

COLLEGE OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY

## ARCHITECTURAL ENGINEERING



#### WHAT IS ARCHITECTURAL ENGINEERING?

Architectural Engineering is a profession that combines the art and science of design in the creation of buildings. A detailed understanding of fundamental and applied engineering principles supports the work of the architectural engineer. Architectural engineering differs from architecture primarily in its focus upon the design of the structural elements, systems and procedures for creating buildings, rather than the overall design.

#### WHY ARCHITECTURAL ENGINEERING AT OSU?

Dedicated faculty, state-of-the-art facilities, and a community of like-minded students create a learning environment that is unmatched. Architectural Engineering and Architecture students at OSU share much of the same coursework. The ArcE program, situated within the School of Architecture, provides OSU architectural engineering graduates with a highly desirable understanding of the overall production of architecture rarely found in other programs. ArcE students graduate with an understanding of the myriad of issues that come to bear on the creation of architecture in contemporary society, and thus gain a deep appreciation of the cooperative nature of the professional practice of Architecture.

#### **HIGHLIGHTS**

- The ABET accredited curriculum offers students a studio based education where they can explore their creativity as well as further their abilities in math and science.
- Two options are available within the major of Architectural Engineering: Structural Design and Construction Project Management. Both options are concerned with the technical nature of bringing a building to fruition.
- Graduates with a degree in Architectural Engineering must pass the Fundamentals of Engineering (FE) exam, and the Professional Engineering (PE) and/or Structural Engineering (SE) exams to become a licensed professional.
- A twelve credit hour Graduate Certificate is available, focused upon the Integrative Design of the Building Envelope, which concerns a specific technical aspect of building design of interest to the student.

#### **FOCUS AREAS**

#### **OPTIONS**

- Structural (STR)
- Construction Project Management (CNPM)

#### MINORS AVAILABLE

Architecture Studies: Design

#### **CAREER OPPORTUNITIES**

- Structural Designer or Consultant
- Project Engineer
- Construction or Project Manager





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# ARCHITECTURAL ENGINEERING Typical Five-Year Curriculum

#### **FIRST YEAR**

#### Fall Semester

ARCH	1211	Intro to Arch Studies
MATH	2144	Calc I
CHEM	1414	General Chemistry
ARCH	2003	Arch & Society
ENGL	1113	Comp I
UNIV	1111	First Year Seminar

#### **Spring Semester**

ARCH	1216	Arch Design I
PHYS	2014	Physics I
ENGR	1412	Engineering Computer
ENGL	1213	Fresh Comp II

#### **SECOND YEAR**

#### Fall Semester

ARCH	2116	Arch Design II
MATH	2153	Calc II
ENSC	2113	Statics
ARCH	2252	Communications I
POLS	1113	American Govt

#### **Spring Semester**

ARCH	2263	Arch Systems
MATH	2163	Calc III
ENSC	2141	Strengths Lab
ENSC	2143	Strength of Materials
HIST	1103	American Hist
ARCH Hist/Theory Elective (H)		

#### **THIRD YEAR**

#### Fall Semester

ARCH	3043	Structural Loads
ARCH	3323	Steel I
ENSC	2123	Dynamics
PHYS	2114	Physics II
XXXX	XXX3	<b>Options</b> Course

#### **Spring Semester**

ARCH	4123	Concrete I
ENSC	3313	Material Science
ARCH	3262	Communications II
XXXX	XXX3	Options Course
GEN ED Natural Science Credit (N)		

#### **FOURTH YEAR**

#### **Fall Semester**

IEM	3503	Eng Econ Analysis
MATH	2233	Differential Eq
Arch	4163	Arch Science I
XXXX	XXX3	Options Course
GEN ED Social Science Credit (S,D)		

#### **Spring Semester**

ARCH	4433	Arch Sciences II
ARCH	4143	Foundations
ARCH	5023	Timbers/Masonry
CIVE	4711	Soils Lab
STAT	4033	Eng Statistics
XXXX	XXX3	Directed Elective

#### FIFTH YEAR Fall Semester

ARCH	5226	Comp Eng Design
ARCH	4263	Seminar
ARCH	4093	Project Management
XXXX	XXX3	Directed Elective

## **TOTAL HOURS: 140**

Accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.



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This course plan is for general guidance only. An official course plan will be provided upon enrollment.

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