

ARCHITECTURAL ENGINEERING, BS

Architectural engineering students are interested in how buildings are designed, how they withstand the forces of nature, and how they are built and maintained. Students are also concerned with how buildings function as a coordinated set of structural, electrical, communication, and mechanical systems. Architectural engineers are also interested in how these systems support a building's mission and its occupants' needs in a sustainable manner. They are creative problem solvers addressing national and international challenges of energy needs, sustainable new and reconditioned building systems, urban development, and community planning.

Accreditation

Information can be found on Department website.

FE Exam

All students are strongly encouraged to prepare for and pass the Fundamentals of Engineering (FE) examination prior to graduation.

Students earning the Bachelor of Science in Architectural Engineering (BS) degree must complete all University, College and departmental degree requirements for a total of 125 credits. These include General Education requirements and the following major requirements and ancillary requirements. Additional information, including a semester-by-semester flowchart of degree requirements, can be found on the departmental website. Students completing the Bachelor of Science in Architectural Engineering (BS) degree must comply with all College of Engineering academic policies and requirements.

Major and Ancillary Requirements		Hours
Major Courses		
ENGR 101	The World of Engineering	1
ENGR 104	Fundamentals of Engineering	3
ENGR 171	Large-Scale Eng. Graphics	1
AEM 201	Statics	3
AEM 250	Mechanics Of Materials I	3
AEM 264	Dynamics	3
AEM 311	Fluid Mechanics	3
CE 260	Civil & Constructn Surveying	2
CE 262	Civil & Constructn Engr Matls	3
CE 331	Intro to Structural Eng.	3
CE 340	Geotechnical Engineering	4
CE 382	Architectural Eng Fundamentals	3
CE 406	Cpstn Design Building: ArchE	4
CE 433	Reinf Concrete Struct I	3
CE 434	Structural Steel Design I	3
CE 462	Vertical Construction Methods	3
ECE 320	Fundmtl Electrical Engr	3
ECE 350	Electric Power & Machines	3
GES 255	Engineering Statistics I	3
ME 216	Thermal Engineering Survey	3
ME 407	Heatg Ventilat Air-Condg	3
General Elective		6

General Elective options include courses in the below subjects from course numbers 300 to 499, except 397. US and Global Citizenship designated courses can be used for this requirement or the General Education requirement, but not both. Students must meet prerequisites required by the selected course.

AEM, CHE, CE, CS, ECE, ENGR, GES, ME, MFE, MTE, AC, BSC, CH, EC, FI, GBA, GEO, GY, MGT, MS, MKT, OM, PH

Credit Hours Subtotal: 66

Ancillary Courses

ARH 252 or	Survey of Art I	3
ARH 253	Survey Of Art II	
CH 101 or	General Chemistry	4
CH 117	Honors General Chemistry	
MATH 125 or	Calculus I	4
MATH 145	Honors Calculus I	
MATH 126 or	Calculus II	4
MATH 146	Honors Calculus II	
MATH 227 or	Calculus III	4
MATH 247	Honors Calculus III	
MATH 238	Appld Diff Equations I	3
PH 105 or	General Physics W/Calc I	4
PH 125	Honors Gen Ph W/Calculus	
PH 106 or	General Physics W/Calc II	4
PH 126	Honors Gen Ph W/Calculus II	
Approved Science (Any core curriculum Natural Science designated course except BSC 108, BSC 109, CH 101, CH 104, CH 117, PH 101, PH 102, PH 105, PH 106, PH 115, PH 125, PH 126)		4

Credit Hours Subtotal: 34

General Education Courses

The specific courses each student completes in order to fulfill the University of Alabama's general education requirements will depend upon the particular degree program in which the student is enrolled. To determine how these general education requirements are integrated into your program of study, review your semester-by-semester flowchart and discuss with your academic advisor.

All architectural engineering students are strongly encouraged to prepare for and pass the Fundamentals of Engineering (FE) examination prior to graduation. A graduate of the program who has passed the FE exam would then be an engineer intern under Model Law as maintained by the National Council of Examiners for Engineering and Surveying (ncees.org). It is recommended that the FE be taken the semester prior to graduation.

Architectural engineers work in a wide spectrum of careers centered on building systems. Architectural engineering graduates can serve as designers of structural, lighting, HVAC, and building energy systems. They work as construction and constructability experts, urban and city planners, project managers, and green building leaders. They are highly involved in the complicated and creative arena of bringing older, historic, and large office and governmental buildings back into productive use.

Learn more about opportunities in this field at the Career Center