Lab0: Lab Syllabus

Instructor:
John Ott
Office: 377 Fitzpatrick Hall
Phone: 631-8131
Email: jott@watt.ame.nd.edu
Lab website: http://www.nd.edu/~jott/Solids/

Teaching Assistants:
Monday
(9:25 AM – 10:15 AM) Tyler Kreipke (tkreipke@nd.edu) and Minh Nguyen (mnguye10@nd.edu)
(10:30 AM – 11:20 AM) Tyler Kreipke (tkreipke@nd.edu) and Minh Nguyen (mnguye10@nd.edu)
Tuesday
(11:00 AM – 11:50 AM) Salvatore Buoncore (sbunoco@nd.edu) and David Ju (dju@nd.edu)
(12:30 PM – 1:20 PM) Salvatore Buoncore (sbunoco@nd.edu) and David Ju (dju@nd.edu)
(2:00 PM – 2:50 PM) Salvatore Buoncore (sbunoco@nd.edu) and David Ju (dju@nd.edu)
Wednesday
(9:25 AM – 10:15 AM) Tyler Kreipke (tkreipke@nd.edu) and Minh Nguyen (mnguye10@nd.edu)
(10:30 AM – 11:20 AM) Tyler Kreipke (tkreipke@nd.edu) and Barry Pawlowski (bpawlows@nd.edu)
Friday
(8:20 AM – 9:10 AM) David Ju (dju@nd.edu) and Barry Pawlowski (bpawlows@nd.edu)
(10:30 AM – 11:20 AM) Salvatore Buoncore (sbunoco@nd.edu) & Barry Pawlowski (bpawlows@nd.edu)

Emails:
E-mailed questions to Lab TA’s will be answered during the week as quickly as possible, but this cannot be guaranteed during the weekends. Please use e-mail to set up appointments. Emails will not be answered 24 hours before any due dates.

Prerequisites: AME 20221 Statics


Objective:
The objective of the laboratory is to provide hands on experience in the mechanical behavior of deformable bodies to further illustrate the concepts that are presented in the lectures. In addition, you will gain experience in the use of a variety of experimental devices common in mechanical testing.

Conduct of Course:
Each section will be divided into smaller subgroups. You will alternate performing experiments in the laboratory (B14 Fitzpatrick) on a three-week rotation.
Attendance:
Attendance is MANDATORY. Failure to attend lab as scheduled will result in no credit for the lab in question. If you are ill or otherwise unable to attend your lab as scheduled, contact the TA in advance if possible, or as soon as possible otherwise. Note: Look in the Policies section for details regarding Makeup Labs. You must attend and complete all lab experiments to pass the course. Absolutely no sharing of data or written material between groups is allowed unless approved by their TA. Seniors are permitted two job interviews. Refer to the Undergraduate Academic Code 3.1.3 for further explanation.

Lab reports:
Each student must submit their own lab report. In some instances you will work in small groups to obtain the data. In this case, you must arrange amongst yourselves to obtain the data for any tests performed as a group.

Format: The format of your lab reports should follow the lab report guidelines. The description is also available on concourse. ATTACH A SCORE SHEET TO THE END OF THE REPORT. FAILURE TO ATTACH A SCORESHEET WILL RESULT IN POINTS BEING DEDUCTED FROM YOUR REPORT SCORE.

Grading:
The instructor must receive an email concerning any grading issues within 24 hours of grades being published.

For each lab except for Lab0, there will be:

- Lab Reports:
  o Each lab report is worth 100 points.
  o Lab reports will count 100% towards the lab grade.
  o Each lab report will have a maximum of seven pages, double spaced, 1 inch margins, 12 pt, justified alignment, and page numbers are required. All references and footnotes should be single spaced.
  o Paper copies of your lab reports are due one week from the date the experiment was performed. They must be turned in by 2 pm in the AME office at 365 Fitzpatrick Hall in the solids lab mailbox. (Ask one of the administrative assistants if you can't find it.)
  o Graded lab reports will be returned in the mailboxes by the elevator. They will be left out for two weeks. Students may be emailed when they are available.
  o Names are optional on lab reports. Notre Dame student ID numbers are required, as well as lab date, time experiment performed, and due date.
Policies:

Laboratory Descriptions and Questions: Procedures and descriptions for each lab are available on Concourse. For each lab, read the lab handout and answer questions at end of handout. Give your answers to your TA at the beginning of the lab. YOU WILL NOT BEGIN WORKING IN THE LAB UNTIL YOU HAVE TURNED IN YOUR ANSWERS.

Late Reports: Late lab reports will receive a deduction of 20% off each working day or portion thereof that they are late. If you have a university excused absence for submitting a late lab report, have Professor Ott initial it and include it with your lab report to the grading TA. Also include a title page with course name, course number, lab section, lab day, lab time, lab report due date, lab report extension date, and Notre Dame ID. All students should participate actively in the experiment. All due dates are posted on the lab course web site. Late lab reports must be turned in to the Head Grading TA.

Participation: All students should participate actively in the laboratory procedure. There will be a 10% penalty on your report score for late arrival, or Pre-lab Quiz not done.

Makeup labs: Students unable to attend their scheduled lab for non-emergency or illness reasons must contact Professor Ott (for the lab missed) five days in advance. A university excused absence is required to make up the lab. Missed labs will require a title page on their report, and an initialed (by Professor Ott) excused absence form. It will include your Notre Dame ID number (name is optional but appreciated), day/time of lab, original due date, and extended due date. These two pages will not count as part of the seven page limit.

SAFETY:

- Read the laboratory handouts before you arrive to perform the experiments.
- All personnel and students in the B14 AME Lab must have on Personal Protective Equipment (PPE) that is appropriate for the task being worked upon. The PPE required in the B14 Lab is a pair of Safety Glasses.
- The B14 Lab provides generic Safety Glasses, which are located on the sink counter near the B14 Lab entrance door. You may also purchase your own personal pair of Safety Glasses to wear during each lab.
- If you get any chemicals in your eyes, immediately contact professor Ott or the TA so they can check the MSDS (SDS) Chemical sheet for appropriate action. If flushing of the eyes with water is warranted, the Safety Eyewash Station is located near the B14 Lab entrance door.
- Do not operate the ATS mechanical testing systems without a teaching assistant present. These machines can generate forces in excess of 10,000 lbs, which can easily crush an undergraduate’s fragile bones.
- Be mindful of your lab partner’s safety.
- Keep the lab area clean.
- Follow all instructions given to you by your teaching assistants.

FAILURE TO ABIDE BY THE SAFETY RULES WILL RESULT IN A ZERO GRADE ON YOUR LAB.
Honor code:
You are all expected to follow the Academic Honor Code of the University (http://honorcode.nd.edu), which states, “As a member of the Notre Dame community, I will not participate in or tolerate academic dishonesty.” Copying or cheating on quizzes or exams is dishonest and will not be tolerated.

Semester Schedule

<table>
<thead>
<tr>
<th>Lab No.</th>
<th>Dates</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/26 – 2/11</td>
<td>Tension test</td>
<td>Sections 2.4-2.6</td>
</tr>
<tr>
<td>2</td>
<td>2/13 – 3/4</td>
<td>Build-a-beam</td>
<td>Chapters 5 and 6</td>
</tr>
<tr>
<td>3</td>
<td>3/6 – 4/1</td>
<td>Beam bending</td>
<td>Section 2.9-2.13, Chapters 7 and 8</td>
</tr>
<tr>
<td>4</td>
<td>4/7 – 4/27</td>
<td>Column buckling</td>
<td>Chapter 10</td>
</tr>
</tbody>
</table>

Please see calendar for more details.

Additions, amendments, or corrections to this syllabus may be made throughout the semester via in class announcements, handouts, or e-mail. Any instructions from your TA override this syllabus, the laboratory procedures handouts, or information on the web site.