

CONSTRUCTION MANAGEMENT (MS)

NYSED: 28333 HEGIS: 0599.00 CIP: 14.3301

Program Description

Today's construction professionals face a highly competitive global engineering and construction environment that requires a fundamental understanding of management, technology, and finance, as well as business and legal principles. Talented managers know how to avoid costly delays, how to maximize existing budgets, and how to control a project's scope, among other valuable skills. Our program helps you acquire that expertise and prepares you to be a leader in the construction industry.

The program educational objectives (PEO) of the Master of Science in Construction Management are for you to learn management and leadership practices, how to apply innovative organizational, technological, planning, and financial tools to construction projects and programs, and the importance of effective communication with all construction industry players.

Admissions

To gain admission to this program, you must hold a bachelor's degree in a relevant field from an accredited undergraduate institution. You should also have a minimum undergraduate grade-point average of 3.00, although this requirement can be waived if you have sufficient professional experience in construction management. Related undergraduate backgrounds include engineering, mathematics, science, business, management, and the liberal arts. All candidates are expected to have sufficient background in college-level mathematics to allow for successful completion of the program. This requirement will be evaluated by a Construction Management Program Director. Students whose academic and professional backgrounds are deemed to be deficient may be required to complete additional undergraduate courses as a pre- or co-requisite to admission.

Program Requirements

The program requires the completion of 30 credits, comprised of the following:

Course	Title	Credits
Major Requirements		
Select a minimum of 15 credits (five courses) of the following:		15
CE-GY 7963	SELECTED TOPICS IN CONSTRUCTION I	
CE-GY 7973	SELECTED TOPICS IN CONSTRUCTION II	
CE-GY 8243	Construction Modeling Techniques	
CE-GY 8253	Project Management for Construction	
CE-GY 8263	Construction Cost Estimating	
CE-GY 8273	Contracts and Specifications	
CE-GY 8283	Risk Analysis	
CE-GY 8293	Construction Operations Analysis	
CE-GY 8303	Information Systems in Project Management	
CE-GY 8313	Engineering for Construction I: Methods and Technologies	
CE-GY 8323	Engineering for Construction II: Design	

CE-GY 8333	Marketing for Construction Management and Engineering Services	
CE-GY 8343	Construction Site Safety	
CE-GY 8353	CONSTRUCTION SCHEDULING	
CE-GY 8363	BUILDING INFORMATION MODELING PROJECT CONTROLS	
CE-GY 8373	CONSTRUCTION ACCOUNTING AND FINANCE	
CE-GY 8383	Building Information Modeling (BIM) and Its Applications in AEC/FM	
CE-GY 8703	Managing and Leading in the 21st Century	
CE-GY 8713	Construction and the Law	
CE-GY 8723	How to Succeed in Construction	
CE-GY 8733	Infrastructure Financing: Structuring of a Deal	
CE-GY 875X	Employer Focused Residency	
CE-GY 8763	Capital Program Management / Program Development	
CE-GY 8773	Dispute Avoidance and Resolution	
CE-GY 8783	Construction Management and Planning	
CE-GY 8803	Infrastructure Planning for Public Works	
ROB-GY 6203	ROBOT PERCEPTION	
Minor Concentration Courses		
Complete a minor concentration of study ¹		6
Electives		
Select six credits of the following:		6
More courses from the above major requirement list, in excess of the minimum requirement		
More courses related to the student's chosen minor concentration		
CE-GY 9105	Principles of Professional Practice I: Ethics & CE-GY 9205 and Principles of Professional Practice II: Management & CE-GY 9305	
	and Principles of Professional Practice III: Leadership	
Other courses from the Civil and Urban Engineering Department: CE-GY, TR-GY		
Other courses chosen in consultation with the Construction Management Program Director		
Capstone		
Select one of the following: ²		3
CE-GY 8393	LEADERSHIP, ETHICS AND PROJECT EXECUTION	
CE-GY 9963	MS PROJECT IN CIVIL & URBAN ENGINEERING DEPARTMENT	
Another three-credit capstone course approved by the Construction Management Program Director		
Total Credits		30

1

All students must complete a minor concentration of study consisting of a minimum of 6 credits selected from courses in any single graduate academic program at NYU (i.e., courses bearing the same prefix), or from any other concentrated area of study approved by the Construction Management Program Director (<http://engineering.nyu.edu/faculty/lawrence-chiarelli/>). The selection of the minor concentration of study shall be made with the advisement and consent of the Construction Management Program Director (<https://engineering.nyu.edu/faculty/lawrence-chiarelli/>).

2

A student shall not enroll in any Capstone Course until after having completed 18 credits or in the final semester of enrollment in the program, whichever is sooner.

Sample Plan of Study

Course	Title	Credits
1st Semester/Term		
CE-GY 8243	Construction Modeling Techniques (Major Requirement Course 1)	3
CE-GY 8253	Project Management for Construction (Major Requirement Course 2)	3
CE-GY 8263	Construction Cost Estimating (Major Requirement Course 3)	3
Credits		9
2nd Semester/Term		
CE-GY 8283	Risk Analysis (Major Requirement Course 4)	3
CE-GY 8353	CONSTRUCTION SCHEDULING (Major Requirement Course 5)	3
Minor Concentration Course 1		3
Credits		9
3rd Semester/Term		
Minor Concentration Course 2		3
CE-GY 8333	Marketing for Construction Management and Engineering Services (Elective 1)	3
CE-GY 8373	CONSTRUCTION ACCOUNTING AND FINANCE (Elective 2)	3
Credits		9
4th Semester/Term		
CE-GY 8393	LEADERSHIP, ETHICS AND PROJECT EXECUTION (Capstone Course)	3
Credits		3
Total Credits		30

Learning Outcomes

Upon successful completion of the program, graduates will:

1. Learn management and leadership practices.
2. Learn how to apply innovative organizational, technological, planning, and financial tools to construction projects and programs.
3. Learn the importance of effective communication with all construction industry players.

Policies

Departmental Residency Requirement

At least 21 credits must be taken from courses offered by the Civil and Urban Engineering Department. These include courses with subject code CE-GY, TR-GY, or ROB-GY 6203 ROBOT PERCEPTION. Students may also apply one of the following courses to the Departmental Residency Requirement: IE-GY 6203 Project Planning and Control (Project Management), MG-GY 6013 ORGANIZATIONAL BEHAVIOR, or MG-GY 8203 PROJECT MANAGEMENT.

Students will typically meet the Departmental Residency Requirement in the following manner:

1. Major Requirement Course 1
2. Major Requirement Course 2
3. Major Requirement Course 3
4. Major Requirement Course 4

5. Major Requirement Course 5

6. Capstone Course

7. Any CE-GY course (including an additional Major Requirement Course), TR-GY course, IE-GY 6203 Project Planning and Control (Project Management), MG-GY 6013 ORGANIZATIONAL BEHAVIOR, or MG-GY 8203 PROJECT MANAGEMENT.

NYU Policies

University-wide policies can be found on the New York University Policy pages (<https://bulletins.nyu.edu/nyu/policies/>).

Tandon Policies

Additional academic policies can be found on the Tandon academic policy page (<https://bulletins.nyu.edu/graduate/engineering/academic-policies/>).