UNIVERSITY OF South Carolina

Major Map: Civil Engineering
Bachelor of Science in Engineering (B.S.E.)
Molinaroli College of Engineering and Computing
Department of Civil & Environmental Engineering
Bulletin Year: 2025-2026

This course plan is a recommended sequence for this major. Courses designated as critical **(!)** may have a deadline for completion and/or affect time to graduation. Please see the Program Notes section for details regarding "critical courses" for this particular Program of Study.

!	Course Subject and Title	Credit Hours	Min. Grade[1]	Program GPA[2]	Code	Prerequisites	Notes
Semester One (17 Credit Hours)							
	ENGL 101 Critical Reading and Composition	3	C		CC-CMW		
!	MATH 141 Calculus 1[3]	4	C		CC-ARP	C or better in MATH 112/115/116 or placement through the MAP	
	CHEM 111 General Chemistry I	3			CC-SCI	C or better in MATH 111/115/122/141 or higher math *or* placement through the MAP; Coreq: CHEM 111L	
	CHEM 111L General Chemistry I Lab	1			CC-SCI	MATH 111 or 115 or higher; Prereq or Coreq: CHEM 111	
	ECIV 101 Intro. to Civil Engr. (or ENCP 101) *fall only*	3		*	PR		
	Carolina Core AIU[4]	3			CC-AIU		
Semester Two (17 Credit Hours)							
	ENGL 102 Rhetoric and Composition	3			CC-CMW CC-INF	C or better in ENGL 101	
!	MATH 142 Calculus II	4	C		CC-ARP	C or better in MATH 141	
	PHYS 211 Essentials of Physics I	3			CC-SCI	C or better in MATH 141; Coreq: PHYS 211L	
	PHYS 211L Essentials of Physics I Lab	1			CC-SCI	Prereq or Coreq: C or better in PHYS 211	
!	ECIV 200 Statics (or ENCP 200)	3	C	*	PR	C or better in MATH 141	
	Carolina Core GHS[4]	3			CC-GHS		
Semester Three (15-16 Credit Hours)							
!	ECIV 201 Computational Methods for Civil Engr. (or ENCP 201)	3		*	PR	C or better in MATH 142 & ECIV 200 *or* ENCP 200	
	Foundational Math Elective[5]	3			PR	C or better in MATH 142	
!	ECIV 220 Mechanics of Solids (or ENCP 260)	3	C	*	PR	C or better in ECIV 200 & MATH 142	
	Basic Science Elective[6]	3-4			PR	See Bulletin listing.	
	Carolina Core GSS[4]	3			CC-GSS		
Semester Four (15-16 Credit Hours)							
	ECIV 111 Intro. to Engr. Graphics & Visualization (or ENCP 102)	3		*	PR		
!	ECIV 360 Fluid Mechanics (or ENCP 360)	3	C	*	PR	Prereq or coreq: C or better in ECIV 200 *or* ENCP 200 and C or better in MATH 142.	
!	MATH 242 Elem. Differential Equations	3			PR	C or better in MATH 142	
!	STAT 509 Statistics for Engineers *or* STAT 511 Probability	3			PR	MATH 142 *(STAT 509)*; C or better in MATH 241 *(STAT 511)*	
	Foundational Math/Science Elective[7]	3-4			PR		
Semester Five (16 Credit Hours)							
!	ECIV 303 Civil Engineering Materials	3		*	MR	C or better in ECIV 220 *or* ENCP 260	
!	ECIV 320 Structural Analysis I	3		*	MR	D or better in ECIV 201 *or* ENCP 201, MATH 242, & C or better in ECIV 220 *or* ENCP 260	
!	ECIV 340 Intro. to Transportation Engineering	3		*	MR	D or better in ECIV 201 *or* ENCP 201 *and* STAT 509 *or* STAT 511	
!	ECIV 350 Intro. to Environmental Engineering	3		*	MR	D or better in CHEM 111 *or* CHEM 141 & C or better in MATH 142	
	ECIV Laboratory Course[8]	1		*	PR	See Bulletin listing.	
	Carolina Core VSR[4]	3			CC-VSR		
Semester Six (16-17 Credit Hours)							
!	ECIV 330 Intro. to Geotechnical Engineering	3		*	MR	C or better in ECIV 220 *or* ENCP 260	
!	ECIV 362 Intro. to Water Resources Engr.	3		*	MR	C or better in either ECIV 360 *or* ENCP 360	
	ECIV Distribution Elective[9]	3		*	PR	See Bulletin listing.	
	ECIV Distribution Elective[9]	3		*	PR	See Bulletin listing.	
	ECIV Laboratory Course[8]	1		*	PR	See Bulletin listing.	
	ESM Elective[10]	3-4			PR		
Semester Seven (12-16 Credit Hours)							
!	ECIV 307 Professional Dev. for Civil Engineers	3		*	MR	Pre or coreq: D or better in ECIV 320, 330, 340, 350 *or* 362	
	ECIV Distribution Elective[9]	3		*	PR	See Bulletin listing.	
	ESM Elective[10]	3			PR	See Bulletin listing.	
	ESM Elective[10]	3-4			PR	See Bulletin listing.	
	Carolina Core CMS[4]	0-3			CC-CMS		

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Semester Eight (16-18 Credit Hours)							
!	ECIV 470 Civil Engineering Design	4		*	MR CC-INT	D or better in ECIV 307 & two ECIV distribution courses; Prereq or Coreq: D or better in ECIV 111 *or* ENCP 102	
	ECIV Distribution Elective[9]	3		*	PR	See Bulletin listing.	
	ESM Elective[10]	3			PR	See Bulletin listing.	
	Career Elective[11]	3-4			PR	See Bulletin listing.	
	Career Elective[11]	3-4			PR	See Bulletin listing.	
Take during any semester (0-6 Credit Hours)							
	Carolina Core GFL[12]	0-6			CC-GFL		

Graduation Requirements Summary

Minimum Total Hours	Minimum Major Requirements Hours	College & Program Requirements Hours	Minimum Carolina Core Hours	Minimum Institutional GPA
124	25	65-71	34	2.00

1. Regardless of individual course grades, students must maintain a minimum 2.00 cumulative GPA.
2. Some colleges require a minimum GPA for major courses. Courses indicated in this column are included in the Civil Engineering program GPA of 2.00.
3. Students who place into MATH 115 will be required to successfully complete it before taking MATH 141.
4. The Carolina Core provides the common core of knowledge, skill and academic experience for all Carolina undergraduate students.
5. **Foundational Math Elective (3 hours): MATH** 241, 300, 344.
6. **Basic Science Elective (3-4 hours): BIOL** 110, 270; **ENVR** 101, 321; **GEOL** 101, 103; **MSCI** 210, 215.
7. **Foundational Math/Science Elective (3-4 hours):** additional course from Foundational Math Elective category, **CHEM** 112 & 112L, **PHYS** 212 & 212L.
8. **ECIV Laboratory Courses (2 hours):** ECIV 303L, ECIV 330L, ECIV 340L, ECIV 350L, ECIV 362L.
9. **ECIV Distribution Electives (12 hours):** One course from 4 of the following 5 areas: Environmental: ECIV 551, 555, 556, 557, 558; Geotechnical: ECIV 530, 531; Structural: ECIV 325, 327 (C or better in ECIV 320 required); Water Resources: ECIV 560, 562, 563; Transportation: ECIV 540,541, 542, 580.
10. **ESM (Engineering, Science, or Mathematics) Electives (12-14 hours):** additional courses from Foundational Math Electives category, Foundational Math/Science Elective category and Basic Science, additional ECIV courses 300-level and higher (not already taken to fulfill the ECIV Distribution Elective requirement), **BIOL** 101, 102, 250 and higher; **BMEN** 212 and higher; **CHEM** 118 and higher; **CSCE** 106**,** 145, 146, 201, or 211; **ECHE** 300 and higher; **ECIV** 210 or ENCP 210; **ELCT** 220, 221 and higher; **EMCH** 290 and higher (not 360); **ENCP** 290 and higher (not 360); **ENVR** 331, 501 or 533; **GEOG** 347 or 563; **GEOL** 302 and higher; **ITEC** 233 and higher; **MATH** 520, 521, 544, 550; **MSCI** 305 and higher; **NAVY** 201, 202, 301; **PHYS** 291 and higher; **STAT** 511, 512, 513, 516, 520, 587.
11. **Career Electives (6-8 hours):** additional courses from Foundational Math Elective category, Foundational Math/Science Elective category, Basic Science category, and ESM Elective category, additional **ECIV** courses 300-level and higher, or **ACCT** 222, **ECON** 224, **FINA** 333, **MGMT** 371, **MGSC** 290, **MKTG** 350.
12. Students in the College of Engineering and Computing are required to demonstrate proficiency in one foreign language equivalent to the 121 course by 1) a score of two or better on the foreign language placement test; or 2) completion of the 109 and 110 courses in FREN, GERM, LATN, or SPAN or completion of the 121 course in another foreign language. Students who do not place out of the GFL requirement may need to take additional hours to meet this requirement.

Program Notes:

- Courses identified as "critical" must be completed by the semester in which they are listed in order to ensure a timely graduation due to prerequisite requirements for subsequent required courses.
- All undergraduate students must take a 3-credit course or its equivalent with a passing grade that covers the founding documents. This course may fulfill any requirement in the program of study. Courses that meet this requirement are listed in the academic bulletin.
- A student cannot repeat courses from the College of Engineering and Computing in which they earned a grade of C or better. In addition, a student cannot repeat any course from the College a second time. No more than four courses from the College of Engineering and Computing may be repeated in order to satisfy the requirements for any degree from the College, regardless of satisfactory work. For this purpose, withdrawal from a course with a grade of **W** is not regarded as enrollment in that course. A student that does not satisfactorily complete a degree-required College course within two attempts must change major or transfer out of the College of Engineering and Computing.
- A concentration in Environmental Engineering, Geotechnical Engineering, Structural Engineering, or Water Resources Engineering is available to students majoring in civil engineering. More details are available in the Bulletin.
- The last 25% of a student's degree must be completed in residence at the University, and at least half of the hours in the student's major courses and in the student's minor courses (if applicable) must be taken at the University.
- Disclaimer: Prerequisites on courses are subject to change. Please refer to Bulletin.

University Requirements: Bachelor's degree-seeking students must meet Carolina Core (general education) requirements. For more information regarding these requirements, please visit the Carolina Core page on the University website.

Codes:			
CC	Carolina Core	**CC-INF**	Carolina Core – Information Literacy
CC-AIU	Carolina Core-Aesthetic and Interpretive Understanding	**CC-INT**	Carolina Core – Integrative Course
CC-ARP	Carolina Core-Analytical Reasoning and Problem-Solving	**CC-SCI**	Carolina Core – Scientific Literacy
CC-CMS	Carolina Core-Effective, Engaged, and Persuasive Communication: Spoken Component	**CC-VSR**	Carolina Core – Values, Ethics, and Social Responsibility
CC-CMW	Effective, Engaged, and Persuasive Communication: Written Component	**CR**	College Requirement
CC-GFL	Carolina Core-Global Citizenship and Multicultural Understanding: Foreign Language	**MR**	Major Requirement
CC-GHS	Carolina Core – Historical Thinking	**PR**	Program Requirement
CC-GSS	Carolina Core – Social Sciences		

Disclaimer: Major maps are only a suggested or recommended sequence of courses required in a program of study. Please contact your academic advisor for assistance in the application of specific coursework to a program of study and course selection and planning for upcoming semesters.