



Frank H. Dotterweich College of Engineering

ENVIRONMENTAL ENGINEERING

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**What is Environmental Engineering?**

Environmental engineers use the principles of engineering, soil science, biology, and chemistry to develop solutions to environmental problems. They are involved in efforts to improve recycling, waste disposal, public health, and water and air pollution control. Environmental engineers apply scientific principles to improve and maintain the environment for the protection of human health, for the protection of nature's beneficial ecosystems, and environment-related enhancement of the quality of human life.

Environmental engineers work in a variety of settings because of the nature of the work they do. When they are working with other engineers and urban/regional planners, environmental engineers are likely to be in offices. When working for private industry, they are often at plant sites. When they are carrying out solutions through construction projects, they are likely to be at construction sites.

Accreditation:

The environmental engineering program is accredited by the Engineering Accreditation Commission of ABET, which provides assurance that the program meets the defined standards of quality. The program prepares students to acquire and apply new knowledge, undertake real-world design, communicate effectively, work in teams, analyze and interpret data, and make decisions.

Tuition and Scholarships:

Low tuition provides a good value for education compared to other universities. Scholarships are available for qualified students at the institutional, college and department levels. Examples of departmental scholarships includes the Jim Cooper Memorial Scholarship, the Citgo Environmental Engineering Challenge Scholarship, the Society of Mining and Mineral Exploration (SME) Scholarship, and the Environmental Engineering CREST Scholarship.

Outstanding Faculty:

All our faculty have PhD degrees and are passionately involved in teaching and research. Environmental engineering course class sizes are typically below 15, allowing for greater student-faculty interaction.

Co-curricular Opportunities:

The department and college provide assistance in identifying student internships and research opportunities. Opportunities are available to develop leadership skills and actively participate in student organizations, including student chapters of the American Academy of Environmental Engineers and Scientists (AAEES), Water Environment Association of Texas and Texas American Water Works Association (WEAT/TAWWA), and Air & Waste Management Association (A&WMA).

Employment:

Our graduates are now working for engineering consulting companies, private industry, state and federal agencies, and national labs. Many of our graduates have gone on to complete Master's and Doctoral degrees at top research universities. According to the U.S. Bureau of Labor Statistics, the median annual wage for environmental engineers was \$100,090 in 2023.

Further Information:

<http://www.tamuk.edu/engineering/departments/even/index.html>

We invite you to visit the campus, meet our faculty, and tour our labs and research facilities. Please call or email to schedule a visit.



REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENVIRONMENTAL ENGINEERING

FRESHMAN YEAR

CHEM 1311 General Inorganic Chemistry I.....3 (prereq: MATH 1314, HS chemistry or CHEM 1481)	AEEN 1310 or MEEN 1310 Comp. Based Graphics/Des I.....3
CHEM 1111 General Inorganic Chemistry Lab I.....1 (pre- or coreq: CHEM 1311)	ENGL 1302 Rhetoric and Composition3 (prereq: ENGL 1301)
ENGL 1301 Rhetoric and Composition3	MATH 2414 Calculus II4 (prereq: MATH 2413)
HIST 1301 American History3	PHYS 2325 University Physics I3 (prereq: 1 year of HS physics or PHYS 1373, coreq: MATH 2413, PHYS 2125)
MATH 2413 Calculus I4 (prereq: MATH 1348)	PHYS 2125 University Physics Lab I1 (pre- or coreq: PHYS 2325)
GEEN 1201 Engineering as a Career.....2	^ Language/Philosophy/Culture.....3
16	17

SOPHOMORE YEAR

CHEM 1312 General Inorganic Chemistry II.....3 (prereq: CHEM 1311/1111)	BIOL 1306 General Biology I.....3
CHEM 1112 General Inorganic Chemistry Laboratory II1 (prereq: CHEM 1311/1111, pre- or coreq: CHEM 1312)	EVEN 2304 Computer Methods for Environmental Engineers3
EVEN 2310 Introduction to Environmental Engineering3 (prereq: sophomore standing in physical science, engineering or agriculture)	EVEN 2311 Envir Eng Ethics and Policy3
HIST 1302 American History3	MATH 3320 Differential Equations3 (prereq: MATH 2414)
MEEN 2355 Statics and Dynamics of Rigid Bodies3 (prereq: PHYS 2325/2125 and MATH 2414)	PHYS 2326 University Physics II.....3 (prereq: PHYS 2325/2125 or PHYS 1302/1102, coreq: MATH 2414, PHYS 2126)
POLS 2301 The Government and Politics of the U.S3	PHYS 2126 University Physics II Laboratory1 (pre- or coreq: PHYS 2326)
16	16

JUNIOR YEAR

CHEM 3323 Organic Chemistry I3 (prereq: CHEM 1312/1112)	CEEN 3317 Engineering Economy3 (prereq: Junior standing in engineering)
CHEM 3123 Organic Chemistry Laboratory I.....1 (pre- or coreq: CHEM 3323)	CEEN 3392 Hydraulics and Fluid Mechanics3 (prereq: MEEN 2355)
EVEN 3320 Chemical Principles for Environ. Engineers3 (prereq: CHEM 1112, CHEM 1312)	EVEN 2372** Env Eng in Global Soc. ^Social/Behavioral Sc.....3 (prereq: Sophomore Standing)
EVEN 3321 Environmental Engineering Lab.....3 (prereq: CHEM 1312/1112)	EVEN 3328 Environ. Eng. Process Fundamentals3 (prereq: EVEN 2310)
POLS 2302 The Government and Politics of Texas3	MEEN or CHEN 3347 Thermodynamics3 (prereq: MEEN 3347 (MATH 2414 and PHYS 2325/2125); CHEN (PHYS 2326/2126))
*Communications.....3	Engineering Elective3
16	18

SENIOR YEAR

EVEN 4102 Environmental Engineering Design I.....1 (co-req: CEEN 3392, EVEN 3320, EVEN 3328)	EVEN 4105 Engineering Management.....1 (prereq: junior or senior standing)
EVEN 4308 Wastewater Treatment3 (prereq: senior standing)	EVEN 4303 Environmental Engineering Design II.....3 (prereq: EVEN 4102)
EVEN 4306 Solid and Hazardous Waste Fundamentals3 (prereq: senior standing)	EVEN 4304 Water Resources and Adv. Computer Methods3 (prereq: EVEN 2304 or equivalent)
EVEN 4386 Air Pollution Control.....3 (prereq: senior standing)	GEOL 4425 Hydrogeology or PLSS 3410 Principles of Soil Sciences4
STAT 4303 Statistical Methods3 (prereq: MATH 2414)	Engineering Elective3
^ Creative Arts.....3	14
16	

Total Hours Required: 129

^ For courses listed under Core Curriculum "Components" see "General Requirements for Graduation with a Baccalaureate Degree" in TAMUK undergraduate Catalog.

Electives are selected from the following:

EVEN 3336, EVEN 3399, EVEN 4336, ***EVEN 4399, CHEN 3321, CHEN 4311, CHEN 4373, CHEN 4389, CHEN 4392, NGEN 3322, NGEN 3393, NGEN 4375, NGEN 4383, NGEN 4478, AEEN 3335, AEEN 3346, AEEN 3350, CEEN 3311, CEEN 4350, CEEN 4362, CEEN 4364, CEEN 4367, EEEN 3313, EEEN 4357, ITEN 3336, ITEN 3338, ITEN 4332, MEEN 3344, MEEN 3398, MEEN 4317, MEEN 4347, MEEN 4354, MEEN 4396, MEEN 4397.

* ENGL 2374 or COMS 2374 is strongly recommended

** EVEN 2372 is strongly recommended as the Social/Behavioral course

*** EVEN 4399 Internship in Environmental Engineering – special approval by department for Engineering Elective.