College of Engineering
Construction Science and Management

Overview
Ever-changing technological advancements in the construction industry demand competent and technically skilled managers of construction. Construction professionals build buildings, highways, bridges, homes, utility systems and specialty construction by successfully managing manpower, material, equipment, schedules and costs that are the key resources under their control. The constructor must understand all aspects of the construction to assure a safe and productive work environment.

Those who are most successful have acquired the proper academic training and have an understanding of the technology available to meet the increasing complexity of this industry. Kansas State University's construction science and management program enables graduates to advance as far as their talent and determination will take them.

Professional options
Careers
Graduates of this program are in high demand in the construction industry. Each year, jobs in the construction industry go unfilled because of a shortage of qualified managers with a college education in construction management.

Employment opportunities are diversified and are available not only in the construction industry, but also in related fields such as the building material industry and land development. Graduates may become a construction manager, general contractor, specialty contractor, project manager, general superintendent, estimator, cost engineer, scheduler, facility manager, expeditor, purchasing agent, office manager, sales engineer, building product technical representative, building inspector, field engineer, safety engineer or construction company owner.

Students will enter the construction field in areas generally categorized as:

Building construction
Apartments, office buildings, industrial plants, hospitals, churches and schools.

Heavy or highway construction
Dams, tunnels, flood control projects, highways and bridges.

Utilities construction
Water and wastewater treatment plants, distribution systems, power lines and pipelines.

Specialty construction
This includes the installation of specialized material, equipment and systems that are specified in the construction project. Such areas would include mechanical, electrical, plumbing and other specialty construction.

Academics
The program is an engineering-based management program designed to prepare graduates to be a professional and a technically competent manager of personnel resources, financial resources, materials, equipment and methods.

The program includes courses in math, engineering science, materials, business and management, and prepares you to build the designs created by engineers and architects.

Degree options
Minors
Students are encouraged to consider broadening their course of study through pursuit of a minor. A minor requires completion of at least 15 designated hours of coursework in an area outside their major curriculum. Students completing all requirements for a minor will receive official recognition for their emphasis on their permanent records. Departments offering minors have specified courses that enable students to acquire moderate expertise in their discipline. Courses included in a minor may be used to satisfy the general requirements and electives of the major curriculum. A minor in business administration aligns particularly well with this curriculum.

Dual degrees
Some students enter dual-degree programs, which may include a major in architectural engineering, civil engineering or business administration. This usually requires extra years of study to complete the coursework required of other degrees.

A cooperative education program is also available to students who wish to obtain construction experience beyond just summer internships. This provides valuable experience in construction before graduation.

Accreditation
The program is accredited by the American Council for Construction Education, acce-hq.org.

Faculty
Faculty in construction science and management are licensed professional engineers and architects or experts in their area or discipline. They have significant industry experience and bring it into the classroom to facilitate the understanding and practical application of engineering theory and construction practices. The department faculty remain up to date on the latest construction material, methods, equipment, construction management, operations and processes to assure students graduate with the most current understanding of design and construction requirements and technology to support the building process. Department faculty members have won numerous teaching and advising awards as a result of their dedication to students and their commitment to quality education.

Preparation
It is suggested that students take courses in math, physics, English and speech in high school or community college. The program includes courses in math, engineering science, construction science, materials, business and management to prepare the graduate to work as a valuable member of the design and construction team to build the designs created by engineers and architects.

Admission
Admission is selective based on academic performance. Submit application, application fee, all transcripts and ACT or SAT scores postmarked by the priority Feb. 1 deadline. Transfer students will be considered for all terms. Freshmen will be considered only for summer and fall terms.
Preprofessional program
Incoming students apply to Kansas State University through the general university admissions process. When enrolling in courses, those wishing to declare a major in construction science and management may enroll directly in the curriculum titled CNSM to start in the preprofessional program in construction science and management.

Professional program
Preprofessional construction science and management students must complete the first three semesters of the program prior to taking any upper-division professional program courses in construction science and management. The criteria for acceptance to the professional program are outlined in the undergraduate catalog for the professional program.

Activities
The department offers a number of very active student professional organizations that provide ample opportunity for involvement and leadership as well as interaction with industry professionals, field trips, scholarships and student competition teams. These student-run organizations include:

- Associated General Contractors
- Mechanical Contractors Association of America
- American Concrete Institute
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- Illuminating Engineering Society
- Sigma Lambda Chi – Construction Science and Management Honor Society
- Department Student Ambassadors
- Engineering Open House
- Construction Management Competition
- Team for Associated Schools of Construction
- AEI Student Competition Team

Financial assistance
Applications for admissions are accepted up to 15 months before the first class day each semester. Apply for admission and fill out the Kansas State University scholarship application at k-state.edu/sfa/scholarships.

Nov. 1 is the priority deadline for incoming freshmen to submit the K-State scholarship application, or Feb. 1 for transfer students. Students should submit their Free Application for Federal Student Aid by March 1. For additional details, go to k-state.edu/sfa.

Suggested coursework
Bachelor of Science degree in construction science and management (124 hours)

Pre-professional program
Hrs. First semester
3 MATH 205 General Calculus and Linear Algebra
2 CNS 100 Construction Science and Management Orientation
3 CNS 110 History of Building and Construction
3 ENGL 100 Expository Writing I
0 CNS 016 Construction Seminar
3 Humanities and social science elective **
14

Hrs. Second semester
3 ECON 110 Principles of Macroeconomics
4 PHYS 113 General Physics I
3 CE 212 Elementary Surveying Engineering
2 CNS 200 Computer Applications in Engineering and Construction
2 COMM 105 Public Speaking 1A
0 CNS 016 Construction Seminar
14

Hrs. Third semester
3 CNS 231 Statics A
4 PHYS 114 General Physics II
1 CNS 210 Graphical Communication I
1 CNS 220 Construction Materials
3 ACCTG 231 Accounting for Business Operations
3 ENGL 200 Expository Writing II
0 CNS 016 Construction Seminar
16

Professional program
Hrs. Fourth semester
1 ARE 310 Introduction to AutoCAD
3 CNS 321 Graphical Communication II
1 CNS 331 Strength of Materials/Analysis
1 CE 332 Strength of Materials Lab
3 CNS 330 Site Construction
3 MANGT 420 Management Concepts
3 STAT 350 Business and Economic Statistics I
0 CNS 016 Construction Seminar
17

Hrs. Fifth semester
3 CNS 325 Construction Documents
3 CNS 440 Construction Methods and Equipment
3 CNS 524 Steel and Timber Construction
3 CNS 535 Electrical Service and Installation
2 CNS 550 Construction Safety
1 CNS 542 Ethics and Professional Standards
1 ARE 312 Building Information Modeling
0 CNS 016 Construction Seminar
16

Hrs. Sixth semester
3 CNS 534 Heating and Air Conditioning
3 CNS 536 Water Supply and Plumbing
3 CNS 641 Construction Estimating
3 CNS 642 Construction Management
3 CNS 645 Construction Scheduling and Cost Control
0 CNS 016 Construction Seminar
15

Hrs. Seventh semester
3 CNS 528 Concrete and Masonry Construction
2 CNS 510 Technology for Management of the Construction Process
3 CNS 643 Preconstruction Services and Design-Build
2 CNS 646 Construction Finance Management
3 ENGL 417 Written Communication for the Workplace
3 MANGT 390 Business Law I
0 CNS 016 Construction Seminar
16

Hrs. Eighth semester
3 CNS 660 Construction Operations
3 Labor elective **
2 Professional elective **
2 Professional elective **

1 Humanities and social sciences electives are to be selected from the College of Liberal Arts and Social Sciences elective course list approved by the College of Engineering. Students should select these courses as needed to complete the requirements of the K-State 8 general education program.

** Management electives, labor electives and professional electives are to be selected from the current approved department lists.

Some courses in business and management require junior standing. Accounting courses require sophomore standing.

For more information about construction science and management, contact:
Department of Architectural Engineering and Construction Science
Kansas State University
240 Seaton Hall
920 N. 17th St.
Manhattan, KS 66506-2903
785-532-5964
Fax: 785-532-3556
arecns@k-state.edu
are-cns.k-state.edu
engg.k-state.edu

For more information about engineering, contact:
Office of Recruitment
College of Engineering
1141 Engineering Hall
1701D Platt St.
Manhattan, KS 66506-5201
785-532-5455
kstateengg@k-state.edu

Notice of nondiscrimination
Kansas State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, ancestry, disability, genetic information, military status, or veteran status, in the University’s programs and activities as required by applicable laws and regulations. The person designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University’s Title IX Coordinator: the Director of the Office of Institutional Equity, equitypdx@k-state.edu, 103 Edwards Hall, Kansas State University, Manhattan, Kansas 66506, (785) 532-6220. The campus ADA Coordinator is the Director of Employee Relations, charlott@k-state.edu, who may be reached at 103 Edwards Hall, Kansas State University, Manhattan, Kansas 66506, (785) 532-6277.

Post-Graduation Statistics
k-state.edu/postgrad-stats
ksdegreestats.org

2017