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

Course Prerequisites
C or better in CNST 2351.

Textbook

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

1. Understand terminology and units of measurements related to equipment usage in industrial and heavy civil 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, applications, utilization and productivity of heavy equipment;
5. Understand general processes/methods for constructing industrial and heavy civil Projects; and

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

Schedule of Topics

<table>
<thead>
<tr>
<th>Week #</th>
<th>Lecture Topics</th>
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| 1-4    | **Course Introduction**  
|        | **Equipment Types**  
|        | **Trucks**  
|        | **Economy and Accounting of Equipments:**  
|        | Cost of Ownership and Operating Construction Equipment  
|        | Selection of Alternative  
|        | Cost Accounting for Equipments  
| 5-6    | **Fundamentals of Earth Moving Operations:**  
|        | Forces and Resistances  
|        | Speed vs. Horsepower  
|        | Fleet Balancing  
| 7-10   | **Equipment Selection:**  
|        | Tractors and bulldozers  
|        | Front-end Loaders  
|        | Scrapers  
|        | Shovels, Backhoes, Draglines, Clamshells  
|        | Cranes and Rigging  
| 11-12  | **Soil Stabilization Methods:**  
|        | Compaction, Additives, Dewatering, Freezing |
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 and homework assignments. Exam make-up 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 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/

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.
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/stu/stu_syllabsuppl.html

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/.