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CET 435-102: Design of Temporary Structures for Construction

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CET 435 – TEMPORARY STRUCTURES

COURSE NUMBER	CET 435-102
COURSE DESCRIPTION	TEMPORARY STRUCTURES
COURSE STRUCTURE	(3-0-3) (lecture hr/wk - lab hr/wk – course credits)
COURSE DESCRIPTION	Analysis of loadings on, and design of Temporary Structures required in construction. Formwork, shoring and scaffolding systems, temporary bridges, trenching, and temporary retaining walls are among the subjects covered. Construction safety associated with temporary structures is stressed.
PREREQUISITE(S)	Prerequisite: CET 331 Structural Systems, CET 233, Structural Analysis in Construction, MET 237 Strength of materials, MET 235 Statics
COREQUISITE(S)	None
REQUIRED MATERIALS	Formwork For Concrete By M.K . Hurd - Latest Edition (SP-4) Note: ACI Discount available as a free student member Phone# 248-848-3800 or fax 248-848-3801 Approximate Cost is \$99.00 plus shipping (regular price approx. \$250)
MANDATORY FIELD TRIP	(Based on Availability)
COURSE OBJECTIVES	By the end of the course students should be able to: <ol style="list-style-type: none">1. Producing and utilizing design, construction and operations documents2. Selecting appropriate construction materials and practices3. Applying Structures4. Knowing Construction Safety
CLASS TOPICS	Statics and Mechanics, Steel Design, Timber Design, and Formwork
OUTCOMES	The Course Learning Outcomes support the achievement of the following CET Program Outcomes and TAC of ABET Criterion 9 requirements Outcome a - An appropriate mastery of the knowledge , techniques skills and modern tools of the construction industry. (Related CLO 1 thru 3) Outcome b - An ability to apply current construction knowledge, adapt emerging applications of mathematics, science, engineering and technology. (Related to CLO 1 thru 3) Outcome d - An ability to apply creativity in the designs of systems, components or processes appropriate to program objectives. (Related to CLO 1 thru 3) Outcome e -an ability to function effectively on teams (refer to CLO 1 thru 4) Outcome f - an ability to identify, analyze and solve technical problems (refer to CLO 1 thru 3) Outcome g - An ability to communicate effectively (refer to CLO 1 thru 4) Outcome k - A commitment to quality, timeliness and continuous improvement. (Related to CLO 2 thru 4) Outcome p - Apply basic technical concepts to the solution of construction problems involving hydraulics and hydrology, geotechnics, structures, construction scheduling and management and construction safety. (Related to CLO 3)

Outcome q - Selecting appropriate construction materials and practices
(Related to CLO 1 thru 3)

GRADING POLICY

Note: Grading Policy may be modified by Instructor for each Section in the Course)

Homework/Sample Problems	10%
Class Participation	5%
Tests	20%
Final Exam	25%
Quizzes	25%
Term Project	15%

Note: Cannot pass course if you having failing grades on tests and final exam

In the event that a student misses a scheduled test, they will have 1 week from the date of the test to schedule their taking of the test. The test schedule will be coordinated with the Engineering Technology Department Administrator, Mrs. Edwards and the Et Department Secretary, Mrs. Eddings.

Makeup Quizzes are not permitted.

The student is responsible for those materials covered in class and any materials assigned as readings as noted by instructor. A student who misses a class is still responsible for submitting materials in on time or they can give adequate notice of any late submittals to the professor before the due date.

All exams are cumulative unless otherwise noted by the instructor. All exams are open book and open notes.

The final letter grade will be determined by the total number of points received during the course. Any variations to any of the above requirements are at sole discretion of the instructor.

Ebooks and similar electronic media are permitted during class time but will not be allowed during the exams.

HOMEWORKS:

All homeworks are due one week after it has been assigned. No homework will be accepted one week after its due date or after it has been reviewed in class. All homeworks will be graded on the basis of the student attempt to understand the concept presented in the text or class, If a student has a particular question concerning the problems they may see the Instructor prior to class or questions may be asked during class at the appropriate time. However, no question concerning the solutions will be answered until the work has been collected and unless the student has actually attempted to solve the problem. Projects must follow the outline or format as directed in class. ABET course guidelines are in effect. The homework must show how you derived the answers. Homework must be handed in individually, hard copy. Homework will be posted on Canvas.

ATTENDANCE:

The student is responsible for those materials covered in class and any materials assigned as readings as noted by instructor. A student who misses a class is still responsible for submitting materials in on time or they can give adequate notice of any late submittals to the professor before the due date.

ACADEMIC INTEGRITY

NJIT has a zero-tolerance policy regarding cheating of any kind and student behavior that is disruptive to a learning environment. Any incidents will be immediately reported to the Dean of Students. In the cases the Honor Code violations are detected, the punishments range from a minimum of failure in the course plus disciplinary probation up to expulsion from NJIT with notations on students' permanent record. Avoid situations where honorable behavior could be misinterpreted. For more information on the honor code, go to <http://www.njit.edu/academics/honorcode.php>

In general, the class shall be run in the format of a business meeting or a business seminar. As such it is expected that the appropriate behavior for that business situation is expected. Specific behaviors are listed below:

STUDENT BEHAVIOR

Tardiness - If you arrive late for class, please try and enter the room with as little fanfare as possible.

Attendance - Attendance will be taken within the first 15 minutes of class. If you arrive after that time, you will be marked absent for that session.

Food - No eating or drinking is allowed during lectures, recitations and workshops.

Cell Phones - Cellular phones must be turned off or silenced during the class hours – if you are expecting an emergency call, leave it on vibrate and leave the class room and take your call. This also applies to texting.

Apparel- No hats, headphones or ear buds should be worn in class.

Electronic Devices - Unless the professor allows the use during lecture, laptops should be closed during lecture. Ebooks are permitted during class time but will not be allowed during exams.

Learning Disabilities - Students with learning disabilities will be accommodated as best as possible. A student should contact the NJIT Learning Center and speak to the Instructor prior to class. Any information in this regard will be kept as confidential as possible. This also applies to any special needs during exams and tests.

Class time should be participative. You should try to be part of the discussion. You will also note that class participation is a small part of your grade in this course.

MODIFICATION TO COURSE

The Course Outline may be modified at the discretion of the instructor or in the event of extenuating circumstances. Students will be notified in class of any changes to the Course outline.

**PREPARED BY
PROGRAM COORDINATOR**

David M Hawes
Prof. John Wiggins

Thursday

6:00 PM – 8:50 PM

KUPF 118

Inclement Weather

As the weather during the early part of this semester can result in dangerous conditions that might warrant the cancellation of class; students should check their NJIT email accounts by 4:30 P.M. prior to coming to campus. If a class is to be cancelled because of inclement weather, it will be forwarded to the student via email by that time.