

CONSTRUCTION MANAGEMENT (CMGT), BACHELOR OF SCIENCE

At Dunwoody College of Technology, the Construction Management bachelor's completion program prepares students to successfully manage, lead, and influence construction projects, teams, and companies. Graduates develop the critical thinking, problem solving, and decision making skills to take on professional roles as project managers, construction managers, business leaders, and entrepreneurs. Students in the program represent various construction industries and combine their specialized technical knowledge with leadership skills required to manage all phases and types of construction and make ethical and strategic decisions about the built environment.

Coursework features lectures on the principles of management and leadership, marketing, construction finance and law, green construction, and field engineering, with advanced training in estimating, planning, and scheduling.

Students also complete professional development projects and capstones within the construction industry.

Arts & Sciences courses enhance a student's technical education through study in oral and written communications; math and physical science; social/behavioral studies; and the arts and humanities.

Credential Earned: BS

Length of Program: 2 years (4 semesters) Summer courses are available to reduce fall/spring course load. Evening AAS students may take up to 5 semesters to complete unless they have technical transfer credits.

Classes Offered: Evening; Distance Learning

Available Starts: Fall Semester; Spring Semester; Summer Session

Program Outcomes

- 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.

Degree Requirements

Admitted students to Construction Management (CMGT) can transfer up to 45 technical credits. A transfer evaluation is required. Not all credits may transfer into the degree program.

Construction Management (CMGT) also has the following prerequisite courses, which may be taken at Dunwoody after acceptance into the program if the requirements have not been met during prior study: CMGT1211, CMGT1231 and CMGT1131

Code	Title	Credits
Transfer Credits:		45
General Requirements		
MATH1700	Pre Calculus	3
	or MATH2250 Statistics	
	Communications Elective	6
	Humanities Elective	3
	Physical/Environmental Science w/Lab	6
	Social Sciences Elective	3
	General Elective	9
Technical Requirements		
CMGT3111	Construction Law	3
CMGT3130	Quality Assurance & Risk	3
MGMT1100	Principles of Marketing	3
MGMT3131	Managerial Accounting	3
CMGT3121	Construction Estimating II	3
MGMT4141	Managerial Economics	3
CMGT3211	Construction Accounting & Finance	3
MGMT3112	Business Management	3
CMGT3221	Construction Planning & Scheduling II	3
CMGT4120	Field Engineering	3
CMGT4501	Project Management	3
CMGT4140	Construction Leadership	3
CMGT4130	Green Construction	3
CMGT4220	Utility & Construction Design	3
Technical Elective		
	Choose any CMGT course(s)	4
Total Credits		121

Courses

Descriptions

CMGT1211 | Construction Estimating I | Lecture/Laboratory (3 Credits)
Integrate material quantities with costs through take-offs, estimates and bid analysis, to predict project costs.

CMGT1231 | Construction Planning & Scheduling I | Lecture/Laboratory (3 Credits)

Analyze a sequence of construction tasks using network diagrams, Gantt charts, and the critical path method to create a project schedule.

CMGT1131 | Construction Plans & Measurements | Lecture (3 Credits)

Interpret architectural and engineering graphics and conventions using construction documents to identify materials and calculate quantities.

CMGT3111 | Construction Law | Lecture (3 Credits)

Examine the components of Construction Law using case law studies and construction documents to understand and identify the legal issues and liabilities encountered in connection with a construction project.

CMGT3130 | Quality Assurance & Risk | Lecture (3 Credits)

Analyze the best allocation of people, processes, material, and equipment based on quality and productivity principles and expectations to maintain an efficient and safe work environment.

MGMT1100 | Principles of Marketing | Lecture (3 Credits)

Introduction to terms, concepts, and skills for analyzing marketing problems. Manage/integrate communication aspects of marketing, such as advertising, sales promotion, and public relations. Identify how to set objectives, select media and measure effectiveness. Explain sales promotion techniques.

MGMT3131 | Managerial Accounting | Lecture (3 Credits)

Introduction of the fundamentals of managerial accounting for reporting, decision making and control of transactions, financial statements, strategic and operational planning to facilitate ethical behavior of the managerial accountant.

CMGT3121 | Construction Estimating II | Lecture/Laboratory (3 Credits)

Advanced analysis of the quantity surveying, cost estimating, and bidding methods of building construction using current industry practices and methods to oversee and manage the successful procurement of projects.

MGMT4141 | Managerial Economics | Lecture (3 Credits)

Apply managerial economic decision making in the areas of mathematics, statistics, economic theory, accounting, finance, marketing, and human behavior.

CMGT3211 | Construction Accounting & Finance | Lecture (3 Credits)

Apply basic accounting and finance concepts in the construction industry to analyze project data and financial statements to forecast, monitor and manage the costs of a construction project. Analyze the unique characteristics of construction accounting and finance through their use in budget development, securing funding, and cash flow to forecast the implementation of business decisions on financial statements.

MGMT3112 | Business Management | Lecture (3 Credits)

Examine principles of management in the context of how firms are organized to analyze their management of finances, operations, human resources, processes and strategy to effectively meet an organization's mission, vision and goals.

CMGT3221 | Construction Planning & Scheduling II | Lecture/Laboratory (3 Credits)

Advanced principles and techniques of managing construction schedules to forecast and report progress for construction projects.

CMGT4120 | Field Engineering | Lecture (3 Credits)

Analyze statics and strength of materials as used for the application of material specifications, quality control, and testing required in the field. Emphasis on field documentation and verification of subcontractor work.

CMGT4501 | Project Management | Lecture (3 Credits)

Integrate project management with documentation prepared for review by an industry review panel. Emphasis is on creation and coordination of plans, schedules, estimates, finance, marketing analysis, risk, insurance, and green initiatives for a site development project.

CMGT4140 | Construction Leadership | Lecture (3 Credits)

Explore conflict management, effective communication, decision making and problem solving through case studies, reflections and projects to develop leadership and management techniques relevant to construction management.

CMGT4130 | Green Construction | Lecture (3 Credits)

Examine green building principles and best practices through laboratory exercises, research, discussions, case studies, and presentations; apply to industry documents to understand the green building industry.

CMGT4220 | Utility & Construction Design | Lecture (3 Credits)

Examine the infrastructure systems related to public works projects produced in the United States; presented and discussed through a series of speakers, field trips and readings in order for construction professionals to realize the importance of our infrastructure systems and how they affect our society, including an analysis of current and future needs.

MATH1700 | Pre Calculus | Lecture (3 Credits)

Preparation for Calculus. Topics include understanding functions from symbolic, tabular, and graphical perspectives. Explore function transformations and composition, polynomial functions, rational polynomial functions, trigonometric functions, exponential functions, and conic sections. The focus is on problem solving using mathematical models to represent real world situations.

General Education: Mathematics

MATH2250 | Statistics | Lecture (3 Credits)

Descriptive and inferential statistics, frequency distributions, probability theory, and issues related to gathering data; computer spreadsheets facilitate the organization, analysis and display of data.

General Education: Mathematics