CONSTRUCTION ENGINEERING TECHNOLOGY (COET)

COET:254 Building Codes (3 Credits)
Prerequisites: MATH 154 and COET 225. Examination of codes and code enforcement. (Formerly 2990:254)

COET:256 Site Engineering (3 Credits)
Prerequisite: MATH 154. This course covers site engineering, surveying, soil mechanics, and structural analysis. (Formerly 2990:256)

COET:310 Residential Building Construction (3 Credits)
Prerequisite: Admission to the BSCET program, or permission from program director. This course focuses on current trends and challenges related to residential construction. (Formerly 2990:310)

COET:315 Building Codes (3 Credits)
Prerequisites: MATH 154 and COET 225. This course covers codes and code enforcement, with a focus on residential construction. (Formerly 2990:315)

COET:320 Advanced Estimating (3 Credits)
Prerequisite: COET 245. This course focuses on estimating and bidding for public and private construction, including heavy/highway and residential projects. (Formerly 2990:320)

COET:325 Construction Inspection (3 Credits)
Prerequisite: COET 254. This course covers inspection of construction, including quality control and code enforcement. (Formerly 2990:325)

COET:330 Quality Control (3 Credits)
Prerequisites: MATH 154 and COET 225. This course covers quality control in construction, including testing and inspection. (Formerly 2990:330)

COET:335 Estimating (3 Credits)
Prerequisite: COET 254. This course covers estimating techniques and software. (Formerly 2990:335)

COET:340 Construction Formwork (3 Credits)
Prerequisite: COET 245. This course examines the design and construction of formwork. (Formerly 2990:340)

COET:345 Construction Formwork (3 Credits)
Prerequisite: COET 245. This course focuses on the design and construction of formwork. (Formerly 2990:345)

COET:350 Safety in Construction (3 Credits)
The purpose of this course is to explain what creates hazards and why, and to suggest where to anticipate trouble in each phase of the work as it progresses. (Formerly 2990:350)

COET:354 Foundation Construction Methods (3 Credits)
Prerequisites: COET 225 and COET 237. This course covers foundation construction methods and software packages. (Formerly 2990:354)

COET:356 Advanced Elements of Structures (3 Credits)
Prerequisite: COET 225. This course covers advanced topics in structural engineering. (Formerly 2990:356)

COET:360 Green & Sustainable Building Practices (3 Credits)
This course is designed to provide an understanding of sustainable construction practices and their importance on environmental issues. (Formerly 2990:360)

COET:421 Risk Management and Contract Strategies (3 Credits)
Prerequisite: Admission to the BSCET program, or permission from program director. This course focuses on current trends and challenges related to construction contracting. (Formerly 2990:421)
COET:422 Leveraging Technology in Construction (3 Credits)
Prerequisite: Admission to the BSCET program, or permission from program director. This course will describe how to use emerging trends and technologies to improve project outcomes. Topics include digital and computing technologies - BIM, video and laser scanning, AI and cloud computing, big data and data analytics, reality capture, blockchain, simulation, augmented reality, data standards and interoperability, and vertical and horizontal integration, industrial production - prefabrication, 3D printing and assembly, offsite manufacture, cyber-physical systems - actuators, sensors, IoT, robots, cobots, and drones. (Formerly 2990:422)

COET:442 Lean Building Science (3 Credits)
Prerequisite: Admission to the BSCET program. This course is designed to provide an understanding of collaborative leadership and lean building science as it relates to job site construction safety, building first cost, schedule, ongoing building operating expenses, and upcycle construction benefits. Students will work in classroom and workshop settings led by construction industry leaders and subject matter experts. There will also be the opportunity to experience job site application of these practices. Core concepts will be taught through a variety of methods, such as learning checks, peer presentations, videos, social media posts and smaller group projects. Students will learn a variety of tools they can apply immediately to their work to reduce waste and improve the overall efficacies of their organizations. (Formerly 2990:442)

COET:453 Legal Aspects of Construction (2 Credits)
Prerequisite: Admission into the BCET program or permission. Study of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, insolvency, subsurface. Review of standard contracts and construction industry rules of arbitration. (Formerly 2990:453)

COET:462 Mechanical Service Systems (3 Credits)
Introduction to materials and equipment used in mechanical heating, ventilating, air conditioning, water and waste systems. (Formerly 2990:462)

COET:463 Electrical Service Systems (3 Credits)
Introduction to materials and equipment in electrical systems of buildings. Includes illumination, electrical sources, materials and distribution. Emphasis of fire safety. (Formerly 2990:463)

COET:465 Heavy Construction Estimating (3 Credits)
Prerequisite: COET 245. Quantity takeoffs and cost analysis to include methods, systems, and equipment relevant to heavy highway and civil infrastructure projects. (Formerly 2990:465)

COET:466 Hydraulics (3 Credits)
Prerequisite: Junior or greater standing. Pre/Corequisite: MATH 356. Introduction to hydrology. Flow in closed conduits and open channels, distribution, systems, storage requirements and basic concepts of hydraulic structures. Basic concepts of seepage and working knowledge of pumps. (Formerly 2990:466)

COET:468 Construction Management (3 Credits)
Prerequisites: COET 352 and COET 358. Construction Management takes established construction practices, current technological advances, and latest management methods and makes them into an efficient, smooth working system. (Formerly 2990:468)

Gen Ed: - Capstone

COET:469 Contracts and Specifications (3 Credits)
Prerequisite: Admission to BSCET program or permission. This course studies the principles and applications of construction specifications, contracts, processes for managing professional risk and increasing economic performance of the construction process. (Formerly 2990:469)

COET:471 Understanding LEED Guidelines (3 Credits)
Prerequisite: COET 371. Provides an understanding of LEED guidelines and requirements and help prepare the student for the LEED associate exam. (Formerly 2990:471)

COET:479 CPC Seminar (3 Credits)
Prerequisite: Senior standing in a BS Degree in Construction Engineering Technology or permission. This course prepares students for the content and format of the Certified Professional Constructor's Examination. (Formerly 2990:479)

COET:489 Special Topics in Construction (1-3 Credits)
Prerequisite: Permission of instructor. (May be repeated for up to six credits.) Special lecture/laboratory courses offered once or only occasionally in areas where no formal courses exist. (Formerly 2990:489)

COET:490 Workshop in Construction (1-3 Credits)
Prerequisites: Permission. Group studies of special topics in construction. May not be used to meet undergraduate major requirements in construction. May be used for elective credit only. (May be repeated for up to six credits) (Formerly 2990:490)

COET:497 Honors Project (1-3 Credits)
Prerequisite: Senior standing in Honors College and permission of supervising faculty in student's degree field and pursuit of major in CET. Individual Senior Honor's Project relevant to student's major field of study. Specific projects are approved and supervised by a designated member of the faculty in the student's degree field. (Formerly 2990:497)

COET:498 Independent Study in Construction (1-3 Credits)
Prerequisite: Permission. Directed study in a special field of interest chosen by student in consultation with instructor. (May be repeated for up to six credits) (Formerly 2990:498)

COET:479 CPC Seminar (3 Credits)
Prerequisite: Senior standing in a BS Degree in Construction Engineering Technology or permission. This course prepares students for the content and format of the Certified Professional Constructor's Examination. (Formerly 2990:479)