

Tennessee Technological University
Department of Civil & Environmental Engineering
CEE 4940 – Fundamentals of Civil Engineering
Required
Fall Semester 2007, Spring Semester 2008

2007 Catalog Data: CEE 4940: Fundamentals of Civil Engineering. Recitation 2. Credit 0. Review fundamentals in preparation for Fundamentals of Engineering (FE) test.
Prerequisite: Graduating senior.

Textbook: *Fundamentals of Engineering (FE) Discipline Specific Reference Handbook*, NCEES.

Reference: M.R. Lindeburg, *Engineering-In-Training Reference Manual*, latest edition, Professional Publications, Inc.

Coordinator: E. P. Ryan, Associate Professor of Civil Engineering

Goal: The goal of CEE 4940 “Fundamentals of Civil Engineering” is to aid the student in preparation for the Fundamentals of Engineering examination.

Course learning objectives:

1. The student is to become familiar with the areas of Civil Engineering that are covered in the FE exam.

Course measurable outcomes:

Students will be expected to:

1. be tested in the following areas of Civil Engineering using problems that are comparable to those on the FE exam: Statics, Math, Mechanics of Materials, Structures, Geotechnical Engineering, Fluid Mechanics, Environmental Engineering, and Transportation Engineering.

Topics covered: (Two classes per week for 8 weeks, 2 hours each)

1. Introduction (1 class)
2. Statics (2 classes)
3. Mathematics (3 classes)
4. Mechanics of materials (2 classes)
5. Structures (1 class)
6. Geotechnical Engineering (1 class)
7. Fluid Mechanics (2 classes)
8. Environmental Engineering (2 classes)
9. Transportation Engineering (2 classes)

Contribution of the course to meeting professional component:

This course is a part of engineering topics of the curriculum.

ABET category content as estimated by faculty member who prepared this course description:

Engineering Science: 0 credits or 0%
Engineering Design: 0 credits or 0%

Relation of course to program outcomes:

Outcome 2: The graduates will have a general comprehension of four technical areas appropriate to civil engineering.

Outcome 3: The graduates will be prepared to begin the professional registration process.

Relation of course to ABET Criteria:

General Criteria

Bloom's Level of Achievement

(3a)	Knowledge of math, science, engineering	3
(3e)	Identify, formulate, and solve engineering problems	2
(3f)	Professional and ethical responsibility	2
(3i)	Need for life-long learning	2

Program Criteria

Bloom's Level of Achievement

1.	Apply knowledge of math and sciences	3
2.	Apply knowledge of four technical areas appropriate to civil Engineering	3
3.	Explain the importance of professional licensure	2

Computer usage: None

Laboratory projects: None

Prepared by: E.P. Ryan

Date: September 2007