ARCHITECTURAL ENGINEERING: MECHANICAL, ELECTRICAL AND PLUMBING, BEN

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 157

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<th>Code</th>
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**General Education Requirements**

All General Education coursework requirements are satisfied upon completion of this degree plan.

**English Composition**

See Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/#english-composition)

| ENGL 1113 | Composition I ¹ | 3     |
| or ENGL 1313 | Critical Analysis and Writing I | |

Select one of the following:

| ENGL 1213 | Composition II | 3 |
| ENGL 1413 | Critical Analysis and Writing II | 3 |
| ENGL 3323 | Technical Writing | 3 |

**American History & Government**

Select one of the following:

| HIST 1103 | Survey of American History | 3 |
| HIST 1483 | American History to 1865 (H) | 3 |
| HIST 1493 | American History Since 1865 (DH) | 3 |
| POLS 1113 | American Government | 3 |

**Analytical & Quantitative Thought (A)**

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

**Humanities (H)**

ARCH 2003 | Architecture and Society (HI) | 3 |

Select 3 Hours

ARCH 3083 | History and Theory of Baroque Architecture (H) | 3 |
ARCH 4173 | History and Theory of Skyscraper Design (H) | 3 |
ARCH 4293 | The Ethics of the Built Environment (H) | 3 |
ARCH 4374 | International Field Study (HI) | 3 |

Any other ARCH (H)

ART 3603 | History of Classical Art (H) | 3 |
ART 3623 | History of Italian Renaissance Art (H) | 3 |
ART 3633 | History of Baroque Art (H) | 3 |

Any upper-division HIST (H)

**Natural Sciences (N)**

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

Select one of the following

| BIOL 1114 | Introductory Biology (LN) | 4 |
| CHEM 1314 | Chemistry I (LN) | 4 |
| CHEM 1515 | Chemistry II (LN) | 4 |
| GEOG 1114 | Physical Geography (LN) | 4 |
| GEOL 1014 | Geology and Human Affairs (LN) | 4 |
| GEOL 1114 | Physical Geology (LN) | 4 |

**Social & Behavioral Sciences (S)**

Consult the college & departmental requirements

Any lower division course designated (S) | 3 |
Any upper division course designated (S) | 3 |

**Hours Subtotal** 43

**Diversity (D)**

Any course designated (D)

Students are encouraged to meet the requirement in their selection of (H) or (S) course work.

**International Dimension (I)**

ARCH 2003 meets the (I) requirement

**Scientific Investigation (L)**

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

**College/Departmental Requirements**

**Engineering Science**

ENSC 2113 | Statics ¹ | 3 |
ENSC 2143 | Strength of Materials ¹ | 3 |

**Architecture**

ARCH 1112 | Introduction to Architecture ¹ | 2 |
ARCH 1216 | Architectural Design Studio I ¹ | 6 |
ARCH 2116 | Architectural Design Studio II ¹ | 6 |
ARCH 2216 | Architectural Design Studio III ¹ | 6 |
ARCH 2263 | Building Systems ¹ | 3 |

**Hours Subtotal** 29

**Major Requirements/Professional School**

Admitted to Professional School of Architecture (see requirements for admission to the upper-division)

**Architecture**

ARCH 3223 | Structures: Timbers | 3 |
ARCH 3262 | Computer Applications in Architecture II | 2 |
ARCH 3323 | Structures: Steel I | 3 |
ARCH 4093 | Architectural Project Management | 3 |
ARCH 4123 | Structures: Concrete I | 3 |
ARCH 4131 | Architectural Science Lab | 1 |
ARCH 4134 | Architectural Science I: Thermal Systems and Life Safety for Architectural Engineers | 4 |
ARCH 4233 | Sustainable Design in Architecture | 3 |
ARCH 4263 | Architecture Seminar | 3 |
ARCH 4433 | Architectural Science II: Acoustics, Lighting, and Service Systems for Architectural Engineers | 3 |
ARCH 5226 | Architectural Engineering Comprehensive Design Studio | 6 |

**Mechanical and Aerospace Engineering**

MAE 3223 | Thermodynamics II | 3 |
MAE 3233  Heat Transfer
Fire Protection and Safety Technology
FPST 1373  Fire Suppression and Detection Systems
Industrial Engineering & Management
IEM 3503  Engineering Economic Analysis
Engineering Science, Engineering
ENSC 2123  Elementary Dynamics
ENSC 2213  Thermodynamics
ENSC 2613  Introduction to Electrical Science
ENSC 3233  Fluid Mechanics
ENGR 1412  Introductory Engineering Computer Programming

Mathematics
MATH 2163  Calculus III
MATH 2233  Differential Equations

Statistics
STAT 4033  Engineering Statistics

Natural Sciences (N)
PHYS 2114  University Physics II (LN)

Controlled Electives
Select 12 credit hours from:
- ARCH 3100  Special Topics in Architecture
- ARCH 4100  Special Topics in Architecture
- FPST 2243  Design and Analysis of Sprinkler Systems
- FPST 2483  Fluid Mechanics for Fire Protection
- FPST 3143  Life Safety Analysis
- FPST 3383  Building Electrical Systems
- FPST 4143  Industrial Ventilation and Smoke Control
- MAE 3293  Fundamentals of Aerodynamics
- MAE 3403  Computer Methods in Analysis and Design
- MAE 4263  Energy Conversion Systems
- MAE 4273  Experimental Fluid Dynamics
- MAE 4703  Design of Indoor Environmental Systems
- MAE 4713  Thermal Systems Realization
- MAE 4733  Mechatronics Design
- Upper division ARCH, FPST, MAE, or ENGR.

Hours Subtotal 85
Total Hours 157

1 Courses that must be completed prior to admission to professional school.

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 2025.

Admission to Professional School (required)
- Refer to the OSU Catalog corresponding to your matriculation date for detailed admissions requirements.

Graduation Requirements
1. 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.
2. The capstone course for Architectural Engineering majors is ARCH 5226 Architectural Engineering Comprehensive Design Studio.