

CM191T Advanced Construction Structures Lab

Introduction and Course & Instructor

SYLLABUS FOR ADVANCED CONSTRUCTION STRUCTURES LAB (CM191T)	
Spring 2017	California State University, Fresno
Course Number: 36722	Instructor: Dr. Yupeng (Vivien) Luo
Units: 1	Office Number: EE131
Time: Friday 9:00am – 11:50am	E-Mail: viluo@csufresno.edu <i>Please allow 3 business days for response to e-mails.</i>
Location: EE104	Telephone: 559-278-1792
Website: To access the course login to Blackboard (http://blackboard.csufresno.edu) using your Fresno State username and password. For help with Blackboard contact Technology Innovations for Learning and Teaching at 278-7373 or send an email to tiltsupport@csufresno.edu	Office Hours: Tuesday 2:00 pm – 4:30 pm Thursday 1:00 pm – 3:30 pm Or by appointment
CM Department Information Office: EE 218 Telephone: 559-278-6056 Fax: 559-278-4475	

Course Description:

This course introduces methods of testing material properties to verify theory and determine limitations of principles of construction materials.

Prerequisites

CM107 (or concurrently)

Required Textbooks and Recommended Materials

- No textbook required.
- Recommended References:
Davis, et al., The Testing of Engineering Materials, McGraw Hill.

R. C. Hibbeler, Mechanics of Materials Plus MasteringEngineering with Pearson eText -- Access Card, 9th Edition, Pearson.

Course Goals and Primary Learning Outcomes

Course Goals:

Specific goals of this course are to:

- Introduce students to the techniques and effort involved in the mechanical testing of engineering materials.
- Teach students to verify various principles and theory of mechanics of materials through testing and learn their limitations.
- Cultivate technical writing skills through lab reports.

ACCE Student Learning Outcomes (SLOs):

This course addresses the following ACCE SLOs, and will directly assess SLOs #1 & #9.

ACCE SLOs#	Level (I/T/U)	Direct Assessment (Y/N)	Outcome Description
1	T	Y	Create written communications appropriate to the construction discipline.
9	T	Y	Apply construction management skills as a member of a multi-disciplinary team.
15	I	N	Understand construction quality assurance and control.
19	T	N	Understand the basic principles of structural behavior.

Primary Course Learning Outcomes (CLOs):

This course has the following primary CLOs, and will directly assess CLOs #4 & #5.

CLOs#	Level (I/T/U)	Direct Assessment (Y/N)	Outcome Description
1	T	N	Learn and understand the techniques and effort involved in the mechanical testing of engineering materials.
2	T	N	Verify various principles and theory of mechanics of materials and learn their limitations.

3	T	N	Gain experience in the acquisition, reduction and analysis of experimental engineering data.
4	T	Y	Develop written communication skills by writing technical reports.
5	T	Y	Perform experiments and associated tasks in a team environment.

Course Assessment Matrix

This course aligns CLOs with ACCE SLOs assessment to meet SOAP and accreditation requirements. The table below specifies the mapping between CLOs and ACCE SLOs, the assessment measures, minimum standards and assessment targets.

CLOs #	ACCE SLOs #	Assessment Measures (2 min)		Minimum Standards	Assessment Targets
		Direct Measures (DM, 1 min.)	Indirect Measures (IM)		
1	15	DM1: DM2:	None	DM1: Pass DM2: 70% or more	DM1: Pass DM2: 80% or more
2	19	DM1: Group reports DM2: Quizzes	None	DM1: 70% or more DM2: 70% or more	DM1: 80% or more DM2: 80% or more
3	19	DM1: Group reports DM2: Quizzes	None	DM1: 70% or more DM2: 70% or more	DM1: 80% or more DM2: 80% or more
4	1	DM1: Group reports DM2: Individual memos	None	DM1: 70% or more DM2: 70% or more	DM1: 80% or more DM2: 80% or more
5	9	DM1: Group reports	IM1: Peer Evaluation	DM1: 70% or more	DM1: 80% or more

Course Organization

Most of the class sessions will be conducted in a physical lab combining lectures and experiments. Students are expected to have completed the pre-lab assignments (i.e. videos and quizzes) before coming to class. Students are encouraged to bring in subjects related to the class for further discussion.

Four experiments will be taught online. Students are expected to go through the online learning modules and complete the pre- and post lab assignments within a given time period. Students are encouraged to use the discussion board on Blackboard to ask questions.

Major Assignments

Pre-Lab Assignments:

Pre-lab assignments are tasks or homework that prepare students for the experiments to be introduced. Students should complete the assignments before arriving in class for the lab period or moving forward in the online modules. These are due on the posted due dates. **Late assignments will NOT be accepted.**

Reports:

Reports are due on the posted due dates. Late lab reports will be accepted up to 1 week late past the due date with a penalty of 50% deduction. After that no reports will be accepted. Exceptions will be made for extenuating circumstances.

Students will submit two types of reports after conducting an experiment. The reports will be either individual or group reports. The individual reports will follow a memorandum format with a brief description of test purpose and procedure and a summary of results in the body of the memorandum and attachments (see “Memo format” on Blackboard). The group report will include a more detailed description of the test objectives and procedure, analysis of results, conclusions, and references, as required in the document “Report Format” on Blackboard.

All reports are to be submitted typed following the guidelines in ASCE Conference Proceedings Author’s Guide (see excerpts on Blackboard).

Grading

Each student will be required to complete all the course assignments and quizzes. If you are absent from class, it is your responsibility to check on announcements made while you were away. Here is a summary of the grading for the course:

Quizzes (2)	35%
Laboratory Reports	50%
Pre-lab Assignments	15%
TOTAL	100%
(A: 90% or Above; B: 80% to 89.9%; C: 70% - 79.9%; D: 60% - 69.9%; F: Below 60%)	

Subject to Change Statement

The syllabus and schedule for this course are subject to change in the event of extenuating circumstances. If you are absent from class, it is your responsibility to check on announcements made while you were absent. The announcement will be done orally in class or published electronically in the blackboard.

Course Policies

Attendance for Physical Labs: Although attendance is not included in the grading, it is mandatory due to the nature of this course. The instructor will take roll at the beginning and/or the end of each class. **One letter grade will be deducted with every third unexcused absence. Three late arrivals or early departures will constitute one unexcused absence. Any student who misses classes six or more times through any combination of excused or unexcused absences will not receive credit for this course. These students should withdraw from the course.** Any missed quizzes or assignments remain the responsibility of the student (See “Student Affairs” section of the California State University, Fresno General Catalog). Students should contact the instructor regarding any absences, especially when there are extended absences due to illness, death in the immediate family, or other situations. In an emergency, students may contact the Dean of Students.

Communication/Assignment Policy: Please refer to the University Policy in the semester catalogue regarding Email communication. This course will be utilizing the Blackboard (version 9.1) for mostly announcements, assignments, and lecture notes. **Students are expected to check Blackboard every other day at the very minimum.** The website is <http://blackboard.csufresno.edu>. There is helpful information for students who are new to the blackboard system located on the blackboard homepage. If you are absent from class, it is your responsibility to check on announcements made while you were away. If a student misses a class and still has questions about lecture material, it is the student’s responsibility to contact the professor.

Etiquette: All class participants are expected to act professionally at all times. At a minimum, this shall include:

For physical labs:

- Show up to class on time. Leave when the instructor has dismissed the class.
- Refrain from using cell phones or doing any activities irrelevant/disruptive during class periods.

For both physical and virtual labs:

- Actively participate in class activities.
- Treat all members of the class with respect.
- Complete assignments on time.
- Be a good team member.

University Policies

Students with Disabilities:

Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).

Honor Code:

“Members of the CSU Fresno academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities.” You should:

- a) understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration)
- b) neither give nor receive unauthorized aid on examinations or other course work that is used by the instructor as the basis of grading.
- c) take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action.

Instructors may require students to sign a statement at the end of all exams and assignments that “I have done my own work and have neither given nor received unauthorized assistance on this work.” If you are going to use this statement, include it here.

Cheating and Plagiarism:

"Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work." Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

Computers:

"At California State University, Fresno, computers and communications links to remote resources are recognized as being integral to the education and research experience. Every student is required to have his/her own computer or have other personal access to a workstation (including a modem and a printer) with all the recommended software. The minimum and recommended standards for the workstations and software, which may vary by academic major, are updated periodically and are available from [Information Technology Services](http://www.csufresno.edu/ITS/) (<http://www.csufresno.edu/ITS/>) or the University Bookstore. In the curriculum and class assignments, students are presumed to have 24-hour access to a computer workstation and the necessary communication links to the University's information resources."

Disruptive Classroom Behavior:

"The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. ... Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop and understanding of the community in which they live . . . Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class."

Copyright Policy:

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Tentative Course Schedule

	Date	Topic
1	Fri., Jan 20	Introduction
2	Fri., Jan 27	Basic Statistics
3	Fri., Feb 3	Strain Gauge Installation and Testing
	Fri., Feb 10	Faculty at Conference - No Class
4	Fri., Feb 17	Concrete Design
5	Fri., Feb 24	Making Concrete Specimen, Slump test
6	Fri., Mar 3	Compression Test (7-day)
7	Fri., Mar 10	Compression Test (14-day)
8	Fri., Mar 17	Compression Test (21-day)
9	Fri., Mar 24	Compression Test (28-day) Quiz 1
10	Fri., Mar 31	Tensile Testing (Online)
11	Fri., Apr 7	Torsion Testing (Online)
	Fri., Apr 14	Spring Break
12	Fri., Apr 21	Shear Test of Wood (Online)
13	Fri., Apr 28	Flexure Test of Wood (Online)
14	Fri., May 5	Quiz 2