

Course Syllabus - CNST 3301

Construction Equipment & Methods

Course Description:

This course introduces students to construction equipment and selected construction methods. This includes economy, selection, productivity of common construction equipment, and construction procedures for industrial, heavy civil, and commercial construction projects.

Course Prerequisites:

CNST 2351 – Construction Estimating I (C or better)

Textbook:

Construction Planning, Equipment, and Methods, 9th Edition, by Robert Peurifory, Clifford Schexnayder, Aviad Shapira, and Robert Schmitt, McGraw-Hill

Course Learning Outcomes:

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

1. Understand terminology and units of measurements related to equipment usage in industrial, heavy civil, and commercial projects
2. Understand standard designations, sizes, and graduations of equipment
3. Perform comparative cost analysis for owning and operating heavy equipment
4. Perform the proper selection, application, utilization, and productivity of heavy equipment
5. Understand general process/methods for constructing industrial, heavy civil, and commercial projects
6. Show awareness of construction Safety (OSHA regulations for excavation, inspection and protection)

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

Student Learning Outcomes:

8. Analyze methods, materials, and equipment used to construct projects

Course and Student Learning Outcome Mapping:

Student Learning Outcome	Course Learning Outcomes
8	1,2,3,4,5,6

Class Grading:

- Participation 10 Points
 - Assignments 30 Points
 - Project 50 Points
 - Mid-Term 100 Points
 - Final Exam 100 Points
 - **Points in Blackboard total to 290 points**
-

Grading Scale:

Letter Grade	Score
A	261-290 points
B	232-260 points
C	203-231 points
D	175-202 points
F	Below 175

Class Schedule:

Week	Topic
1	Course Introduction
2	Construction Process Safety Chapter 19 - Planning for Building Construction
3	Chapter 2 - Equipment Economics Chapter 3 - Planning for Earthwork Construction
4	Chapter 4 - Soil and Rock Chapter 5 - Compaction and Stabilization Equipment
5	Chapter 6 - Mobile Equipment Power Requirements
6	Chapter 7 - Dozers and Graders Chapter 9 - Excavators
7	Chapter 8 - Scrappers Chapter 11 - Drilling Rock and Earth
8	Mid-Term Exam
9	Chapter 10 - Trucks and Hauling Equipment
10	Shoring Operations Chapter 17 - Piles and Pile-Driving Equipment
11	Chapter 12 - Blasting Rock Chapter 13 - Aggregate Production
12	Chapter 15 - Concrete and Concrete Equipment Chapter 20 - Forming Systems
13	Chapter 16 - Cranes
14	Thanksgiving Holiday
15	Final Exam Project Due

Academic Honesty:

The instructor reserves the right to adjust letter grades, upward only, based on individual attendance and class participation if numerical grade warrants such consideration. 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. Since dishonesty harms the individual, all students, and the integrity of The University, policies on scholastic dishonesty will be strictly enforced.

Exam Policy:

Exams will include material covered in class discussions, reading assignments, handouts, and homework assignments, whether or not covered in class or listed on the syllabus. Exam make-up will be given only in the event of a verified emergency or doctor-verified sickness.

Classroom Behavior:

High level of professionalism in the classroom is expected. The instructor has the right to set the rules in his/her classroom. A student does not have the right to make changes to the instructor's way of managing the classroom. Disruptive behaviors, such as excessive talking, arriving 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.

Course/Instructor Evaluation:

A Start -Stop-Continue survey and a course/instructor evaluation will be conducted at the middle and the end of this semester. Any suggestions you have on improving the course, however, are welcome throughout the semester.

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 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/>

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>