

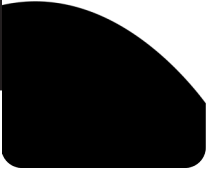
CEE

Civil and Environmental Engineering

WEB LINKS	http://ceve.rice.edu/undergrad/
FRANK ADVICE	Make a 4-year plan early on to know what the major entails and update as you go. Consult with advisors if in doubt. Don't overload your schedule in the first two semesters; try to get the requisites out of the way and aim to take 15-18 credits per semester. Take CEVE 101 in the freshman year to get a broad overview of courses and research in the department. Take CEVE 481 in the fall term and CEVE 480 in the spring of your senior year. Try studying in groups, after your own reviews, to enhance learning and critical discussion skills. Join and actively participate in student and professional organizations.
ADVICE FOR STUDENTS WITH AP CREDIT	With at least a 4 on AP exams, you may not need to take courses such as Physics, Chemistry, Calculus or Biology. If you feel you are ready, you can take higher level courses or honors courses. You can also get started with your master's degree in the last one to two years.
GRADUATION REQUIREMENTS	Students are responsible for making certain that their plan of study meets all degree and major requirements. These requirements are found in the General Announcements. Students have the option of following either their matriculation or graduation year requirements.
BS VERSUS BA	The B.S. program is accredited by the Engineering Accreditation Commission (EAC) of ABET, www.abet.org . The B.S. is recommended for those interested in graduate studies or careers as licensed professional engineers. The B.A. degree is recommended to students interested in graduate studies outside of engineering such as policy, law or medicine, or those interested in pursuing a double major or a minor, such as the one in energy and water sustainability.
NOT REQUIRED BUT HIGHLY RECOMMENDED COURSES	CEVE 304 Structural Analysis, (required for structures and mechanics specialty), CEVE 322 Engineering Economics, CEVE 313 Uncertainty and Risk in Urban Infrastructures, CAD/CAE course (CEE tutorial), and Fondren Library's Introduction to GIS.



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RESEARCH	Students are encouraged to seek undergraduate research experience with CEE faculty members. Explore research early by talking to professors and showing your interest in their work. CEVE 101 will introduce you to CEE faculty and their research areas.
INTERNSHIPS	Students are encouraged to apply for summer internships. The ASCE student chapter and the Center for Career Development's job fairs are great resources. Internships are not limited to engineering firms; but they have more leverage if related to your career focus.
STUDY ABROAD	While challenging, study abroad is possible for engineers. Required Rice courses may not be offered at universities abroad. Plan to travel in the spring of the sophomore year or fall of the junior year. Consider joining Engineers Without Borders and implement engineering projects in developing countries. Travel is typically during scheduled breaks.
PROFESSIONAL ORGANIZATIONS AND STUDENT CLUBS	ASCE (American Society of Civil Engineers) student chapter, EWB (Engineers Without Borders), Chi Epsilon Honor Society, Concrete Canoe Club, Earthquake Engineering Research Institute (EERI), and the Society of Women Engineers, among others.
EXPLORATORY COURSES FOR NON-MAJORS	CEVE 101 Fundamentals of Civil and Environmental Engineering, CEVE 310 Principles of Environmental Engineering, CEVE 307 Energy and the Environment, CEVE 406 Intro Environmental Law, CEVE 313 Uncertainty and Risk in Urban Infrastructures.

B.A. In Civil & Environmental Engineering

(Track E: Environmental Core Curriculum)

Specializations: Courses labeled as SPEC cover topics in which environmental engineering and other disciplines share a common interest. Take 7 courses from electives approved by an adviser assigned by the CEE Dept., including 4 from one specific focus area. Of these 7 electives, 4 must be 300 level courses or above, and 2 of these upper-division courses must be from the CEE curriculum. Examples of areas of specialization include environmental science and engineering, civil engineering, biology, chemical engineering, chemistry, economics or management

Sample Degree Plan

THIS IS ONE EXAMPLE OF MANY POSSIBLE SCHEDULES.

CONSULT A DIVISIONAL OR DEPARTMENTAL ADVISER TO CUSTOMIZE YOUR DEGREE PLAN.

FALL				SPRING			
FRESHMAN		17 credits		FRESHMAN		17 credits	
MATH 101	Single Variable Calculus I	3		MATH 102	Single Variable Calculus II	3	
PHYS 101•	Mechanics w/Lab	4		PHYS 102••	Electricity & Magnetism w/Lab	4*	
CHEM 121	General Chemistry I w/Lab	4*		CHEM 122	General Chem II w/Lab	4*	
CEVE 101	Fundamentals of CEE	3		OPEN	Open elective	3	
FWIS	Freshman Writing	3		OPEN	Open elective	3	
SOPHOMORE		15 credits		SOPHOMORE		16 credits	
CEVE 307	Energy & the Environment	3		CAAM 210	Intro to Engineering	3	
DIST	Distribution elective	3		SPEC	Specialization elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3		DIST	Distribution elective	3	
OPEN	Open elective	3		DIST	Distribution elective	3	
				LPAP	Lifetime Phys Activity elective	1	
JUNIOR		16 credits		JUNIOR		15 credits	
CEVE 310	Principles of Engineering	3		SPEC	Specialization elective	3	
CEVE 401	Environmental Chemistry w/Lab	4*		SPEC	Specialization elective	3	
SPEC	Specialization elective	3		DIST	Distribution elective	3	
DIST	Distribution elective	3		OPEN	Open elective	3	
DIST	Distribution elective	3		OPEN	Open elective	3	
SENIOR		15 credits		SENIOR		15 credits	
SPEC	Specialization elective	3		CEVE 412	Hydrology & Water Resources Engineering	3	
SPEC	Specialization elective	3		SPEC	Specialization elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	

* In addition to class hours, these courses have a regularly scheduled lab and/or discussion session that must fit into your schedule.

• When registering for PHYS 101, you must also register for PHYS 103, the discussion section for 101.

•• When registering for PHYS 102, you must also register for PHYS 104, the discussion section for 102.

Basic requirements	General math & science courses	25
	Core courses in major	16
Elective requirements	Specialization area courses	21
	Open electives and LPAP	39
	FWIS and distribution courses	21
Minimum credit required for the B.A.		122

Of the 122 credits, the B.A. in Civil and Environmental Engineering requires a minimum of 62 credits in general math and science, core and specialization area courses.

Major Requirements

NUMBER	CREDIT	TITLE
MATH 101	3	Single Variable Calculus I
MATH 102	3	Single Variable Calculus II
PHYS 101•/111	4	Mechanics w/Lab
PHYS 102••/112	4*	Electricity and Magnetism w/Lab
CAAM 210 or 335 or COMP110/NSCI 230	3	Introduction to Engineering Computation/Matrix Analysis/ Computation in Science and Engineering/ Computation in Science and Engineering
CHEM 121	4*	General Chemistry I w/Lab
CHEM 122	4*	General Chemistry II w/Lab
CEVE 101	3	Fundamentals of Civil & Environmental Engineering
CEVE 307	3	Energy and the Environment
CEVE 310	3	Principles of Environmental Engineering
CEVE 401	4*	Environmental Chemistry and Lab
CEVE 412	3	Hydrology and Water Resources Engineering
SPEC	3	Specialization elective
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- When registering for PHYS 102, you must also register for PHYS 104, the discussion section for 102.

B.A. In Civil & Environmental Engineering

(Track C: Civil Core Curriculum)

Specializations: The SPEC courses cover general civil engineering topics. Take 7 courses from electives approved by an adviser assigned by the CEE Dept., including at least 4 with the CEVE designation. Of these 7 electives, 4 must be 300 level courses or above.

Sample Degree Plan

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CONSULT A DIVISIONAL OR DEPARTMENTAL ADVISER TO CUSTOMIZE YOUR DEGREE PLAN.

FALL				SPRING			
FRESHMAN		17 credits		FRESHMAN		17 credits	
MATH 101	Single Variable Calculus I	3		MATH 102	Single Variable Calculus II	3	
PHYS 101•	Mechanics w/ Lab	4*		PHYS 102••	Electricity and Magnetism w/ Lab	4*	
CHEM 121	General Chemistry I w/ Lab	4*		CHEM 122	General Chemistry w/ Lab	4	
CEVE 101	Fundamentals of CEE	3		DIST	Distribution elective	3	
FWIS	Freshman Writing	3		OPEN	Open elective	3	
SOPHOMORE		15 credits		SOPHOMORE		16 credits	
CEVE 211	Engineering Mechanics	3		CAAM 210	Intro to Eng Computation	3*	
CEVE 310	Principles of Engineering	3		CEVE 304	Structural Analysis I (SPEC)	3	
OPEN	Open elective	3		CEVE 311	Mechanics of Solids & Structures	3	
OPEN	Open elective	3		CEVE 312	Strength of Materials Lab	1	
OPEN	Open elective	3		DIST	Distribution elective	3	
				OPEN	Open elective	3	
JUNIOR		15 credits		JUNIOR		15 credits	
SPEC	Specialization elective	3		SPEC	Specialization elective	3	
SPEC	Specialization elective	3		SPEC	Specialization elective	3	
SPEC	Specialization elective	3		DIST	Distribution elective	3	
DIST	Distribution elective	3		OPEN	Open elective (SPEC)	3	
OPEN	Open elective (SPEC)	3		OPEN	Open elective	3	
SENIOR		16 credits		SENIOR		15 credits	
SPEC	Specialization elective	3		SPEC	Specialization elective	3	
DIST	Distribution elective	3		DIST	Distribution elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective (SPEC)	3		OPEN	Open elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
LPAP	Lifetime Phys Activity elective	1					

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Major Requirements

NUMBER	CREDIT	TITLE
MATH 101	3	Single Variable Calculus I
MATH 102	3	Single Variable Calculus II
PHYS 101•/111	4	Mechanics w/Lab /Honors Mechanics w/Lab
PHYS 102••/112	4*	Electricity and Magnetism w/Lab /Honors Electricity and Magnetism w/Lab
CAAM 210 or 335 or COMP 110/NSCI 230	3	Intro to Engineering Computation/Matrix Analysis/Computation in Science and Engineering/Computation in Science and Engineering
CHEM 121	4*	General Chemistry I w/Lab
CHEM 122	4	General Chemistry II w/Lab
CEVE 101	3	Fundamentals of Civil and Environmental Engineering
CEVE 211	3	Engineering Mechanics
CEVE 304	3	Structural Analysis
CEVE 310	3	Principles of Environmental Engineering
CEVE 311	3	Mechanics of Solids and Structures
CEVE 312	1	Strength of Materials Lab
SPEC	3	Specialization Elective
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