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.

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
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 to 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

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECON1000</td>
<td>Introduction to Micro &amp; Macro Economics</td>
<td>3</td>
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<td>HUMN2400</td>
<td>Ethics</td>
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<td>MATH1050</td>
<td>Algebra, Trigonometry &amp; Geometry</td>
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<tr>
<td>SPCH1000</td>
<td>Speech</td>
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<td>Communications</td>
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<td>Physical/Environmental Science with Lab</td>
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<td>Psychology</td>
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Technical Requirements

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<tr>
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<tbody>
<tr>
<td>CMGT1111</td>
<td>The Construction Industry</td>
<td>2</td>
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<tr>
<td>CMGT1131</td>
<td>Construction Plans &amp; Measurements</td>
<td>3</td>
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<tr>
<td>CSBT1000</td>
<td>AEC Seminar</td>
<td>1</td>
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<tr>
<td>CSBT1002</td>
<td>Construction Drafting</td>
<td>3</td>
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<tr>
<td>SCVL1111</td>
<td>Introduction to Surveying</td>
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<tr>
<td>CMGT1211</td>
<td>Construction Estimating</td>
<td>3</td>
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<tr>
<td>CMGT1231</td>
<td>Construction Planning &amp; Scheduling</td>
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<tr>
<td>CSBT2110</td>
<td>Building Codes</td>
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</tr>
<tr>
<td>SCVL2111</td>
<td>Materials, Testing, Construction Methods</td>
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<tr>
<td>CMGT1221</td>
<td>Construction Materials &amp; Methods II</td>
<td>3</td>
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<tr>
<td>CMGT2211</td>
<td>Integrated Environmental Systems</td>
<td>3</td>
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<tr>
<td>CMGT2221</td>
<td>Construction Administration</td>
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<td>CMGT2131</td>
<td>Construction Safety</td>
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<tr>
<td>CMGT2203</td>
<td>Construction Mgmt Statics &amp; Structures</td>
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<tr>
<td>CMGT2230</td>
<td>Commercial Project Management</td>
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Technical Elective (Choose one course):
- CMGT2150 Residential Project Management
- CMGT2500 Project Management: NAHB 2 yr Competitio

Technical Elective (Choose one course):
- CMGT1310 Construction Topics I
- CMGT1313 Construction Contracts
- CMGT1314 Erosion & Sediment Control
- CMGT1315 Service Learning I
- CMGT1316 Certified Aging in Place Specialist
- CMGT1317 Certified Green Professional
- CMGT1318 Construction Technology I
- CMGT1319 Introduction to Facilities Management
- CMGT1320 Construction Claims
- CSBT2000 Professional Development
- CMGT1901 International AEC Fields & Practices

Total Credits 64
Courses

Descriptions

**CMGT1111 | The Construction Industry | Lecture (2 Credits)**
Aspects of the construction industry presented using interviews with practicing professionals, site tours, and exploratory reflections to illustrate the many opportunities available as a professional.

**CMGT1131 | Construction Plans & Measurements | Lecture (3 Credits)**
Interpret architectural and engineering graphics and conventions using construction documents to identify materials and calculate quantities.

**CSBT1000 | AEC Seminar | Seminar (1 Credit)**
Introduction to the academic and classroom culture. Develop a proficiency in communication skills including research, oral presentation, writing, and collaboration.

**CSBT1002 | Construction Drafting | Lec/Lab (3 Credits)**
Implement construction graphics and conventions using hand drafting and drawing software.

**SCVL1111 | Introduction to Surveying | Lec/Lab (3 Credits)**
Introduction to the technical equipment and industry processes used by surveying technicians to collect and interpret data.

**CMGT1211 | Construction Estimating I | Lec/Lab (3 Credits)**
Integrate material quantities with costs through take-offs, estimates and bid analysis, to predict project costs.
Prerequisite(s): CMGT1131

**CMGT1231 | Construction Planning & Scheduling I | Lec/Lab (3 Credits)**
Analyze a sequence of construction tasks using network diagrams, Gantt charts, and the critical path method to create a project schedule.
Prerequisite(s): CMGT1131

**CSBT2110 | 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.

**SCVL2111 | Materials, Testing, Construction Methods | Lec/Lab (3 Credits)**
Introduction to testing construction materials and methods, inspection and quality control. Examine construction documents to estimate quantities and costs for civil projects.

**CMGT1221 | Construction Materials & Methods II | Lec/Lab (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.

**CMGT2221 | Construction Administration | Lecture (2 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.
Prerequisite(s): CMGT1210, CMGT1211, CMGT1230, And CMGT1231

**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.
Prerequisite(s): CMGT1210, CMGT1211, CMGT1230, And CMGT1231

**CMGT2500 | Project Management: NAHB 2 yr Competition | Laboratory (3 Credits)**
Integrate residential project management with documentation prepared for review by an industry review panel and a presentation at the National Association of Home Builders (NAHB) annual student competition. Emphasis is on creation and coordination of plans, schedules and estimates. Students are selected by faculty to register for this course.
Prerequisite(s): CMGT1210, CMGT1211, CMGT1230, And CMGT1231

**CMGT2131 | Construction Safety | Lecture (2 Credits)**
Examine the principles of construction safety and identify health hazards using the Occupational Safety and Health Administration (OSHA)1926 Construction Industry Regulations and MNOSHA Laws and Rules. Emphasis is on OSHA 30-hour Construction standards.

**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.
Prerequisite(s): MATH1050

**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): CMGT1210, CMGT1211, CMGT1230, And CMGT1231

**CMGT3130 | Construction Topics | Seminar (1 Credit)**
Investigate a selected topic in various areas of construction allowing a problem of special interest to be further examined.

**CMGT3133 | Construction Contracts | Seminar (1 Credit)**
Introduction to construction administration documents, systems, and procedures to understand the construction contracting process including planning and scheduling the job, bidding through closeout to meet project requirements.

**CMGT3134 | Erosion & Sediment Control | Seminar (1 Credit)**
Analyze the use of best management practices to prevent erosion and sediment control loss on construction sites. Focus is on permit regulations, laborer activities, proper installation of best management practices, turf establishment items, and inspection procedures.

**CMGT3135 | Service Learning | Seminar (1 Credit)**
Practice construction management through service construction projects and public/non profit partnerships to increase skills and build community.

**CMGT3136 | Certified Aging in Place Specialist | Seminar (1 Credit)**
Examine the technical, business management, and customer service requirements associated with an aging society who desire to remain independent and age-in-place. Analyze existing living conditions and propose revisions to increase the likelihood of the aging population being able to remain in their homes.

**CMGT3137 | Certified Green Professional | Seminar (1 Credit)**
Correlate the basics of residential construction to the application of green building practices in the construction of a new home, remodel, site development, and multifamily projects.

**CMGT3138 | Construction Technology | Seminar (1 Credit)**
Explore electronic-based technology through research and industry presentations to explain the role technology has in managing the construction process.
CMGT1319 | Introduction to Facilities Management | Seminar (1 Credit)
Discover aspects of the facilities management industry as presented through interviews with practicing professionals, site tours, textbook studies, and exploratory reflections to illustrate the many opportunities available as a professional.

CMGT1901 | International AEC Fields & Practices | Travel Study (1 Credit)
Introduction to the international aspects of architecture, engineering, and construction industries. Emphasis on inter-cultural communication, cultural intelligence, and globalization of technology. Four traditional classroom sessions (held before travel) include lectures, seminar discussions, case studies, participatory activities, and guest speaker presentations. Coursework during travel is primarily experiential based and includes fieldwork, group projects and community based service-learning. Travel expenses are incurred by the student.

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.

ECON1000 | Introduction to Micro & Macro Economics | Lecture (3 Credits)
Fundamental economic issues and theories are explored through discussion and research. Current events, policy perspectives, and case studies are used to process and apply economics to everyday life.

General Education: Social Sciences

HUMN2400 | Ethics | Lecture (2 Credits)
The development of ethical standards as related to the individual, government, business, and society. Current legislation is examined from the perspective of its moral and ethical roots with considerations and standards influencing personal and business decisions.

General Education: Social Sciences

MATH1050 | Algebra, Trigonometry & Geometry | Lecture (3 Credits)
Principles of algebra, geometry and trigonometry used in the context of a technical setting. Problem-solving strategies are developed and applied to technology.

General Education: Mathematics

SPCH1000 | Speech | Lecture (3 Credits)
Introduction to public speech making; purpose and organization, audience analysis and response, verbal and non-verbal clues.

General Education: Communications