	MA 2621	CH 1010 CH 1020	PH 1110/1111	GE or BB	MA, CH, PH, GE, or BB

ENGINEERING SCIENCE AND DESIGN (6 units)					
Fundamental Engineering Science		Core CE		Labs	MQP
4/3 unit		2/3 unit		2/3 unit	1 unit
CE 2000 (or ES 2501) CE 2001 (or ES 2502) CE 3041 ES 3004	CE 2002 ES 2001 ES 2503 ES 2800 ES 3001 ES 3002	CE 3010 CE 3020 CE 3050 CE 3059	CE 2020 CE 3026 CE 4054 CE 4060	Including 1/3 unit capstone design	

CE Depth			
3/3 unit (at least 2/3 unit from one sub-discipline)			
<u>Structural and Geotechnical Engineering</u>	<u>Environmental Engineering and Water Resources</u>	<u>Transportation Engineering and Development</u>	<u>Construction Engineering and Project Management</u>
CE 3006 CE 3008 CE 3031 CE 3044 CE 4007 CE 4017	CE 3060 CE 3061 CE 3062 CE 3074 CE 4061 CE/CHE 4063 CE 4600	CE 3031 CE 3051 CE 3070 CE 3074 CE 4061 CE 4071	CE 3022 CE 3025 CE 3031 CE 3044