

CONSTRUCTION PROJECT MANAGEMENT (PMGT), AAS

At Dunwoody College of Technology, the Construction Project Management AAS degree is designed to address the increasing demand for formally trained project managers, estimators, and field personnel. The program prepares students for various entry-level positions in the construction industry. Construction project management requires highly developed critical thinking, problem solving, and decision making skills to manage individual and team performance and functional oversight of a project life cycle.

Through the use of instructional projects, students learn the tools to become leaders of the construction team, including how to develop and manage schedules and estimates; how to monitor and report on the progress of construction activities to stakeholders; and how to track and control construction costs. Key themes include risk and safety management, ethical and legal implications, and financial decision making.

Courses utilize tangible local projects to examine best practices, industry standards, and applications with curriculum specifically designed to emulate various jobs performed in the professional work environment. Current industry software is used to create and manage documents for student projects. In addition, service learning projects, site visits, speakers, and lab exercises introduce students to industry and community partners with a directed focus on gaining an appreciation for the social and environmental responsibilities that extend beyond creating the built environment.

Arts & Sciences courses round out the course of study, providing students with the analytical, communication, and writing skills the industry demands of its professionals. The program also includes a capstone project. A shorter certificate option is also available.

Accredited by the American Council for Construction Education (ACCE). (<https://www.acce-hq.org/>)

Credential Earned: AAS

Length of Program: 2 years (4 semesters) Evening AAS students may take up to 5 semesters to complete unless they have technical transfer credits.

Classes Offered: Day; Evening; Distance Learning; Hybrid

Available Starts: Fall Semester; Spring Semester; Summer Session

Bachelor's Completion Option(s): Construction Management (CMGT), Bachelor of Science (<https://catalog.dunwoody.edu/catalog-student-handbook/academic-programs/construction-sciences-building-technology/construction-management-cmgt-bachelor-science/>)

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 for construct projects.
- Apply electronic-based technology to manage the construction process.
- Apply basic surveying techniques for construction layout and control.
- Understand construction accounting and cost control.
- Understand the legal implications of contract, common, and regulatory law to manage a construction project.
- Understand the basic principles of structural behavior.
- Understand the basic principles of mechanical, electrical, and piping systems.

Degree Requirements

Code	Title	Credits
General Requirements		
MATH1000	Algebra & Trigonometry	3
	Communications Elective	3
	Humanities Elective	3
	Physical/Environmental Science with Lab	3
	Social Science	3
Technical Requirements		
CMGT1112	The Construction Industry	3
CMGT1002	Construction Drafting	3
CMGT1318	Construction Technology I	1
CMGT1131	Construction Plans & Measurements	3
SCVL1111	Introduction to Topographic Surveying	3
CMGT2203	Construction Mgmt Statics & Structures	3
CMGT1211	Construction Estimating I	3
CMGT1231	Construction Planning & Scheduling I	3
CMGT2222	Construction Administration	3
CMGT2132	Construction Safety Management	1
CMGT1221	Construction Materials & Methods II	3
CMGT2150	Residential Project Management	3
MGMT1000	Principles of Accounting	3
CMGT2211	Integrated Environmental Systems	3
CMGT2111	Building Codes	3
CMGT2230	Commercial Project Management	3
SCVL2111	Materials, Testing, Construction Methods	3
CSBT2000	Professional Development	1
Technical Elective:		2
Choose 2 credits of CMGT or SCVL courses		
Total Credits		65

Courses

Descriptions

CMGT1112 | The Construction Industry | Lecture (3 Credits)

Aspects of the construction industry are explored through guest speakers, site tours, and exploratory reflections to highlight the variety of opportunities available as a construction professional.

CMGT1002 | Construction Drafting | Lecture/Laboratory (3 Credits)

Implement construction graphics and conventions using hand drafting and drawing software.

CMGT1318 | Construction Technology I | Seminar (1 Credit)

Explore electronic-based technology through research and industry presentations to explain the role technology has in managing the construction process.

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

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

SCVL1111 | Introduction to Topographic Surveying | Lecture/Laboratory (3 Credits)

Introduction to the technical equipment and industry processes used by surveying technicians to collect and interpret data.

CMGT2203 | Construction Mgmt Statics & Structures | Lecture (3 Credits)

Evaluate structural behavior, structural materials, and load resistance for vertical and horizontal projects. Focus is on how construction managers work with designers.

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.

CMGT2222 | Construction Administration | Lecture (3 Credits)

Examine the requirements of Construction Administration using industry standard formats and procedures to understand the administrative requirements for their implications on a construction project.

CMGT2132 | Construction Safety Management | Seminar (1 Credit)

Examine the principles of construction safety management to develop strategies to prevent injuries on construction projects.

CMGT1221 | Construction Materials & Methods II | Lecture/Laboratory (3 Credits)

Examine building materials and construction methods through deconstruction of building systems using case studies, field trips and hands on exercises to figure out how buildings are assembled. Emphasis on the methods and materials for the interior of buildings.

Prerequisite(s): CMGT1131

CMGT2150 | Residential Project Management | Laboratory (3 Credits)

Integrate residential project management skills to create and coordinate plans, schedules, and estimates for a site development residential project utilizing construction competition guidelines.

MGMT1000 | Principles of Accounting | Lecture (3 Credits)

Introduction to fundamental accounting concepts and cycles. Includes analyzing, interpreting, and recording transactions, as well as the preparation of financial statements, bank reconciliations and payroll transactions in accordance with commonly accepted accounting principles.

CMGT2211 | Integrated Environmental Systems | Lecture (3 Credits)

Examine mechanical, electrical, plumbing and fire protection systems using case studies to coordinate the integration of these disciplines.

CMGT2111 | Building Codes | Lecture (3 Credits)

Select and apply appropriate federal, state/provincial and municipal codes, standards and accessibility guidelines using industry standards with an emphasis on Life Safety Codes and the ADA to prepare for licensing exams, meet with codes officials, and to design spaces that enhance the health, safety and welfare of the general public.

CMGT2230 | Commercial Project Management | Laboratory (3 Credits)

Manage a construction project from Request for Proposals through closeout integrating software; best practices and ethical decision making illustrate the competencies required of a construction project manager/site supervisor. Emphasis on overall culmination of prerequisite skills achieved in prior courses.

Prerequisite(s): CMGT1211 And CMGT1231

SCVL2111 | Materials, Testing, Construction Methods | Lecture/Laboratory (3 Credits)

Introduction to testing construction materials and methods, inspection and quality control. Examine construction documents to estimate quantities and costs for civil projects.

CSBT2000 | Professional Development | Seminar (1 Credit)

Apply technical skills in a related industry setting to acquire real world experience in an area of student interest.

MATH1000 | Algebra & Trigonometry | Lecture (3 Credits)

Real numbers and polynomials, exponents and radicals, fractional equations; proportions and linear equations; trigonometric functions, solutions of triangles, radians, trig functions graphs, vectors, and basic identities.

General Education: Mathematics