

# CIVIL CONSTRUCTION ENGR. TECH (CET)

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Division: Mathematics, Engineering Technologies and Computer Sciences (METCS) Division

## **CET 111 Construction Method & Materials (3 Credits)**

**Pre-requisites:** (Companion Essay with a score of 08 or Write Placer Essay with a score of 07 or Write Placer Essay with a score of 08 or Move Up English 096 with a score of P or ENG 096 Summer Bridge with a score of P or TRANSFERRED ENG 101 with a score of 889 or Elig. for Eng 101 with a score of 904 or Pre-reg. Eng 101 waiver only with a score of 906 or SAT/ACT Elig for Eng 101 with a score of 993 or TRANSFERRED ENG 102 with a score of 998) or COLLEGE DEGREE with a score of 988 or SAT/ACT Elig Eng101 Mth100 with a score of 995 or Transf. Eng 101 Mth 100 with a score of 999

## **CET 211 Surveying (4 Credits)**

This is an introductory course that includes the use, care and adjustment of modern digital surveying instruments, the measurement of distance and difference in elevation, angles, directions, lines and grades. Other topics covered include the theory of measurement and errors, traversing and area computation. Field exercises are included to complement lecture topics.

## **CET 212 Surveying II (3 Credits)**

This is a continuation of CET 211 and covers the elements of horizontal, vertical and compound curves, cross-sectioning and earthwork computations. Other topics covered include the essentials of boundary surveys, coordinates, control surveys, construction surveys and state plane coordinates. Field exercises and computer applications are included to complement lecture topics.

**Pre-requisites:** CET 211 with a minimum grade of C

## **CET 214 Evid & Proc for Boundary Loc (3 Credits)**

This course addresses the concept of evidence relating to boundary locations as discoverable on the ground and through deeds or other written records, and the procedures followed by the land surveyor when conflicts occur between those items of evidence by relating laws and cases.

**Pre-requisites:** CET 211 with a minimum grade of C

## **CET 221 Hydraulics and Drainage (3 Credits)**

This course is an introduction to the fluid properties of water and the concepts of surface water hydrology. Topics covered include flow through pipes and channels and relationships between rainfall and runoff. Class time is divided between the study of theory and the application of this theory in the design of storm drainage systems. Laboratory exercises are included to complement lecture topics.

**Pre-requisites:** CET 211 with a minimum grade of C and MTH 113 with a minimum grade of C

## **CET 225 Soil Mechanics (3 Credits)**

This is an introductory course in soil properties and testing techniques. Topics covered include soil classification, index properties, bearing capacity, retaining walls, soil compaction and pile driving. Emphasis is placed on practical field applications, including inspection and testing. Laboratory exercises are included to complement lecture topics.

**Pre-requisites:** ENR 110 with a minimum grade of C

## **CET 231 Structures (3 Credits)**

In this course, students perform calculations and write specifications for the correct size and physical characteristics of structural components of the simpler forms of structural systems. Design of steel and wood framing members, including bearing plates, base plates and riveted, bolted and welded connections is included. Also included is the study of reinforced concrete elements such as rectangular beams, T-beams and one and two-way slabs.

**Pre-requisites:** ENR 220 with a minimum grade of C

## **CET 251 CET Seminar (2 Credits)**

This is a survey course involving a variety of topics relevant to civil engineering, construction and land surveying. Through group discussion, research and oral presentations, students gain an appreciation of the skills and techniques needed for success as a professional in their chosen field.