MINOR IN ARCHITECTURAL ENGINEERING (ARCE)

The Minor in Architectural Engineering provides an interdisciplinary overview of engineering topics associated with building design and the study and practice of engineering. The Minor consists of technically challenging courses that rely on a series of prerequisites, as well as experiment-based and skill-development courses that can be taken without prerequisites. The core courses of the Minor offer a range of theoretical as well as analytical topics, and electives are varied so that students can place an emphasis on specific subject areas depending on their major course of study. The Minor is useful for students across the physical sciences and math as well as architecture, as it will familiarize students with the methods of engineering study and provide a rigorous technical base that will give them an advantage in future studies.

Students require a minimum GPA of “C” (2.0) to be awarded a Minor, which is then reflected in their transcripts. Interested students should contact a faculty member in Architecture and Community Design to review the requirements, course prerequisites, and complete the paperwork to declare the Minor. The Minor requires the completion of twenty-four (24) units, as follows:

**Required Courses (16 units):**

- MATH - 109 Calculus and Analytic Geometry I *
- PHYS - 110 General Physics I *
- ARCD - 310 Introduction to Construction Materials
- ARCD - 360 Introduction to Structural Engineering

* MATH 109 and PHYS 110 – students must receive a C- or better in each course. ARCD majors may substitute MATH 107 and PHYS 130 for MATH 109 and PHYS 110, but must receive a grade of B- or better in each course.

**Electives (8 units)**

Choose two of the following (student is responsible for prerequisites):

- ARCD - 250 Computer Aided Design and Drawing
- ARCD - 300 Computer Aided Design and Drawing 2
- ARCD - 370 Construction Innovation Lab
- ARCD - 372 Engineering, Design and Testing
- ARCD - 390 Sp. Topics: Revit 1
- ARCD - 390 Sp. Topics: Solar Decathlon Investigations
- ENVS - 212 Air and Water w/Lab
- ENVS - 250 Environmental Data Analysis
- ENVS - 350 Energy and Environment
- ENVS - 410 Methods of Environmental Monitoring w/Lab
- PHYS - 310 Analytical Mechanics
- PHYS - 312 Statistical and Thermal Physics
- PHYS - 320 Electromagnetism

**Highly recommended for those planning to continue in engineering programs:**

- CHEM - 111 General Chemistry I
- PHYS - 210 General Physics II
- PHYS - 240 Modern Physics