CONSTRUCTION ENGINEERING, BS

Construction engineering majors typically like to build things and figure out ways to do so more quickly and with less waste materials. In the field, construction engineers work on different types of building projects, coordinating with team members to create cities and communities where people live and work.

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 Construction 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 Construction 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
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 366	Intro to Const. Eng.	3
CE 402 or	Capstone Design Site: ConE	4
CE 404	Capstone Design: Building ConE	
CE 418	Engineering Management	3
CE 433 or	Reinf Concrete Struct I	3
CE 434	Structural Steel Design I	
CE 461	Horizontl Construction Methods	3
CE 462	Vertical Construction Methods	3
CE 463	Construction Cost Estimating	3
CE 464	Safety Engineering	3
CE 468	Construction Scheduling	3
GES 255	Engineering Statistics I	3
Engineering Systems Elective (Select two of the following)		6
AEM 311	Fluid Mechanics	
or		
ME 215	Thermodynamics I	
or		
ME 216	Thermal Engineering Survey	
or		
ECE 320	Fundmtl Electrical Engr	
General Elective		3
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		
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		4
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.		
	Credit Hours Subtotal:	31
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 construction 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.

Construction engineers pursue careers in the public sector, managing projects that benefit society, working on highways, mass transit systems, dams, bridges, and infrastructure. Careers are also available with private sector engineering design and construction firms that manage commercial and industrial projects for clients throughout the world. Construction engineering careers frequently serve as a gateway to executive leadership positions or self-employment. Construction engineers lead and inspire people and effectively manage large budgets and challenging schedules.

Types of Jobs Accepted

Construction engineering graduates often begin their careers with field-based assignments. Many serve as assistant project managers on construction sites. They may assist in the management of a project's cost and schedule or serve in a variety of engineering functions. Other graduates go directly to positions with major industrial firms serving as corporate client representatives on major projects. Still others find career opportunities with state and federal agencies helping plan and oversee major public sector projects.

Jobs of Experienced Alumni

Experienced construction engineers plan and execute major projects and frequently are directly accountable for overall safety, cost, and schedule performance. Many manage million and billion dollar projects with schedules extending over many years. Most construction engineers have organizational management responsibilities for the corporations or agencies they serve, and many ultimately serve in executive leadership positions.

Learn more about opportunities in this field at the Career Center