

Architectural Engineering, Minor

Architectural engineering is a field of engineering that encompasses elements of civil engineering, mechanical engineering, architecture, and related fields to plan, design, and create buildings within the urban environment. It includes the architectural and structural design, mechanical systems design, computational controls and sensing, and sustainable engineering strategies.

The Department of Civil and Environmental Engineering recognizes the importance of interdisciplinary work and of exposing students to the great richness in a classroom of diverse students from multiple majors bringing their own perspectives. The prospect of engineering students in architecture classes and vice versa stands to benefit all the students, whether or not they are enrolled in the minor.

The minor in architectural engineering opens opportunities for students across the university who are interested in a unique and multidisciplinary approach to the built environment. For engineering students, this minor offers an opportunity to work in the built environment and to better understand architecture, while for architecture students this is an opportunity to acquire the technical knowledge of a course of study in an engineering minor.

A total of 20 semester hours (SH) are required to complete this minor. Students will be required to complete 8 SH of required courses and 12 SH of approved elective courses from several colleges and departments at the university. Students interested in this minor must contact the civil engineering academic advisor in order to declare the minor.

This minor in architectural engineering is designed for any major and is open to any undergraduate student at the university.

Students may double count no more than two courses with any major or graduate degree requirement, other than general electives.

Minor Requirements

Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs and recitations courses where specified.

Required Courses

Code	Title	Hours
ARCH 3210 and ARCH 3211	Environmental Systems and Recitation for ARCH 3210	4
CIVE 2221 and CIVE 2222	Statics and Solid Mechanics and Recitation for CIVE 2221	4

Electives

ARCHITECTURE ELECTIVES

Code	Title	Hours
Complete one of the following:		4
ARCH 2240	Architectonic Systems	
ARCH 2330 and ARCH 2331	Architecture and the City in the Nineteenth Century and Recitation for ARCH 2330	
ARCH 2340 and ARCH 2341	Modern Architecture and Recitation for ARCH 2340	
ARCH 5220	Integrated Building Systems	
LARC 2230	Introduction to Sustainable Site Planning and Design	
LARC 2240	Sustainable Site Construction and Detailing	

ENGINEERING ELECTIVES

Code	Title	Hours
Complete one or two of the following:		8
CIVE 2320 and CIVE 2321	Structural Analysis and Recitation for CIVE 2320	
CIVE 2324	Concrete Structure Design	
CIVE 3425	Steel Structure Design	
CIVE 5281	Coastal Dynamics and Design	
CIVE 5363	Climate Science, Engineering Adaptation, and Policy	
CIVE 5520	Structural Systems	
CIVE 5522	Structural Systems Modeling	
CIVE 5524	Vibration-Based Structural Health Monitoring	
SBSY 5100	Sustainable Design and Technologies in Construction	
SBSY 5200	Sustainable Engineering Systems for Buildings	

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SBSY 5250	Building Performance Simulation
SBSY 5300	Information Systems for Integrated Project Delivery
If only one course was taken above, complete one course from the following:	
CIVE 2340 and CIVE 2341	Geotechnical Engineering and Lab for CIVE 2340
CIVE 4542	Foundation Engineering and Design
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure
GE 3300	Energy Systems: Science, Technology, and Sustainability

GPA Requirement

2.000 GPA required in the minor