

Program Overview: Bachelor of Science Construction Management



About This Major . . .

Construction managers plan, direct, and coordinate a wide variety of construction projects, including the building of all types of residential, commercial, and industrial structures, roads, pipelines and bridges. Construction managers coordinate and supervise the construction process from the conceptual development stage through the final construction, insuring the project is completed correctly, on time and on budget. The safety of the work environment is another aspect of the job of a construction manager. Construction managers are managers of processes and people and must excel in both technical and interpersonal skills.

Areas that a construction project manager are responsible for include the following: interpretation of plans and specifications, codes, project delivery, contracts, bonding, permits, scheduling, estimating, quality management, safety management, environmental management, regulatory issues, and internships. Construction managers are also involved with the business side of the project including: primary and project accounting systems, finance, company strategic business planning, legal environment of business, and human resource management. The construction manager on the work site must be prepared to understand and coordinate all phases of the building project. The curriculum is designed to prepare students with the knowledge and skills necessary to assume entry-level construction management positions for all industry sectors.

All CMU baccalaureate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning.

In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Critical Thinking Skills: Apply business knowledge and skills in appropriate business contexts and transfer knowledge and skills to new business situations.
2. Communication Skills: Independently communicate clearly, appropriately, and persuasively to the audience, both orally and in writing.
3. Quantitative fluency: Analyze business data critically, reason logically, and apply quantitative analysis methods correctly to develop appropriate business conclusions.
4. Strategic Application of Information: Strategically apply information across functional business areas.
5. Team Work: Effectively work in a team.
6. General Business Knowledge: Integrate knowledge from multiple functional areas of business to solve business problems and to develop sound business strategies.
7. Work Products: Produce professional business work products.
8. Identify, formulate and solve construction related problems by applying mathematics, science and business principles. (Specialized Knowledge)

Program Highlights:

The CMU Construction Management Club works closely with industry in hosting events, in preparing for competitions, and in site visits.

CMU Construction Management students have participated annually in the Associated Schools of Construction's (ASC) Region 6 student competition and conference, winning third place honors. Students have also competed each year in BYU's CM Challenge, and have won first and second place honors as well as have been recognized as the best presenters.

Recent internships have been completed at Elam Construction, FCI Construction, and the Precision Construction Group.

Examples of entry-level positions include: field engineer, project engineer, estimator, and scheduler. Alumni can expect promotion to field superintendent, project manager, and senior estimator, as well as construction company management and ownership.

The involvement of the Construction Management Advisory Board provides many opportunities for students to visit work sites, hear guest lecturers, and network with the construction industry long before graduation.



Program Requirements

A student must follow CMU graduation requirements by completing 120 semester credit hours, including 40 credits of coursework at the 300+ level. See the “Undergraduate Graduation Requirements” in the catalog for additional graduation information. Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration. In general, CMU’s programs of study are based on two curriculum groups:

1. Essential Learning

CMU’s Essential Learning program provides the foundation of skills and information that cuts across all fields of study and the support for advanced concepts that students will later encounter in their majors. Before moving into work at the 300+ level, students complete the Maverick Milestone and its co-requirement, Essential Speech. This pair of courses is a capstone experience where students integrate what they have learned from their foundation courses by making connections among diverse areas of knowledge. The capstone is also an opportunity for students to work with disparate ideas, a critical skill expected of all CMU graduates that will aid them in solving the complex and unscripted problems they will encounter in their personal, professional, and civic lives.

2. What You Will Study in This Major. . .

Foundational Courses

These courses provide a solid basis for upper division business classes and focus in functional areas. An exciting first class in the business program is Freshman Business Seminar which provides an overview of both the world of business and the Department of Business at CMU.

- Accounting
- Construction Safety
- Building Materials
- Business Statistics
- Building Mechanical and Electrical
- Surveying

Construction Management Core Courses

These include the following functional areas as well as others

- Management
- Finance
- Human Resource Management
- Mechanical and Industrial Systems
- Legal Environment of Business
- Business Decision Making

Concentration Requirements

These courses will provide the basis for study in the ever-evolving field of construction management. Analysis, critical thinking, and communication are keys any effective construction manager needs in today’s workplace.

Required

- Construction Materials and Methods
- Advanced Construction Estimating/Bidding
- Advanced Building Systems
- Structural Analysis
- Managing Safety and the Regulatory Environment
- Construction Financial Management
- Soil and Foundation Construction
- Planning and Scheduling
- Project Management

Electives from which to choose

- Computer-aided Design
- Construction Management Internship
- Leadership
- Risk Management

Electives

This degree will prepare students for employment in both vertical and horizontal building, as well as in residential and commercial.

Due to the campus’s location, pipelines, rig pads, and roads are in-demand emphases.

The program seeks to provide specificity in the degree, allowing students to focus on heavy civil, sustainable, and green building. The focus on green building and sustainability is projected to continue.

At industry-sponsored competitions designed to mirror the workplace as closely as possible, students apply the knowledge and skills learned in classes to real-world construction problems.

The construction management curriculum teaches the knowledge and skills needed in the workplace.

For more information about this major, go to: <http://www.coloradomesa.edu/business/degrees.html> or contact the Academic Department Head for Business, 309 Dominguez Hall, 970.248.1778.