

CONSTRUCTION MANAGEMENT (CMGT)

CMGT 4120 Construction Scheduling (4 Credits)

Understanding and applying scheduling and control to construction projects is essential to successful construction management. Project scheduling emphasizes network-based schedules, such as critical path management (CPM), network calculations, critical paths, resource scheduling, probabilistic scheduling and computer applications. Project control focuses on goals, flow of information, time and cost control, and change management. Prerequisite or Corequisite: CMGT 4420.

CMGT 4155 Sustainable Development (4 Credits)

The course includes many case studies of historic and contemporary structures exemplifying various sustainability features. Emphasis is placed on how LEED project certification influences the overall construction project. Topics include LEED certification techniques for sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design. The following topics are covered from a LEED perspective: ventilation, air conditioning, heating, electrical lighting, energy efficiency, and building control systems. The student studies and analyzes how management and LEED techniques are applied to current construction projects.

CMGT 4320 Introduction to Architecture and Design Management (4 Credits)

This course introduces students to the significant value that architecture brings to real estate and the built environment and the various services and professions associated with it. Students will be introduced to principles, protocols and the planning process related to the design function and the link between the architect's vision and the finished physical structure. Students will be introduced to design, thinking, theory and application. Student will learn to read and interpret the various graphical and written construction documents as well as know how they are developed and what information they contain. Architectural, structural, mechanical, electrical, plumbing and civil drawings and specifications are covered. The business model for design services will be explored as well as the unique risks and challenges associated with managing the design throughout the various stages of development and construction.

CMGT 4410 Construction Building Systems (4 Credits)

A survey of residential and commercial construction materials, means, and methods associated with the various structural and architectural systems used to design and construct buildings. Project plans and specifications are incorporated to teach the basic sequencing and overall construction process. The influence of sustainability in construction is introduced. This class will also have an off campus, experiential learning lab associated with it.

CMGT 4420 Construction Estimating (4 Credits)

This course is designed to provide the student with the theory, principles and techniques of quantity analysis (take-off), labor determinations, overhead and profit analysis. It offers insight into the construction estimating process. The role of the estimator, types of estimating, CSI divisions, bid/contract documents, change order pricing, design/build projects and estimation compilation will be introduced. Discussions regarding the cost/benefit of sustainable materials and typical construction materials will enhance the requisite knowledge of construction estimating. Experiential learning lab is associated with this course. Prerequisite: CMGT 4320 and CMGT 4410. This course is a co/prerequisite for CMGT 4120.

CMGT 4480 Construction Project Management (4 Credits)

Principles and techniques of construction project management, use of systems analysis, internal and external procedures, planning, programming, budgeting and staffing, controlling major projects, emphasis on construction scheduling techniques with case application.

CMGT 4490 Residential Development (4 Credits)

A course sequence designed to emphasize the practical application of the theories and concepts of residential development. The course provides a capstone experience for seniors. Students are expected to apply their knowledge of general business, real estate and construction management practices by forming a student business entity, acquiring land, building and selling a residential property in a case format. Students will apply accounting, finance, marketing, real estate and construction management techniques in the planning for a residential development. The application of green building materials and methods is emphasized.

CMGT 4700 Topics in Construction Mgmt (0-4 Credits)

CMGT 4980 Construction Internship (0-4 Credits)

Daniels College of Business's graduate curriculum is designed to be experiential and build upon practical experience. To gain the full benefit of this curriculum, students are encouraged to expand their experiential learning beyond the short term experiences required in the classroom. Internships that allow students to apply newly learned skills and theories in the workplace are considered an integral to the curriculum and all students are strongly encouraged to seek such opportunities. Please review REBE Internship Guidelines: o Internships must be requested via PCO at least two weeks in advance of the quarter in which the work will commence. Final PCO approval is the Burns School Director. o No internships will be approved once the quarter begins. o Internships in arrears will not be approved. o Students may use a maximum of 4 Internship credits towards their REBE major degree. o Students have the option to obtain these 4 REBE internship credits by completing one or multiple internships combined for a maximum of 4 credit hours. o For students working full time at a company, they cannot seek internship in the same company they are working for and receive credit (in advance or arrears). o Not allowed for MBA concentrations.

CMGT 4991 Independent Study (1-10 Credits)