

# Bachelor of Science in Construction Management

The Bachelor of Science in Construction Management (BSCM) prepares students to work as entry-level managers in the construction industry. Managers help control construction costs and schedules; administer contracts; determine construction means and methods; and manage people, material, and equipment while ensuring compliance with design criteria and safety standards.

The BSCM is nationally accredited by the American Council for Construction Education.

## Admission Requirements

- Complete the Admission Requirements for Baccalaureate Degrees (<http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/>).

## Graduation Requirements

- Complete the General University Requirements for Baccalaureate Degrees (<http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/>).
- Complete the General Education Requirements for Baccalaureate Degrees (<http://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/gers/>).
- Complete the following major requirements:

Code	Title	Credits
<b>Support Courses</b>		
ACCT A201	Principles of Financial Accounting	3
ACCT A202	Principles of Managerial Accounting	3
AET A411	Northern Design	3
BA A241	Business Law I	3
BA A300	Organizational Theory and Behavior	3
ECON A101	Principles of Microeconomics	3
ECON A102	Principles of Macroeconomics	3
GEO A181	Construction Surveying	1
PHIL A301	Ethics	3
or PHIL A305	Professional Ethics	
PHYS A123	College Physics I	3
PHYS A123L	College Physics I Laboratory	1
WRTG A212	Writing and the Professions <sup>1</sup>	3
Complete one of the following science courses with a laboratory class:		4
CHEM A105 & A105L	General Chemistry I and General Chemistry I Laboratory	

GEOL A111 & A111L	Planet Earth and Planet Earth Laboratory	
Complete one additional science course with laboratory at or above the 100 level in CHEM, ENVI, GEOL or PHYS		4
Complete one of the following:		3-6
MATH A221	Applied Calculus for Managerial and Social Sciences	
MATH A251	Calculus I	
MATH A251F	F.A.T. Calculus I	
STAT A253	Applied Statistics for the Sciences	

### Core Courses

AET A101	Fundamentals of Construction Documents	3
AET A102	Methods and Materials of Building Construction	3
AET A123	Codes and Standards	3
AET A213	Fundamentals of Civil Construction	4
AET A242	Mechanical, Electrical and Plumbing Systems	4
AET A332	Structural Technology	3
CM A163	Building Construction Cost Estimating	3
CM A201	Construction Project Management I	3
CM A202	Project Planning and Scheduling	3
CM A232	Statics and Strength of Materials	3
CM A263	Civil Construction Cost Estimating	3
CM A301	Construction Project Management II	3
CM A313	Soils in Construction	3
CM A401	Construction Law	3
CM A422	Sustainability in the Built Environment	3
CM A440	Financial Management for Construction	3
CM A450	Construction Management Professional Practice <sup>2</sup>	3
CM A460	Construction Equipment Management and Methods	3
CM A495	Advanced Construction Management Internship	3
OSH A405	Construction Industry Safety Management	3
<b>Total</b>		<b>105-108</b>

<sup>1</sup> Or WRTG A2W.

<sup>2</sup> All BSCM majors are also required to sit for the eight-hour, comprehensive American Institute of Constructors, Associate

*Constructor (Level 1) Exam as part of CM A450. CM A450 should be taken during the last or second-to-last semester before graduation.*

**A minimum of 120 credits is required for the degree, of which 39 credits must be upper-division.**

## **Program Student Learning Outcomes**

Students graduating with a Bachelor of Science in Construction Management will be able to:

- Create written communications appropriate to the construction discipline.
- Create oral presentations appropriate to the construction discipline.
- Create a construction project safety plan.
- Create construction project cost estimates.
- Create construction project schedules.
- Analyze professional decisions based on ethical principles.
- Analyze construction documents for planning and management of construction processes.
- Analyze methods, materials, and equipment used to construct projects.
- Apply construction management skills as a member of a multi-disciplinary team.
- Apply electronic-based technology to manage the construction process.
- Apply basic surveying techniques for construction layout and control.
- Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
- Understand construction risk management.
- Understand construction accounting and cost control.
- Understand construction quality assurance and control.
- Understand construction project control processes.
- Understand the legal implications of contract, common, and regulatory law to manage a construction project.
- Understand the basic principles of sustainable construction.
- Understand the basic principles of structural behavior.
- Understand the basic principles of mechanical, electrical and piping systems.