REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: of Engineering Technology

Prefix & Course Number: CET 4200 Crosslisted With*: ____

Course Title: Experimental Methods in Structural Engineering


Check All That Apply: Required for Major:_____ Required for Minor:_____ Specified Elective: _____

Required for Concentration: ____ Elective: x Service Course: ____

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

**Federal Credit Hour Definition:** A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:

(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 3-6(0+6-12)

**Face-to-Face or Equivalent Hours per course:**

Lecture _____ Lab 90-180 Internship _____ Practicum _____ Other (please specify type and hours):____

**Additional Student Work Hours per course:** 90-180

APPROVED:

Department Chair OR Program Director Date

Dean OR Associate Dean Date

Associate VP, Academic and Student Affairs Date

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: CET 4200

Schedule Type: A Grade Mode: L
Variable topics umbrella course: No X Yes _____ If Yes, number of credit hours allowed _____
Specified repeatable course: No Yes X
Prerequisite(s): CET 3135
Corequisite(s): _____
Prerequisite(s) or Corequisite(s): _____

Banner Enforced:
  Prerequisite(s): CET 3135
  Corequisite(s): _____
  Prerequisite(s) or Corequisite(s): _____

Registration restrictions: Level _____ Class _____ Program/Major _____ Student attribute _____

Catalog Course Description:

In this course students will be dealing with the aspects of static and dynamic testing methods of structures made of steel, concrete, or timber. Students will be introduced to test planning, specimen design and building, loading systems and instrumentation, data acquisition and processing. They will be involved in laboratory applications and hybrid techniques, illustrative physical and numerical simulations. This course is repeatable up to 6 credits.

Required Reading and Other Materials will be equivalent to:

Course material provided by faculty.

Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to:
1. Plan and design basic static and dynamic tests.
2. Conduct static test.
3. Evaluate basic experimental results.

Detailed Outline of Course Content:
I. Physical and numerical modeling
II. Static and dynamic loading systems
III. Measurement systems
IV. Factor analysis
V. Instrumentation
VI. Data acquisition
VII. Data processing

Evaluation of Student Performance:
1. Participation in laboratory activities
2. Laboratory reports