

**CE 3336 – 12476 Civil Engineering Materials**  
**MW 12:30-1:20 Virtual**

**FA 2020**

Instructor: Vivek Tandon ([vivek@utep.edu](mailto:vivek@utep.edu)) Office: Eng. Annex-221  
Office Hours: MW 10:30 to 11:30 AM  
Required Text: *Materials for Civil and Construction Engineers*, Mamlouk and Zaniewski, Addison Wesley Longman, Inc., 4<sup>th</sup> edition.  
References: *Lecture Notes and Laboratory Notes*

**OBJECTIVES OF COURSE**

The objective of CE 3336 is to develop an understanding of appropriate mechanical and physical properties of civil engineering materials including Asphalt, Asphalt Concrete, Portland cement, Portland cement concrete, aggregates, wood, masonry, and nature of material.

**SCHEDULE**

A tentative lecture schedule is attached. Reading assignments from your text are indicated on the lecture schedule. You are expected to read the appropriate assignment before the lecture.

Prepared notes will also be occasionally handed out in class to supplement, or in some cases to substitute for, reading material from the book. Be sure to save the notes because you will be evaluated over the topics covered in the notes.

**GRADING**

Your grade for this course will be determined based on 1,600 points as per the following weightage:

1. Assigned Homework Grade (240)
2. Three exams given in class (150 points each=450 points)
3. One Final Exam (300 points)
4. Quiz (300 points)
5. Laboratory (310 points)

In accordance with University regulations, students who miss examinations will receive grades of zero. Exceptions to this rule will be made only on a carefully considered individual basis and only if the student contacts the instructor before the exam. If you know in advance that you are going to miss an exam, it is your responsibility to inform the instructor before the exam.

## HOMEWORK

Homework problems will be assigned on every topic. Home Works will be assigned and collected but will not be evaluated. TA will count number of problems worked on and if all the assigned problems have been submitted, a 100% grade will be assigned to that Home Work. Past experience clearly shows that a student's grade is strongly dependent upon the effort that is put into working and understanding the homework. Homework solutions will be available on due dates. We encourage that you team up with your classmates for this activity.

## QUIZES

Students will be quizzed on regular basis. The quiz will be similar to either the homework problems from the previous week or the examples solved in the class or the examples in the textbook or reading assignments. The duration of the quiz will be less than 15 minutes. To accommodate possible emergencies, the two lowest grades obtained will not be considered.

## EXAMINATIONS

Examinations are normally held during the class period for about 50 minutes. The tentative dates and topics covered are included in the attached schedule. Those students who missed the exams due to reasons beyond their control and desire to take a make-up test, a makeup test will also be conducted on the day of final at the end of the final exam. However, to take this test the students should provide their homework and quizzes along with a request for a makeup exam. To be eligible for a makeup exam, you should have an average of better than 70% in the homework and quizzes related to the topics covered on a given exam.

## FINAL EXAMINATION

Final examination will cover the whole course and will last two hours and 45 minutes. **To pass the course it is essential that you receive more than 50% grade in the final exam.** The final exam will be a multiple choice and partial credit will not be assigned for calculating final exam grade.

## CALCULATOR POLICY

Only models of calculators approved by NCEES are permitted during exams and quizzes. The following are the only calculators that will be permitted during quizzes and exams:

**Casio:** All fx-115 models. Any Casio calculator must contain fx-115 in its model name.

**Hewlett Packard:** The HP 33s and HP 35s models, but no others.

**Texas Instruments:** All TI-30X and TI-36X models. Any Texas Instruments calculator must contain either TI-30X or TI-36X in its model name.

## STUDY GROUPS

Students should form study groups of about four-five persons. These groups will collaborate in the laboratory sessions. Group members are also encouraged to get together to solve the homework problems. Keep in mind that working together does not mean copying from each other.

### **ATTENDANCE and CLASS PARTICIPATION**

Students are expected to attend all class periods and must attend all laboratory periods. Those who fail to attend class regularly are inviting scholastic difficulty and, with the approval of the Dean of the College of Engineering, may be dropped from the course with a grade of F for repeated (5 or more) unexcused absences. All students are expected to participate in the class on regular basis this should be documented in their lecture notebooks. We will evaluate them on the regular basis to monitor the progress.

**Homework assignments and other material will only be distributed in the class or via email.**

### **POLICY ON CHEATING**

Students are expected to be above reproach in all scholastic activities. Students who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the university. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student, or the attempt to commit such acts (Regents Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22). Scholastic dishonesty harms the individual, all students, and the integrity of the university. Policies on scholastic dishonesty will be strictly enforced.

### **COURSE/INSTRUCTOR EVALUATION**

A course/instructor evaluation will be conducted in class near the end of the semester.

### **LABORATORY**

Each student must register for a laboratory section. You will not be allowed to pass this course if you do not attend all laboratories. Please consult me if you feel you have to miss a laboratory so that some type of makeup can be scheduled in advance. We are very much interested in seeing that the laboratory provides you with the training that you need without being an undue burden on your time. Please keep us informed of any problems that you are having with your laboratory.

### **FINAL COMMENT**

Good luck to all of you in this course. Please do not hesitate to ask questions in class, or if necessary, to see your instructor outside of class. Any specific comments that students have on how the course might be improved are particularly welcomed.

### **SPECIAL NOTE**

Use only last four Digits of your UTEP ID on homework, quizzes, laboratory reports, and exams papers.

**Tentative Lecture and Laboratory Schedule**

Week	Monday	Wednesday	Exam Content	Laboratory
08/24	Introduction	Topic 1		No Laboratory
08/31	Topic 1	Topic 1		How to Prepare Laboratory Report
09/07	<i>Labor Day</i>	Topic 2		No Laboratory
09/14	Topic 2	<b>Exam I</b>	<b>Topic 1</b>	Introduction to Measuring Devices
09/21	Topic 2	Topic 3		Specific Gravity and Absorption
09/28	Topic 3	Topic 4		Mortar Specimen Preparation
10/05	Topic 4	Topic 4		Mortar Test/PCA Web Videos
10/12	Topic 4	Topic 5		Concrete Mix Design
10/19	Topic 5	Topic 5		Preparation of Concrete Specimens
10/26	Topic 5	<b>Exam II</b>	<b>Topics 2-4</b>	Binder Test Demonstration
11/02	Topic 6	Topic 6		Asphalt Concrete Mix Design Problem
11/09	Topic 6&7	Topic 7		Asphalt Concrete Mix Testing
11/16	Topic 8	<b>Exam III</b>	<b>Topics 5-7</b>	Properties of Wood and Testing of Concrete Specimen
11/23	Topic 8	No Class		Masonry Demo Testing (Report Due 12/03)
11/30	Discussion	Discussion		No Laboratory
<b>Final Exam Dec., 7<sup>th</sup>, 7:00 a.m. – 9:45 a.m.</b>				

Topic No.	Subject	Assigned Reading
1	Materials Engineering Concept	Chapter 1
2	Aggregates	Chapter 5
3	Portland Cement	Chapter 6
4	Portland Cement Concrete	Chapter 7
5	Asphalt and Asphalt Mixtures	Chapter 9
6	Wood	Chapter 10
7	Masonry	Chapter 8
8	Nature of Materials	Chapter 2