Construction Management (CM)

Courses

CM A163 Building Construction Cost Estimating 3 Credits
Presents methods and techniques for preparing accurate cost estimates for building construction projects. Emphasizes quantity takeoffs, unit pricing, productivity factors, bidding and negotiation procedures, and cost reporting.
Prerequisites: AET A101 and AET A102 and MATH A105.

CM A201 Construction Project Management I 3 Credits
Examines construction project management methods and processes. Includes project delivery systems introduction and contract types; contract administration procedures; jobsite planning and logistics; and managing labor, materials, and equipment.
Prerequisites: AET A101 and AET A102.

CM A202 Project Planning and Scheduling 3 Credits
Examines concepts and methods for planning and scheduling of construction projects. Includes identifying work elements, estimating activity durations, preparing network schedules and schedule updates, analyzing planned vs. actual project progress and use of computer scheduling software.
Prerequisites: CM A201 and MATH A105.

CM A205 Construction Safety 3 Credits
Examines safety and health practices for the construction industry. Includes developing and implementing construction project site-specific safety plans, analyzing the laws and regulations that govern safety, evaluating construction site hazards and environmental conditions, and incident investigation and reporting.
Prerequisites: CM A201.

CM A213 Construction Civil Technology 4 Credits
Outlines elements of civil design and construction, including soils and soil properties, roads, earthwork, and utilities using local, state and federal regulations. Students will also be introduced to construction surveying.
Registration Restrictions: Appropriate SAT, ACT or UAA-approved math placement test scores may be used in lieu of the MATH A105 prerequisite.
Prerequisites: AET A101 with a minimum grade of C and AET A102 with a minimum grade of C and MATH A105 with a minimum grade of C.

CM A263 Civil Construction Cost Estimating 3 Credits
Presents methods and techniques for preparing accurate cost estimates for earthwork, roads, highways, underground utilities, and site work. Emphasizes quantity surveys, unit costs, production factors, bidding, and construction equipment management.
Prerequisites: CM A201 and MATH A105.

CM A295 Construction Management Internship 3 Credits
Places students in building construction offices related to student educational program and occupational objectives. Direct supervision by contractor professional, program faculty, and Career Services coordinator.
Registration Restrictions: Departmental approval.

CM A301 Construction Project Management II 3 Credits
Examines advanced subjects in construction project management. Includes project procurement, project delivery methodology, managing project change, quality control, claims and disputes, and labor relations.
Prerequisites: CM A163 and CM A202.

CM A313 Soils in Construction 3 Credits
Examines the properties and classifications of soils encountered and used in construction. Includes soils investigation, soils stress analysis, embankment construction, and excavation works and supports.
Prerequisites: CM A213 and MATH A151.

CM A331 Statics and Strength of Materials 3 Credits
Examines forces and the mechanics of materials for structural elements and structural assemblies. Includes the fundamentals of statics; stress, strain and deformation; shear and bending moment stresses in beams; and column analysis.
Prerequisites: AET A231 and (MATH A152 with a minimum grade of C or MATH A155 with a minimum grade of C).

CM A401 Construction Law 3 Credits
Examines the significant legal topics affecting general contractors, subcontractors, project owners and surety bond agents. Integrates legal issues with design and construction services, focusing on risk management and liability awareness.
Prerequisites: CM A301 and (BA A241 or JUST A241).

CM A422 Sustainability in the Built Environment 3 Credits
Examines sustainability concepts and the implementation of sustainability principles in the design and construction of the built environment. Evaluates human-constructed development and resource preservation challenges in the context of the local and global natural environment.
Registration Restrictions: Completion of GER Tier 1 (basic college-level skills) courses, junior standing, plus completion of one Tier 2 Natural Science course and one other Tier 2 GER course.
Attributes: UAA Integrative Capstone GER.

CM A440 Financial Management for Construction 3 Credits
Examines financial management topics relevant to the construction management professional, including the interpretation of financial statements, financial ratios, applications of engineering economy, cash flow analysis, construction financing, and cost information systems.
Prerequisites: ACCT A202 and CM A301.

CM A450 Construction Management Professional Practice 3 Credits
Integrates educational and construction management principles using case studies. Emphasizes teamwork and professional competency. Includes the evaluation of project goals, conditions, and design documents to produce a plan for delivery and control.
Registration Restrictions: Completion of GER Tier 1 (basic college-level skills) courses.
Prerequisites: CM A301 and CM A495.
Attributes: UAA Integrative Capstone GER.
CM A460 Construction Equipment Management and Methods 3 Credits
Analyzes the management of construction equipment and methods employed in different sectors of the construction industry including buildings, heavy-highway, and utilities construction. Includes earthmoving operations, appropriate equipment selection, operating costs, and fleet management.
Prerequisites: CM A263 and CM A313.

CM A495 Advanced Construction Management Internship 3 Credits
Provides career development and exploration through work experience in the field by placement in a construction management home or field office. Intern will perform duties directly related to construction management functions.
Registration Restrictions: Departmental approval