

**SHARIF UNIVERSITY OF TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING**

SPRING 2015

CE 20101 SOLID MECHANICS LABORATORY

INSTRUCTOR: Vahab Toufigh, Ph.D., P.E.
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OFFICE HOURS: -----

PREREQUISTE: CE20111

Text: CE 20101 Laboratory Manual, Department of Civil Engineering, Sharif University of Technology; Engineering Mechanics of Solids by Popov.

Course Description: This course is meant to supplement the students' understanding and appreciation of material behavior and structural theory through personal contact with and observation of tests on common engineering materials and systems. It is also intended to teach a student how to prepare and submit a brief report on an experiment.

Objective of the course:

- a) To familiarize the students with the principal structural materials and to give them a knowledge of their properties and their behavior under various conditions of stress.
- b) To acquaint the students with the standard technique of testing materials and train them in making accurate observations of phenomena and correct interpretations of results.
- c) To afford training in working up test data and preparing reports embodying the results of the tests.
- d) To demonstrate experimentally the principles of strength of materials, which course should precede or accompany this course.

Laboratory Reports: Each laboratory report is expected to be emailed to (ce.solidlab@gmail.com) at least one hour before the class, and hard copies will be due five minutes before the beginning of the class. Late reports will be accepted up to 1:00 PM on the day immediately after the due date, but will be penalized 25%. No reports will be accepted after that time.

E-mail: Email is the most efficient method to contact me. Also I would send any messages I need to convey by email. Any message sent by email will be assumed to be received by students

Grading

Lab Reports	40%
Project	25%
Participation	5%
Final	30%

Absence: If you need to be absent from the class for justifiable reasons (sickness, family obligations, etc) you must inform the instructor in advance. The instructor would report to the Registrar's Office if the total absence exceeds 2 classes, which may result in administrative drop from the class.

Policy on Cheating: Cheating will not be tolerated on exams or lab reports. Cheating on exams is any event that occurs during the exam and/or after return of the exam. Any report and project handed in by students must represent their own original work. All plagiarism in reports will be tracked. Anyone caught cheating or plagiarizing will be subject to failing this course.

Course Calendar

Date	A	B	C	D
12/3	Maxwell's Law	Cantilever	Shear Center	Buckling
12/10	Rectangular Frame	Maxwell's Law	Cantilever	Shear Center
12/17	Torsion	Rectangular Frame	Maxwell's Law	Cantilever
12/24	Hook's Law	Torsion	Rectangular Frame	Maxwell's Law
1/16	Suspension Bridge	Hook's Law	Torsion	Rectangular Frame
1/23	Buckling	Suspension Bridge	Hook's Law	Torsion
1/30	Shear Center	Buckling	Suspension Bridge	Hook's Law
2/6	Cantilever	Shear Center	Buckling	Suspension Bridge
2/13	Tensile Test			
2/20	Spaghetti Bridge			
2/27	Presentation			
3/3	Final Exam			