# Architectural Engineering: Structures, BEN

Requirements for Students Matriculating in or before Academic Year 2022-2023. Learn more about University Academic Regulation 3.1 [here](http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 140

## Code Title Hours

### General Education Requirements

#### English Composition

- See Academic Regulation 3.5 [here](http://catalog.okstate.edu/university-academic-regulations/#english-composition)
- ENGL 1113 Composition I 3
- or ENGL 1313 Critical Analysis and Writing I 3

Select one of the following: 3
- ENGL 1213 Composition II
- ENGL 1413 Critical Analysis and Writing II
- ENGL 3323 Technical Writing

#### American History & Government

Select one of the following: 3
- HIST 1103 Survey of American History
- HIST 1483 American History to 1865 (H)
- HIST 1493 American History Since 1865 (DH)
- POLS 1113 American Government 3

#### Analytical & Quantitative Thought (A)

- MATH 2144 Calculus I (A) 1 4
- MATH 2153 Calculus II (A) 1 3

#### Humanities (H)

- ARCH 2003 Architecture and Society (HI) 3

Select 3 hours from the following: 3
- ARCH 3083 History and Theory of Renaissance and Baroque Architecture (H)
- ARCH 3473 History and Theory of Structures in Architecture (H)
- ARCH 4173 History and Theory of Skyscraper Design (H)
- ARCH 4293 The Ethics of the Built Environment (H)
- ARCH 4374 International Field Study (HI)
- Any other ARCH (H)
- Any other upper division HIST (H) Any upper ART (H)

### Natural Sciences (N)

- CHEM 1414 General Chemistry for Engineers (LN) 4
- PHYS 2014 University Physics I (LN) 1 4
- PHYS 2114 University Physics II (LN) 1 4

3 hours of (N) 3

### Social & Behavioral Sciences (S)

Select 3 hours lower division (S) 3

### Hours Subtotal

43

### Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan
- At least one Diversity (D) course
- At least one International Dimension (I) course

### Scientific Investigation (L)

Any course designated (L). Normally met by Natural Sciences and/or Basic Science requirements.

### College/Departmental Requirements

#### Architecture

- ARCH 1112 Introduction to Architecture 1 2
- ARCH 1216 Architectural Design Studio I 1 6
- ARCH 2116 Architectural Design Studio II 6
- ARCH 2252 Design Communication I: Visual and Graphic Acuity 1 2
- ARCH 2263 Building Systems 1 3

#### Engineering Science

- ENGR 1412 Introductory Engineering Computer Programming 1 2
- ENSC 2113 Statics 1 3
- ENSC 2143 Strength of Materials 1 3
- ENSC 2141 Strength of Materials Lab 1 1

### Hours Subtotal

28

### Major Requirements

#### Architecture

- ARCH 3043 Structural Loadings in Architecture 3
- ARCH 3143 Structures: Analysis I 3
- ARCH 3262 Design Communication II: Advanced Digital Applications 2
- ARCH 3323 Structures: Steel I 3
- ARCH 3343 Structures: Steel II 3
- ARCH 4093 Architectural Project Management 3
- ARCH 4123 Structures: Concrete I 3
- ARCH 4143 Structures: Foundations for Buildings 3
- ARCH 4163 Architectural Science I: Thermal Systems and Life Safety for Architectural Engineers 3
- ARCH 4263 Architecture Seminar 3
- ARCH 4343 Structures: Concrete II 3
- ARCH 4433 Architectural Science II: Acoustics, Lighting, and Service Systems for Architectural Engineers 3
- ARCH 5023 Masonry Design and Analysis 3
- ARCH 5226 Architectural Engineering Comprehensive Design Studio 6

#### Civil Engineering

- CIVE 4711 Basic Soils Testing Laboratory 1

#### Industrial Engineering & Management

- IEM 3503 Engineering Economic Analysis 3

#### Engineering Science, Engineering

- ENSC 2123 Elementary Dynamics 3
- ENSC 3313 Materials Science 3

#### Mathematics

- MATH 2163 Calculus III 3
MATH 2233  Differential Equations  3

Statistics
STAT 4033  Engineering Statistics  3

Hours Subtotal  63

Electives
Select 6 credit hours from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ARCH 2890</td>
<td>Honors for Topics in Architecture</td>
</tr>
<tr>
<td>ARCH 3100</td>
<td>Special Topics in Architecture</td>
</tr>
<tr>
<td>ARCH 3473</td>
<td>History and Theory of Structures in Architecture (H)</td>
</tr>
<tr>
<td>ARCH 4100</td>
<td>Special Topics in Architecture</td>
</tr>
<tr>
<td>ARCH 4233</td>
<td>Sustainable Design in Architecture</td>
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<tr>
<td>ARCH 5143</td>
<td>Structures: Special Loadings</td>
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<tr>
<td>ARCH 6243</td>
<td>Structures: Analysis III</td>
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<td>ARCH 6343</td>
<td>Structures: Steel III</td>
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<td>ARCH 6543</td>
<td>Structures: Concrete III</td>
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<td>CIVE 3623</td>
<td>Engineering Materials Laboratory</td>
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<td>CIVE 3614</td>
<td>Engineering Surveying</td>
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<td>CIVE 5403</td>
<td>Advanced Strength of Materials</td>
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<tr>
<td>CIVE 5433</td>
<td>Energy Methods in Applied Mechanics</td>
</tr>
<tr>
<td>CIVE 5533</td>
<td>Prestressed Concrete</td>
</tr>
<tr>
<td>CIVE 5573</td>
<td>Timber Design</td>
</tr>
</tbody>
</table>

Upper division ARCH, FPST, MAE, ENGR, CIVE, CET

Hours Subtotal  6

Total Hours  140

1 Courses that must be completed prior to admission to professional school with a "C" or better.

**Admission to Professional School (required)**

- Refer to the OSU Catalog corresponding to your matriculation date for detailed admissions requirements.

**Graduation Requirements**

1. A minimum GPA of 2.00 Technical GPA. The Technical GPA is calculated from all courses in the curriculum with a prefix belonging to the degree program, or substitutions for these courses.
2. A final grade of 'C' or better in all ARCH prefix courses, substitutions for ARCH prefix courses, and all non-ARCH prefix courses that are a prerequisite to an ARCH prefix course. The final grade of "C" is however not needed in the terminal courses in a series.
3. The capstone course for Architectural Engineering majors is ARCH 5226 Architectural Engineering Comprehensive Design Studio.

**Additional State/OSU Requirements**

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2028.