

## TEACHING EXPERIENCE

### Undergraduate level (Eastern Illinois University)

#### **CMG 1000 – Introduction to Construction Management** ([Syllabus](#))

This course introduces students to construction management processes and procedures, relationships, practices, terminology, project types, procurement methods, industry standards, contract documents, and career opportunities. Topics include the roles of the owner, architect, engineer, and contractor; project teams and organizations; their responsibilities and interrelationships; types of contracts; different project delivery methods; bidding and award documents and procedures; construction budgets; cost estimating; construction planning and scheduling; cost control; sustainability; technology.

#### **CMG 2223 – Print Reading and Introduction to Building Information Management (BIM)** ([Syllabus](#))

This course provides an introduction to reading and interpreting construction drawings and specifications, along with an entry-level exploration of Building Information Modeling (BIM). In the first portion of the course, students will learn how construction plans are organized and drawn, how to read and interpret architectural and engineering drawings, and how to apply this knowledge from conceptual design through final construction documentation. In the second part of the course, students are introduced to the fundamentals of BIM, with a focus on creating and modifying 3D building models using Autodesk Revit.

#### **CMG 3833 - Sustainable Buildings** ([Syllabus](#))

This course examines the principles of environmentally sustainable construction with applications in green building design, construction techniques, and building mechanical systems. Emphasis is placed on sustainable building strategies that improve environmental performance, resource efficiency, and occupant well-being. The course also introduces the Leadership in Energy and Environmental Design (LEED) Green Building Rating System as a framework for benchmarking the design, construction, and operation of high-performance buildings.

#### **CMG 4223 – Construction Cost Estimating** ([Syllabus](#))

This course covers the principles and practices of construction cost estimating, including the estimation of materials, labor, and equipment costs. Emphasis is placed on conventional cost estimating methods applied to a wide range of residential and commercial construction projects. Students learn to interpret construction documents, perform quantity takeoffs, and develop accurate cost estimates to support effective project planning and decision-making.

#### **CMG 4243- Construction Project Management Capstone** ([Syllabus](#))

This capstone course applies business and construction management principles through the development and preparation of a professional response to a Request for Proposals (RFP) for an actual Design–Build (D/B) project. Students explore key topics related to Design–Build contracting, including Design–Build delivery methods and advantages, alternative D/B formats, project scope definition, performance-based versus prescriptive specifications, and RFP requirements.

### Graduate level (Eastern Illinois University)

#### **TEC 5143 – Research in Technology** ([Syllabus](#))

This course introduces the means and methods of research used to define and investigate problems in technology-related fields. Topics include problem and scope definition, literature review, research methodologies, data collection, and data analysis. Students will learn the processes and tools for conducting both experimental and non-experimental research, with an emphasis on research design, analysis, interpretation, and reporting. The course also guides students in writing of a research proposal.

**Undergraduate level (Virginia Tech)**

**BC 4434 - Construction Practice I**

This course delves into advanced business and management practices related to vertical construction projects. It covers a wide range of topics, including Work Breakdown Structure (WBS), planning and scheduling, cash flow forecasting and analysis, assemblies estimating, as well as estimating general conditions and overhead costs. Additionally, students will explore site logistics planning, construction contracts and insurance, and the review and management of Building Information Models (BIM). The course also introduces the Design-Build project delivery method.

**BC 4444 - Construction Practice II (Capstone Project)**

This course explores and applies business and construction management practices related to the development and preparation of a response to an RFP to an actual Design-Build capstone project. Topics are reinforced through working on a real-life D/B project. This course is designed to prepare students to understand concepts and principles of the D/B contracting method through working on preparing and delivering responses to an RFP for a real-life D/B project.

**BC 4164 - Process Planning and Production Design for Construction**

Course topics include production systems, behavior of construction systems and workers, relationships between subsystems in the construction process, queueing systems, process modeling, and simulation. This course gives students an understanding of the production process from both a theoretical and practical perspective. It also equips them with tools and techniques to design, analyze, and improve construction processes.

**Graduate level (Virginia Tech)**

**BC 5984 - Decision-Making and Risk Management**

This course explores the theories, methodologies, and tools used in decision-making and risk management from a beginner to an advanced level. Students will gain insights into the complexities of making decisions in uncertain environments and learn strategies to manage and mitigate risks effectively. This course is designed to prepare students to think critically and become better decision-makers. It will also equip them with risk management knowledge to apply in various contexts.

**GUEST LECTURE**

**BC4164 –Process Planning and Production Design for Construction**

*Virginia Tech*

- Supervised and coordinated students in BC4164 class on the use of **Generative AI**, such as ChatGPT and Claude, and open-sourced LLM, such as Llama 3.2, for construction scheduling applications.

**SKILLS**

**Application used**

Autodesk Platform Service, Autodesk Tandem, Primavera P6, Autodesk Revit, Autodesk Naviswork, AutoCAD, Autodesk Recap, Faro Scene, Trimble Realworks, SPSS, Microsoft Projects, and Unity 3D.

**Programming language**

Python, R, Python, C#, Javascript, Java, HTML/CSS, ROS, Solidity and MATLAB

**Data Science & Machine Learning:** TensorFlow, PyTorch, Scikit-Learn, Pandas, NumPy, Matplotlib, MLX, CUDA, Llama.cpp, Llamaindex, Huggingface, Langchain, Unsloth AI and CrewAI

**PROFESSIONAL AFFILIATION/ CERTIFICATION**

- LEED Green Associate, *U.S. Green Building Council*, 2025
- Future Professoriate Certificate, *Graduate Certificate Program, Virginia Tech*, 2024