

Course Syllabus – CNST 4381

Reinforced Concrete Construction

Course Description:

This course introduces students to the application of the ACI 318 Building Code to design, inspect, and construct reinforced concrete members.

Course Prerequisites:

C or better in CNST 3355.

Textbook:

Reinforced Concrete: Design theory & examples by Bhatt, P; MacGinley, T.J; Choo, B.S.

Course Learning Outcomes:

Upon the completion of the course students will demonstrate the ability to:

1. Design concrete mixtures
2. Analyze flexural, shear, torsion and load capacities of concrete slabs, beams, and columns
3. Design simple concrete members using ACI 318 ultimate design strength method

In addition to the learning objectives above, this course emphasizes Ethics, Safety, and Oral/Written Communication.

Student Learning Outcomes:

19. Understand the basic principles of structural behavior

Course and Student Learning Outcome Mapping:

Student Learning Outcome	Course Learning Outcomes
19	1,2,3,4

Student Learning Assessment and Assessment Target:

Assessment	SLO#19	Assessment Target
Assess (A)	X	At least 70% of students receive a grade of 70 or better

Class Grading:

Assignments	15%
Class Quizzes	20%
Midterm Exam	30%
Final Exam	35%

Grading Scale:

Letter Grade	Score
A	90% - 100%
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	< 60%

Note: During the semester, students are responsible for verification of correct score for their assignments, quizzes, and midterm exams. No corrections/modifications will take place after the last class.

Class Schedule:*

Week#	Topic
1	Concrete Materials

2	Concrete Mix Design
3	Properties of Hardened Concrete
4	Structural System
5	Design Process Philosophy
6	Analysis of Singly Reinforced Concrete Beam
7	Design of Singly Reinforced Beam
8	Mid-Term Exam**
9	T-Sec and Doubly Reinforced Beam
10	Shear
11	Short Columns
12	Serviceability
13	Torsion
14	Final Exam**

* Topics are subject to change. Number of topics are subject to change based on student's capabilities and progress.

** Exam dates are tentative and subject to change.

Academic Honesty:

Each student is responsible for maintaining high standards of academic honesty and ethical behavior. Students are expected to write their exams, quizzes and reports on their own, based on their individual level of progress with the material. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from The University (See Student Handbook for a detailed description of the UH Academic Honesty Policy).

Exam & Assignment Policy:

There will be a quiz every week. The quiz will include the topics covered in previous lectures. There will be homework (Assignment) each week for the topic covered in the same week. It is expected that student will do their assignments within one week. No late assignments will be accepted. Exams will include material covered in class discussions and homework assignments. Exam make-ups will be given only in the event of a verified emergency or doctor-verified sickness. The student is responsible for all reading assignments and class handouts whether or not covered in class or listed on the syllabus.

The last day of class is the deadline for students to verify their grades and the accuracy of their score. After this deadline, there will be no consideration for any changes.

University Counseling and Psychological Services:

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (UH main campus www.uh.edu/caps, or UH Sugar Land campus <http://www.uh.edu/dsaes/uhsugarland/>) by calling [713-743-5454](tel:713-743-5454) during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus.

UH main campus: http://www.uh.edu/caps/outreach/lets_talk.html

UH Sugar Land campus: <http://www.uh.edu/dsaes/uhsugarland/>

Virtual Classroom Ethics:

High level of professionalism during virtual teaching is expected from students. A student does not have the right to make changes to the instructor's way of managing the classroom. Disruptive behaviors, such as carelessness, joining late to class, and using unauthorized electronic devices during class is not permitted. Repetitive and seriously disruptive behavior may result in removal from class in accordance with policies and procedures set by the Dean of Students Office.

It is expected that student will join the class using Microsoft Teams. Students shall open their cameras and mute their mics during the class unless otherwise permitted by the instructor.

Grading Policy and Scale:

Grading and passing rate will be determined during the course progress. Grades will be distributed among quizzes, assignments, attendance, and exams.

Students with Disabilities:

University of Houston provides, upon request, appropriate academic adjustments for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Center for Students with Disabilities (713/743-5400) for more assistance.

For detailed information about Disabilities, Religious Holy Days, the Academic Calendar, and Academic Honesty, and other information, please visit the following website:

<http://www.uh.edu/provost/policies/student/resources/>.