

Eng Tech: Civil & Construction (ETCC)

ETCC 173. Architectural Const & Material. 3 Credits.

Introduction to construction materials and methods. Building systems and construction details. Emphasis is placed on selection of materials and methods. Laboratory section performs site investigations observing materials and their properties. Course Fee: \$12.00 Formerly CET 173.

ETCC 298. Cooperative Education. 12 Credits.**ETCC 302. Soils & Foundations. 4 Credits.**

Engineering properties of soil. Laboratory testing to determine soil characteristics. Shallow foundations and retaining structures. Prerequisite: CET 232. Course Fee: \$25.00 CET 315.

ETCC 307. Structural Analysis. 3 Credits.

Loads on building according to Uniform Building Code (UBC). Internal forces and deformations of statically determinate trusses and frames. Influence lines and Live loads. Introduction to matrix-displacement method of structural analysis. Using software for structural analysis. Prerequisite: CET 232. Formerly CET 307.

ETCC 361. Design/Details Steel Building. 4 Credits.

Design of steel members according to American Institute of Steel Construction Code. Both calculations and construction details are emphasized. Prerequisite: CET 232. Course Fee: \$10.00 Formerly CET 361.

ETCC 375. Applied Mechanics of Fluids. 3 Credits.

Introduction to fluids, fluid properties, hydrostatic forces, fluid flow, pipeline systems, open channels, and fluid machinery. Prerequisite: CET 232. Course Fee: \$10.00 Formerly CET 375.

ETCC 385. Highway Design & Construction. 4 Credits.

Intended as a first course in highway engineering. It is inclusive of surveying topics pertinent to the design and layout of highways. The transportation engineering profession, geometry, pavement selection, highway soil mechanics and characteristics of the vehicle, driver, pedestrian, and the road will be discussed. A semester design project based on fieldwork will be completed as part of the laboratory section. Prerequisite: CET 181 or consent of instructor. Course Fee: \$25.00 Formerly CET 385.

ETCC 391. Special Topics. 1-12 Credits.**ETCC 392. Independent Study. 1-12 Credits.****ETCC 411. Reinforced Concrete Dsgn/Details. 4 Credits.**

Design of reinforced concrete members according to American Concrete Institution (ACI) code. Both calculations and details of reinforcing steel are emphasized. Prerequisite: CET 232. Course Fee: \$15.00 Formerly CET 411.

ETCC 489. Senior Project I. 1 Credit.

This course is the proposal phase for a program faculty-approved technical project. Emphasis is placed on library research, design, specification, cost analysis, and project management. The student will submit a formal written report and give a public explanation of the project. This course meets part of the general education requirements for a capstone course. Prerequisites: Senior standing and advisor consent. Course Fee: \$2.00 Formerly IET 480. Course Fees: \$2.15

ETCC 492. Special Topics. 1-12 Credits.**ETCC 499. Capstone: Senior Project II. 2 Credits.**

This course is the implementation phase for a program faculty-approved technical project. Emphasis is placed on construction, design, testing, and formal presentation. The student will submit a formal written report and give a public explanation and demonstration of the project. The student will furnish all necessary materials. This course completes the general education requirements for a capstone course. Prerequisites: Senior standing and advisor consent, ETCC 489. Formerly IET 481.