

RESIDENTIAL CONSTRUCTION ENGINEERING, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

The objective of the Residential Construction Minor is to provide an opportunity for students to gain an understanding of the residential building construction topics and issues with emphasis on sustainable land development, design and construction of residential buildings, as well as construction management of residential projects. Residential building construction is a unique interdisciplinary field that draws upon civil and architectural engineering, architecture, real estate, management, finance, and marketing disciplines. Design principles, including economical, safe, and serviceable structural design, green building systems design, sustainable land development, and construction management are also included. This minor is expected to be primarily of interest to students from Civil and Environmental Engineering, Architectural Engineering, and Architecture majors, but students from other majors can also enroll in this minor. In planning a program, students should check the prerequisite requirements for courses they wish to include in their minor. The minor will help students increase their competitiveness for employment in the residential market and construction industry.

What is Residential Construction?

Residential Construction is the building of single- and multi-family single-units, manufactured, duplex and quad-plex homes and apartments and condominiums.

You Might Like This Program If...

- You have an interest in architectural engineering, civil engineering, or architecture.
- You want to build residential homes.
- You have an interest in real estate.

Program Requirements

Requirement	Credits
Requirements for the Minor	22

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
AE 449	Ultra-High Performance Buildings: Passive House Principles & Design	3
AE 470	Residential Building Design and Construction	3
CE 410	Sustainable Residential Subdivision Design	3

CE 411	Residential Construction Design Project	1
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Additional Courses

Additional Courses: Require a grade of C or better

AE 471	CONSTRUCTION MANAGEMENT OF RESIDENTIAL BUILDING PROJECTS	3
or AE 475	Building Construction Engineering I	

Select 9 credits from one of the following tracks: 9

Architecture Track

AE 210	Introduction to Architectural Structural Systems
AE 421	Architectural Structural Systems I
AE 422	Architectural Structural Systems II
ARCH 380	Building Environmental Systems I
ARCH 412	Integrative Energy and Environmental Design
ARCH 480	Technical Systems Integration
FIN 100	Introduction to Finance
or BA 301	Finance

Architectural Engineering Track

AE 202	Introduction to Architectural Engineering Concepts
AE 372	Introduction to the Building Construction Industry
AE 402	Design of Concrete Structures for Buildings
AE 404	Building Structural Systems in Steel and Concrete
AE 432	Design of Masonry Structures
AE 454	Advanced Heating, Ventilating, and Air Conditioning

Civil Engineering Track

AE 432	Design of Masonry Structures
AE/CE 542	Building Enclosure Science and Design
BE 462	Design of Wood Structures
CE 332	Professionalism, Economics & Construction Project Delivery
CE 336	Materials Science for Civil Engineers
CE 341	Design of Concrete Structures
CE 432	Construction Project Management

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

University Park
Ali Memari

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Career Paths

Students with a minor in Residential Construction serve in a variety of roles relating to design, construction, research and education.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES WITH A MINOR IN RESIDENTIAL CONSTRUCTION (<https://www.ae.psu.edu/industry/career-fair/>)

Opportunities for Graduate Studies

Students with a minor in Residential Construction may be interested in graduate studies in architectural engineering, facilities engineering and management or civil engineering.

MORE INFORMATION ABOUT OPPORTUNITIES FOR GRADUATE STUDIES (<https://www.ae.psu.edu/academics/graduate/>)

Contact

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<https://www.ae.psu.edu/academics/undergraduate/residential-construction-minor.aspx>