



CONSTRUCTION SCIENCE AND MANAGEMENT

COLLEGE OF SCIENCE AND ENGINEERING



WHY CONSTRUCTION SCIENCE AND MANAGEMENT?

The construction industry is the largest production industry in the United States, with expenditures exceeding \$1,236 billion per year. In fact, 6 percent of the population is directly employed in construction, with another 6 percent employed by companies that support construction. The industry is characterized by rapid growth and continuous technological changes as new materials, building techniques and increasingly sophisticated projects are designed and built. The key professional in this industry is the “constructor,” or construction manager, who is the trained professional who manages a project from start to finish and keeps it on schedule and within budget.

According to the Bureau of Labor Statistics, management-level positions within the construction industry should increase as construction projects become more complex. This growing complexity is due to sophisticated technology; the proliferation of laws, such as building codes, that set standards for buildings and construction materials, worker safety, environmental protection and energy efficiency; and an increasing need to replace or upgrade the country’s infrastructure, such as roads and bridges, utility transmission lines, pipelines and other projects.

Texas State’s construction science and management degree is based on nationally recognized academic standards along with feedback from the department’s Construction Advisory Board. Typical classes include:

- » Construction Materials and Processes
- » Construction Project Management and Scheduling
- » Residential Construction Systems
- » Construction Contracts, Liability and Ethics
- » Commercial Building Construction Systems
- » Soils and Foundations
- » Heavy, Civil and Highway Construction Systems
- » Environmentally Conscious Design and Construction
- » Construction Estimating
- » Architectural Design
- » Mechanical, Electrical and Plumbing Systems

Students are required to complete a minor in business administration and a construction related internship.

TEXAS STATE
ENGINEERING TECHNOLOGY

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TEXAS STATE
UNIVERSITY

The rising STAR of Texas

MEMBER THE TEXAS STATE UNIVERSITY SYSTEM





CAREERS IN CONSTRUCTION SCIENCE AND MANAGEMENT

The bachelor of science in construction science and management prepares students for careers such as:

- » Residential Construction
- » Commercial Construction
- » Heavy Civil and Highway Construction
- » Industrial and Offshore Construction
- » Construction Managers
- » Project Managers
- » Field Engineers
- » General Contractors
- » Subcontractors
- » Estimators
- » Schedulers
- » Superintendents
- » Office Engineers
- » Code Inspectors
- » Technical Sales
- » Material Suppliers

Since 16 percent of the gross national product (GNP) is either directly or indirectly related to construction, it is easy to see why a wide range of career opportunities exists.

BACHELOR OF SCIENCE

Major in Construction Science and Management (BS/CSMG/BUS)

The bachelor of science in construction science and management includes an 18-hour business administration minor and an internship. The 400 hour internship is taken in the summer, between the student's sophomore and junior year.

The program's curriculum was developed to comply with the American Council for Construction Education (ACCE) accreditation guidelines. These guidelines include four specific categories:

- » General education
- » Mathematics and science
- » Business and management
- » Construction

Following is a listing of CSM courses typically taken by construction majors. A complete list of required courses and course descriptions can be found in the undergraduate catalog.

PRE-CONSTRUCTION CURRICULUM

The pre-construction curriculum requires prospective construction majors to complete the following courses and maintain a 2.5 major GPA in these classes with no grade lower than a C before being able to enroll in advanced construction courses.

- » Introduction to the Construction and Concrete Industry
- » Fundamentals of Architectural Problem Solving and Design
- » Construction Materials and Processes
- » Statistics and Strength of Materials
- » Pre-Calculus
- » Elementary Statistics
- » General Chemistry I
- » General Physics I
- » General Physics II

CONSTRUCTION MAJOR COURSES

- » Introduction to the Construction and Concrete Industry
- » Architectural Design I – Construction Documents
- » Construction Materials and Processes
- » Residential Construction Systems
- » Introduction to Construction Surveying and Site Layout
- » Statistics and Strength of Materials
- » Structural Analysis
- » Soils and Foundations
- » Mechanical, Electrical and Plumbing Systems
- » Advanced Architectural Design – Technology in Construction
- » Environmentally Conscious Design and Construction
- » Commercial Building Construction Systems
- » Heavy, Civil and Highway Construction Systems
- » Construction Estimating
- » Construction Project Management and Scheduling
- » Construction Contracts, Liability and Ethics
- » Industrial Safety
- » Internship
- » Senior Capstone

MINOR IN BUSINESS ADMINISTRATION

- » Accounting in Organizations and Society
- » Legal Environment of Business
- » Principles of Economics
- » Management of Organizations
- » E-Business
- » Principles of Marketing

ACCE ACCREDITATION

Texas State University's bachelor of science in construction science and management is accredited by the American Council for Construction Education (ACCE). This accreditation guarantees that the program meets the nationally recognized high academic standards set by ACCE. Also, students graduating from an accredited program have additional career and professional opportunities.

The accreditation standards for ACCE may be found at acce-hq.org. Texas State's program was the third construction program to be accredited in Texas.

ABOUT TEXAS STATE'S PROGRAM

Texas State's construction program began in 1984 and has grown to more than 450 students. The program moved to the Roy F. Mitte Building in 2003. Professors and lecturers in the program have specific backgrounds in the construction industry.

Because of the high demand for construction majors, the program holds two Construction Job Fairs annually, usually in September and February. Local, state, national and international employers attend these events. All construction majors are required to serve an internship in their sophomore or junior year, giving them real work experience before pursuing a career in the construction industry.

FACULTY

The Department of Engineering Technology has 20 full-time faculty members, 10 of whom are dedicated to construction. The faculty members earned degrees from respected institutions of higher education that are considered leaders in a spectrum of technologies. The faculty size allows for a favorable student-faculty ratio and has earned the program a strong reputation for dedicated teaching, research, advising, mentoring and career counseling. An open-door policy exists throughout the department.

LOCATION

Texas State is located in San Marcos, Texas, part of the booming Austin Metropolitan Area. Students have opportunities in construction oriented research, internships and employment.

ADMISSION TO TEXAS STATE

For more information about Texas State and to apply for admission, visit admissions.txstate.edu or contact the Office of Undergraduate Admissions at admissions@txstate.edu or 512.245.2364.

FINANCIAL AID AND SCHOLARSHIPS

Texas State offers scholarships that are open to students of all majors. Visit finaid.txstate.edu or contact Financial Aid and Scholarships at finaid@txstate.edu or 512.245.2315. Departmental scholarships can be found at txstate.edu/technology/student-resources/scholarships.

