Construction Engineering (CNEN)

**CNEN 3810 Introduction to Construction Management (3 credits)**
Construction contracts, contract bonds, construction funding, cash flow analysis, labor productivity and cost. Analytical techniques for project planning and scheduling. Construction safety. Sr. stndg. for all other majors.
*Prerequisite:* Soph. stndg for CNEN, CIEN, and ENEN majors.
*Level of Study:* Undergraduate
*Last four terms offered:* 2024 Spring Term, 2023 Spring Term, 2022 Spring Term, 2021 Spring Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%203810)

**CNEN 3860 Construction Materials and Methods (3 credits)**
Introduction to materials and methods of building construction and construction drawings; foundation, structural framing, floor, room and wall systems; blueprint reading and quantity takeoff techniques; and an introduction to building information modeling.
*Prerequisite:* CNEN 3810.
*Level of Study:* Undergraduate
*Marquette Core Curriculum:* Engage Social Systms & Values
*Last four terms offered:* 2023 Fall Term, 2022 Fall Term, 2021 Fall Term, 2020 Fall Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%203860)

**CNEN 4815 Mechanical and Electrical Systems for Buildings (3 credits)**
Provides basic knowledge of electrical, plumbing and HVAC systems used in residential, commercial and industrial buildings. Studies the advantages and disadvantages of various systems, and how their design and installation integrates into the management of the building process. Particular attention is given to soliciting and managing mechanical and electrical subcontractors.
*Prerequisite:* CNEN 3810.
*Level of Study:* Undergraduate
*Last four terms offered:* 2024 Spring Term, 2023 Spring Term, 2022 Spring Term, 2021 Spring Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%204815)

**CNEN 4830 Construction Planning, Scheduling, and Control (3 credits)**
A study of principles and techniques used to plan, schedule and control costs on building construction projects. Network and linear scheduling models, resource allocation and time-cost analysis. Develops an appreciation of the resources required in a project and their limitations and introduces the techniques for analyzing and improving their use. Develops an understanding of the correlation between project planning and control and cost estimating and scheduling.
*Prerequisite:* CNEN 3860.
*Level of Study:* Undergraduate
*Last four terms offered:* 2023 Fall Term, 2022 Fall Term, 2021 Fall Term, 2020 Fall Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%204830)

**CNEN 4840 Construction Cost Analysis and Estimating (3 credits)**
Study of various cost estimating methods and their applications. Topics include: labor, material, equipment and indirect costs; quantity takeoff; analysis of historical cost data; forecasting and computerized estimating methods.
*Prerequisite:* CNEN 4845 or cons. of instr.
*Level of Study:* Undergraduate
*Last four terms offered:* 2024 Spring Term, 2023 Spring Term, 2022 Spring Term, 2021 Spring Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%204840)

**CNEN 4845 Construction Equipment and Methods (3 credits)**
Construction equipment and productivity analysis. Design of equipment fleet operations. Design of temporary structures used during construction such as earth retaining structures and concrete formwork systems. Construction equipment safety and safety standards related to earthwork and concrete forming operations.
*Prerequisite:* CNEN 3810 and Sr. stndg.
*Level of Study:* Undergraduate
*Last four terms offered:* 2023 Fall Term, 2022 Fall Term, 2021 Fall Term, 2020 Fall Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%204845)

**CNEN 4931 Topics in Construction Engineering and Management (1-3 credits)**
Course content announced each term.
*Prerequisite:* Cons. of instr.
*Level of Study:* Undergraduate
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%204931)
CNEN 4995 Independent Study in Construction Engineering (1-3 credits)
Undergraduate independent study project of either a theoretical or experimental nature., 3.000 GPA, cons. of instr., and cons. of dept. ch.
Prerequisite: Jr. stndg.
Level of Study: Undergraduate
Last four terms offered: 2022 Spring Term, 2020 Fall Term, 2020 Spring Term, 2015 Summer Term
Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=CNEN%204995)