

GE 312 Instrumentation and Testing Laboratory SPRING 2017

Course Outline

Prof. Henrique Reis
Lecture: Tu-Th 8:00 a.m.
Room 101, Transportation Bldg.

Office: 217 Transpt. Bldg.
e-mail: h-reis@uiuc.edu
Telephone: 217-233-1228

Required Text and Supplies

GE 312 Instrumentation and Test Laboratory Notes. You can purchase these notes at the Illini Union Bookstore (IUB). In the Lab Notes you will find the following:

- Instructions on lab procedures, analysis instructions, and questions for discussion. You should review these manual carefully prior to each lab. You will be told ahead of time which “points for discussion” are to be completed in your lab reports.
- A list of grading criteria for the labs and guidelines for technical writing.
- Instructional material explaining the theory behind the labs.

Safety glasses with side shields. Safety glasses are available at ECE Stores

Two additional texts on reserve in the library:

- Norman E. Dowling, “*Mechanical Behavior of Materials,*” 2nd Edition, Prentice Hall Inc., 1999.
- William D. Callister, Jr., “*Materials Science and Engineering – An Introduction,*” 6th Edition, John Wiley and Sons, Inc., 2003.

Laboratory Exercises

Jan. 16-Jan. 20	No Lab.
Jan. 23-Jan. 27	Lab 1: The Tension Test
Jan. 30-Feb. 03	Lab 2: Compression and Hardness Tests
Feb. 06-Feb. 10	Lab 3: Bending and Torsion Tests
Feb. 13-Feb. 17	Lab 4: Notch Sensitivity
Feb. 20-Feb. 24	Lab 5: Impact Testing & Fracture Toughness

Grading

10% per lab report; 40% Final Exam; 10% attendance of lectures

Laboratory Attendance Policy

Everyone is expected to attend his or her assigned laboratory section. If you must miss a laboratory section *for a good reason*, contact Professor Reis by e-mail as soon as possible, but no later than the day of the laboratory, to obtain an official excuse. Due to heavy laboratory usage, the experiments we perform are in place for only a week at a time. If you miss a laboratory without an official excuse from the instructor, a **zero** will be given. If you have an official excuse granted by Professor Reis, you may obtain the data for the missed laboratory, write the report, and submit it for grading according to the schedule for your laboratory section (see below).

Unacceptable reasons for missing a laboratory include, but are not limited to, the following: job interviews; “I forgot to attend lab”; “I overslept”. Official excuses are normally given for, but are not limited to, the following: emergencies such as death or severe illness of a family member; illness, supported with a note from the McKinley Health Center or other medical provider; attendance at an off-campus meeting to present research results or as an official representative of a UIUC Registered Student Organization, provided the request is made during the first week of class; family events, such as a wedding, provided the request is made during the first week of class.

Continued on back of page

Late Policy

Reports are due exactly one week after the laboratory at 4:30 PM on the day of your assigned laboratory section. Late reports turned in by 4:30 PM the next business day after they are due will lose 10%, but *any reports turned in later than one day will not receive credit*. Laboratory reports shall be time-stamped and put in the “GE 312 Grader” mailbox in room 117 T.B. Get the report time-stamped by a secretary before placing it in the mailbox. *Any reports turned into the mailbox without a time-stamp will not be accepted.*

MANDATORY: Make a PDF of your report and send it also via e-mail to the Head Teaching Assistant, see below. For purpose of “late policy,” the time reported in the e-mail is the official time of the reported submission.

Teaching Assistant (TA) Information

The following TAs will be teaching and grading the laboratory portion of this course. Any questions regarding lab policies should be directed to the Head TA, Mr. John Conway. Any questions on the laboratory experiments should be discussed first with fellow students, but ultimately your TA is your resource for information.

Head Teaching Assistant:	John Conway	jfconwa2@illinois.edu
Lab Assistants:	Madhav Arora	marora6@illinois.edu
	Narayanan Ramakrishnan	rnarynn3@illinois.edu
	Ziying Xiang	zxiang3@illinois.edu

Office Hours

Times and locations TBA

Laboratory Times, Locations, and Ground Rules

There are three lab sections this semester: AB1, meeting 10:00-11:50 a.m. on Tuesdays; AB2, meeting 10:00-11:50 a.m. on Thursdays; AB3, meeting 4:00-5:50 p.m. on Thursdays, and AB4, meeting 6:00-7:50 p.m. on Thursdays. All meet in room 200 of Talbot Lab. Please be aware of the following lab ground rules:

- You must read your laboratory write up (online, see below) for that week’s experiments **prior** to coming to your laboratory section, otherwise you will not have enough time to complete the assignment.
- It is imperative that you be on time to your laboratory section. **Anyone arriving more than 10 minutes late will not be permitted entry.**
- Safety glasses with side shields are the responsibility of the student to purchase and bring to the laboratory each week; **you must remember your safety glasses or you will not be permitted entry;** no excuses will be accepted.
- If you are not permitted entry to your laboratory section for **either** reason listed above, it shall be considered a missed laboratory and **you will receive a zero for that laboratory assignment.**
- **For reasons of safety, you must dress appropriately and behave professionally.** No baggy attire or sandals will be permitted; there is moving machinery and we want to prevent injury by entanglement with loose clothing. Sandals do not protect the tops of your feet as do enclosed shoes. Also, loud joking or horseplay will not be tolerated. Such behavior can be distracting to others in the lab and may cause them to lose concentration. The laboratory manager, at his discretion, may remove a person from the lab for either of these reasons. If that occurs, ***the person removed will receive a zero for that laboratory assignment.***
- **No Cell Phones or Cameras allowed in the classroom or in the Laboratory.** Students are not allowed to use cell phones or cameras within the classroom or within the Laboratory.
- **Your Data:** You can access your experimental data one hour later after finishing your lab. The web site is: <http://mtl.illinois.edu/data>