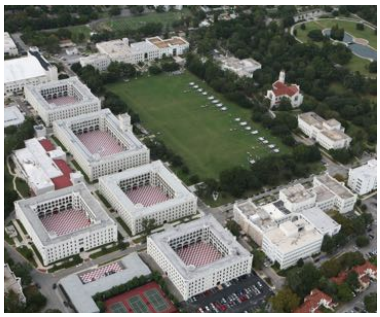
Civil & Environmental Engineering



THE CITADEL
SCHOOL OF ENGINEERING

CURRICULUM OVERVIEW: Student-focused program providing graduates with analytical capabilities, critical thinking, design proficiencies, professional skills, principled leadership, and technical knowledge in structural, geotechnical, environmental & transportation engineering.

PROGRAM SUMMARY: 1.) Frequent on-site field trips, 2.) engagement with civil engineering professionals, 3.) active learning classroom environment, 4.) Fundamentals of Engineering Exam preparation, 5.) daytime engineering-field employment [readily available] to gain real world experience, and 6.) design-focused curriculum including:

General Education	7-courses
Math & Science	8-courses, 4-labs
Surveying, GPS, GIS	2-courses, 2-labs
Fundamental Engineering courses	6-courses
Structural	4-courses, 1-lab
Geotechnical	2-courses, 1-lab
Environmental	4-courses, 2-labs
Transportation	2-courses, 1-lab
Professional Skills & Licensure	5-courses

STUDENTS: Civilians, active duty, veterans, and cadets work together in a uniquely supportive, collaborative & energetic learning environment to prepare for a wide range of successful and rewarding civil engineering careers.

CIVIL ENGINEERING CURRICULUM

a. Design focused
b. Prep. for engineering practice

I. STRUCTURAL ENGINEERING

a. Buildings, bridges, coastal structures
b. Beams, columns, connections
c. Reinforced concrete, steel design

II. GEOTECHNICAL ENGINEERING

a. Foundations, excavation
b. Soil properties, soil conditions
c. Soil strength, stress/strain

III. ENVIRONMENTAL ENGINEERING

a. Water resources
b. Water treatment
c. Hazardous materials

IV. TRANSPORTATION ENGINEERING

a. Roadways, traffic control systems
b. Airports, public transit, railroads
c. Marine terminals, ports, harbors

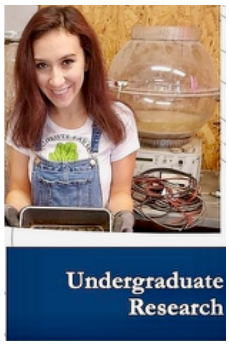
ADVISORY BOARD: 20-member board, meets twice per year, advises faculty on recruiting, admissions, curriculum, student enrichment, equipment/technology needs, enhancements, capital development, scholarships, internships, graduate employment, graduate school, etc.

Chris Cook, PE, LEED, Advisory Board Chair
Partner, ADC Engineering

"The Citadel's 2+2 civil engineering program allows students to graduate with a widely recognized design-oriented education and at the same time earn extremely valuable work experience that provides graudates with highly marketable skills to jump-start their engineering careers."

Erin Slayton, PE, DBIA, ENV-SP, Advisory Board Vice Chair
Vice President, HDR

"The Citadel's civil engineering program has a great reputation of preparing graduates for successful careers across a wide range of positions in consulting, public works, project development, engineering design, project management and construction administration."



FOR MORE INFORMATION:

Trident Tech

The Citadel

Citadel Engineers
Citadel Civil Engineers

Citadel School of Engineering
Citadel Civil Engineering

Citadel Civil, Environmental & Construction Engineering

Bachelor of Science in Civil Engineering

#	Citadel course	Courses Taken at Trident Tech. (or equivalent): 69 credit hours		69
		Civil Engineering (19 hours)		19
1	CIVL 202	EGR-260 Engineering Statics ***(Citadel offers to 2+2 students)***	3	
2	CIVL 103	EGR-282 Introduction to Civil Engineering	2	
3	CIVL 210	EGR-202 Introduction to Engineering Programming	3	
4	CIVL 101	EGR-275 Introduction to Engineering/Computer Graphics	3	
5	CIVL 205	EGR-285 Engineering Surveying I ***(Citadel offers to 2+2 students)***	3	
6	CIVL 208	EGR-286 Engineering Surveying II ***(Citadel offers to 2+2 students)***	3	
7	CIVL 235	EGR-295 Engineering Surveying Lab I ***(Citadel offers to 2+2 students)***	1	
8	CIVL 239	EGR-296 Engineering Surveying Lab II ***(Citadel offers to 2+2 students)***	1	
		Writing/English Composition (9 hours)		9
9	ENGL 101	ENG-101	3	
10	ENGL 102+	ENG-102 or above, but not public speaking	3	
11	COMM 260	ENG-260	3	
12,13	Hum / FA	**Humanities/Social Sciences (6 hours)**	6	6
14	HIST ###	**History (3 hours)**	3	3
		Math/Science (32 hours)		32
15,16	BIOL 150/151	BIO-101 Biology	4	
17,18	CHEM 151/161	CHM-110 College Chemistry I	4	
19,20	CHEM 152/162	CHM-111 College Chemistry II	4	
21	MATH 131	MAT-140 Calculus I	4	
22	MATH 132	MAT-141 Calculus II	4	
23	MATH 231	MAT-240 Calculus III	4	
24	MATH 234	MAT-242 Differential Equations	4	
25,26	PHYS 221/271	PHY-221 Physics	4	
		Courses Taken at The Citadel: 61 credit hours		**61**
		Third Year (33 hours)		33
27		EUGS 101- Intro to The Citadel Experience	1	
28		CIVL-203 Dynamics *(TTC also offers, EGR-262)*	3	
29		CIVL-302 Highway Engineering	3	
30		CIVL-304 Mechanics of Materials	3	
31		CIVL-305 Transportation Engineering	3	
32		CIVL-307 Materials Laboratory	1	
33		CIVL-309 Structural Analysis	4	
34		CIVIL-314 Engineering Economy	2	
35		CIVL-320 Fluid Mechanics	3	
36		CIVL-321 Hydrology and Hydraulics	3	
37		CIVL-322 Introduction to Environmental Engineering	3	
38		CIVL-327 Asphalt and Concrete Laboratory	1	
39		CIVL-331 Probability & Statistics for Civil/Construction Engineering	3	
		Fourth Year (28 hours)		28
40		CIVL-402 Geotechnical Engineering Laboratory	1	
41		CIVL-404 Reinforced Concrete Design	3	
42		CIVL-406 Steel Design	3	
43		CIVL-408 Water and Wastewater Systems	3	
44		CIVL-409 Introduction to Geotechnical Engineering	3	
45		CIVL-410 Geotechnical Engineering II	3	
46		CIVL-411 Engineering Management	3	
47		CIVL-412 Engineering Practice & Professional Licensure	1	
48		CIVL-418 Fluid Mechanics Laboratory	1	
49		CIVL-419 Environmental Engineering Laboratory	1	
50		CIVL-432 Civil Engineering Capstone I	3	
51		CIVL-433 Civil Engineering Capstone II	3	
			Total Credit Hours	**130**