

Construction Management

Department Information

- **Department Location:**
Construction Management and Engineering
- **Department Phone:**
701-231-6202
- **Department Web Site:**
www.ndsu.edu/construction/
- **Degrees Offered:**
B.S.Cons.M.
- **Official Program Curriculum:**
bulletin.ndsu.edu/undergraduate/program-curriculum/construction-management/

Construction Management Major

Construction management is a combination of technology, construction techniques, and management to meet the needs of the rapidly growing construction industry. The program is designed to prepare students for the art of achieving maximum profit by efficient use of people, machines, materials and other resources to complete a construction project on time and to the satisfaction of the owner. A meld of engineering, construction, management and business gives the student a background and understanding of a management point of view in the construction industry. The Bachelor of Science in Construction Management program is accredited by the American Council for Construction Education (<http://www.acce-hq.org>).

Graduation Requirement

A minor in Business Administration offered by the College of Business is required for all B.S. in Construction Management students. Juniors and seniors are required to have a minimum cumulative GPA of 2.50 to be admitted into the minor program. A minor in Business Administration requires a minimum GPA of 2.50 in the courses that satisfy the minor. In addition, a cumulative GPA of 2.50 overall is required to graduate with a B.S. in Construction Management degree.

Program Learning Outcomes (PLO)

Program Learning Outcomes establish the minimum level of learning outcomes, defined by the Construction Management program. The Construction Management program shall provide students, by the time of their graduation:

1. The basic skills necessary to plan, organize, monitor and control resources to manage the overall construction process.
2. The knowledge and skills to apply computer and software applications for a career in construction.
3. The knowledge and skills necessary to identify, define, and compare construction materials, methods, and equipment alternatives.
4. The necessary communication skills for the successful practice of the construction profession.
5. The professional abilities and skills to pursue life-long learning within the broader societal context of the construction profession.

The Program Learning Outcomes are further supported by the Student Learning Outcomes.

Student Learning Outcomes (SLO)

Student Learning Outcomes establish the minimum level of learning and the body of knowledge, defined by ACCE (<http://www.acce-hq.org>), that students are expected to achieve or have by the time of graduation. Upon graduation from Construction Management program, graduates shall be able to:

1. Create written communications appropriate to the construction discipline.
2. Create oral presentations appropriate to the construction discipline.
3. Create a construction project safety plan.
4. Create construction project cost estimates.
5. Create construction project schedules.
6. Analyze professional decisions based on ethical principles.
7. Analyze construction documents for planning and management of construction processes.
8. Analyze methods, materials, and equipment used to construct projects.
9. Apply construction management skills as a member of a multi-disciplinary team.
10. Apply electronic-based technology to manage the construction process.

11. Apply basic surveying techniques for construction layout and control.
12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
13. Understand construction risk management.
14. Understand construction accounting and cost control.
15. Understand construction quality assurance and control.
16. Understand construction project control processes.
17. Understand the legal implications of contract, common, and regulatory law to manage a construction project.
18. Understand the basic principles of sustainable construction.
19. Understand the basic principles of structural behavior.
20. Understand the basic principles of mechanical, electrical and piping systems.

Plan of Study

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

Freshman			
Fall	Credits	Spring	Credits
CM&E 111	1	CM&E 212	3
CM&E 200	3	ENGL 120 (Gen Ed C Category)	3
ENGL 110 (Gen Ed C Category)	4	MATH 146 (Gen Ed R Category) [#]	4
MATH 105 or 107	3	COMM 110 (Gen Ed C Category)	3
CHEM 121 (Gen Ed S Category) [*]	3	Economics (Gen Ed B/G Category) ^{***}	3
CHEM 121L (Gen Ed L Category) [*]	1	Social Behavior Elective (Gen Ed B Category)	3
	15		19
Sophomore			
Fall	Credits	Spring	Credits
CM&E 204	3	CM&E 203	3
CM&E 250	3	CM&E 240	3
PHYS 211 (Gene Ed S Category) [*]	3	CM&E 260	3
PHYS 211L (Gene Ed L Category) [*]	1	Humanities (Gen Ed A Category)	3
GEOL 105 (Gene Ed S/G Category)	3	Humanities & Diversity (Gen Ed A&D Category)	3
ACCT 102	3		
	16		15
Junior			
Fall	Credits	Spring	Credits
CM&E 305	3	CM&E 301	3
CM&E 380	3	CM&E 315	3
STAT 330	3	CM&E 405	3
ENGL 320 or 321 (Gen Ed C Category)	3	BUSN 431 ^{**}	3
MGMT 320 ^{**}	3	MRKT 320 or FIN 320 ^{**}	3
	15		15

Senior			
Fall	Credits	Spring	Credits
CM&E 403	3	CM&E 488	3
CM&E 421	3	CM&E 453	3
CM&E 430	3	Wellness (Gen Ed W Category)	2
CM&E 450	3	Business Admin Minor 300/400 Elective**	3
Business Admin Minor 300/400 Elective**	3	Business Admin Minor 300/400 Elective**	3
		15	14

Total Credits: 124

An overall minimum CGPA of 2.50 and a minor in Business Administration with a minor GPA of 2.50 are required to graduate with a B.S. in Construction Management.

*All science courses require the companion lab with the exception of geology.

**To be eligible for enrollment into 300/400 level courses offered by the College of Business requires application for a minor in Business Administration(BA).

*** To satisfy the Gen Ed Category B, a student can choose between two options: ECON 105 plus an additional course within Category B OR ECON 201 and ECON 202. Both options satisfy the Gen Ed Category G requirements and the requirements for the BA minor.

Gen Ed Category description can be found on the General Education page (<http://bulletin.ndsu.edu/past-bulletin-archive/2018-19/academic-policies/undergraduate-policies/general-education>).