Construction Management Curriculum Overview

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In any given construction project the disciplines of architecture, engineering, and management converge. Recognizing this fact is a student's first step towards becoming a real-world leader in the fields of project and construction management. The second step is taken by enrolling in Norwich University's Construction Management degree program, where students learn the foundational skills necessary to take projects from the conceptual stage straight through to the grand opening ceremony.

Mission:

- Prepare students to excel in construction management and related fields.
- Make clear to students that above all else, the Construction Management profession is committed to bettering the world.
- Provide fundamental, hands-on education in the construction management field.
- Foster creativity, critical thinking, and problem solving abilities and motivate students to consider the impact of their work on society
- Enable students to be leaders in their profession, community, nation, and the world.

Goals:

Construction Management students are taught to assess, strategize, and execute projects from an interdisciplinary approach in which facets of architecture, engineering, and management are taken into account. Along with business, engineering, and architecture courses, students are required to take Construction Management courses specifically designed to prepare students for situations they may encounter while on the job site and in the office. Additionally, core studies include courses in the humanities, social sciences, mathematics and sciences.

The Goals [Program Educational Objectives (PEOs)] for graduates of the Construction Management Program are to:

- Lead project teams in their chosen field progressively rising to positions of technical or managerial leadership.
- Be respected and recognized for technical and managerial competence in the creation of solutions that balance sustainability, societal and economic issues.
- Become active citizens in their profession, community, the nation and the world.
- Communicate to both technical and non-technical audience.
- Actively engage in continuing education throughout life.

Outcomes:

Students who are awarded the Bachelor of Science in Construction Management, may sit for the Associated Constructors (AC) and/or the Construction Management in Training Exams (CMIT) exams. These students must have a foundational understanding of:

- Construction project management from pre-design through commissioning;
- project life-cycle and sustainability;
- health and safety, accident prevention, and regulatory compliance;
- law, contract documents administration, and dispute prevention and resolution;
- materials, labor, and methods of construction;
- finance and accounting principles;
- planning and scheduling;
- cost management, plan reading, quantity takeoff and estimating;
- project delivery methods;
- leadership and people management; and
- business and communication skills

Students in the Construction Management Program will demonstrate an ability to:

1. identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. communicate effectively with a range of audiences
4. recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. acquire and apply new knowledge as needed, using appropriate learning strategies.

Careers for this Major:

Graduates from this program manage varying job demands and requirements and are capable of adapting to rapidly changing technology. Whether working for a private construction firm, engineering firm, government agency, real estate developer, or Industry, there are many areas in which construction managers can focus. A few of the major specialties include:

- Construction management
- Construction supervision
- Construction inspection
- Safety inspection
- Project estimation
- Project development

To learn more about employment opportunities in Construction Management, please visit: http://careers.asce.org.

Accreditation:

The Construction Management Program is accredited by the Applied Science Accreditation Commission (ASAC) of ABET, http://www.abet.org, 415 N. Charles Street, Baltimore, MD 21201, (410) 347-7700.

Major

B.S. in Construction Management - Curriculum Map 2019-2020 Catalog

Print as PDF Curriculum Map (http://catalog.norwich.edu/residentialprogramscatalog/collegeofprofessionalschools/thedavidcrawfordschoolofengineering/eleccomp/enginmgmt/Construction.pdf)

Course	Cr	Comp.	Course	Cr	Comp.
FRESHMAN					
Fall			**Spring**		
CH 103 General Chemistry I (General Education Lab Science) or GL 110 Introduction to Geology	4		EG 110 Introduction to Engineering II	3	
EG 109 Introduction to Engineering I	3		EN 102 Composition and Literature II	3	
EN 101 Composition and Literature I	3		MA 108 Applied Calculus (General Education Math) or 121 Calculus I	4	
MA 107 Precalculus Mathematics (General Education Math)	4		SA 112 Foundations of Art and Architecture II (General Education Arts & Humanities)	3	
General Education Leadership (http://catalog.norwich.edu/archives/2019-20/residentialprogramscatalog/generaleducationgoals)	1-3		General Education History/ Literature (http://catalog.norwich.edu/archives/2019-20/residentialprogramscatalog/generaleducationgoals)	3	
Fall Semester Total Cr.:	15-17		Spring Semester Total Cr.:	16	
SOPHOMORE					
Fall			**Spring**		
AP 225 Introduction to Passive Environmental Systems	3		AP 325 Materials, Construction, and Design	3	
CE 211 Surveying	3		CE 214 Site Development and Engineering	4	
CE 264 Specifications and Estimating	1		EM 210 Building Information Modeling and Integrated Practices	4	
EC 202 Principles of Economics (Micro) (General Education Social Science)	3		EM 220 Advanced Project Estimating	3	
EN 204 Professional and Technical Writing	3		QM 213 Business and Economic Statistics I or MA 232 Elementary Statistics	3	
PS 201 General Physics I (General Education Lab Science)	4				
Fall Semester Total Cr.:	17		Spring Semester Total Cr.:	17	
JUNIOR					
Fall			**Spring**		
AP 327 Active Building Systems I	3		CE 457 Wood, Steel, and Concrete Structures	4	
CE 336 Introduction to Transportation Engineering	3		EM 320 Construction Productivity	3	
CE 351 Statics and Mechanics of Materials	4		EM 322 Construction Safety	3	
CE 460 Construction Management	3		EM 324 Special Construction Systems	3	
EG 350 Engineering Economics and Decision Analysis	3		General Education History/ Literature (http://catalog.norwich.edu/archives/2019-20/residentialprogramscatalog/generaleducationgoals)	3	
Fall Semester Total Cr.:	16		Spring Semester Total Cr.:	16	
SENIOR					
Fall			**Spring**		
CE 321 Materials Laboratory	1		EM 480 Construction Management Practices (Capstone)	3	
CE 458 Structural Issues for Construction	3		CE 446 Soils in Construction	4	
EG 044 Conference	0		MG 310 Production/ Operations Management	3	
EM 399 Pilot Course	3		MG 351 Organizational Behavior	3	
EM 401 Pre-Construction Management	3		Free Elective	3	
EM 461 Project Management	3				
EM 475 Senior Project Planning	1				
MG 341 Business Law I (General Education Ethics)	3				
Fall Semester Total Cr.:	17		Spring Semester Total Cr.:	16	
TOTAL CREDITS FOR THIS MAJOR: 130-132					

Minor

Construction Management Minor Curriculum Map 2019-2020 Catalog

Engineering majors may choose this minor. All courses must be completed with a grade of C or higher.

A) Two courses from either one of the following lists:

List of Architecture Courses		
AP 211	Architectural Design I	5
AP 212	Architectural Design II	5
AP 221	Site Development and Design	3
AP 222	Human Issues in Design	3
AP 225	Introduction to Passive Environmental Systems	3
AP 311	Architectural Design III	5
AP 312	Architectural Design IV	5
AP 325	Materials, Construction, and Design	3
AP 411	Architectural Design V	5
AP 412	Architectural Design VI	5
List of Civil Engineering Courses		
CE 211	Surveying	3
CE 214	Site Development and Engineering	4
CE 328	Soil Mechanics	4
CE 332	Engineering Hydrology	3
CE 336	Introduction to Transportation Engineering	3
CE 348	Structural Analysis	3

CE 419	Foundation Engineering	3
CE 421	Environmental Engineering	4
CE 422	Waste and Water Treatment	3
CE 442	Design of Steel Structures	3
CE 444	Reinforced Concrete Design	3
B) Plus four courses from the following:		12
EG 350	Engineering Economics and Decision Analysis	3
CE 460	Construction Management	3
EM 210	Building Information Modeling and Integrated Practices	4
EM 220	Advanced Project Estimating (formerly EM 302-Supply Chain Management)	3
EM 320	Construction Productivity	3
EM 322	Construction Safety	3
EM 324	Special Construction Systems	3
EM 401	Pre-Construction Management	3
EM 461	Project Management (formerly EM 301-Project Management)	3
Total Cr.		18