

EE 101 Laboratory Syllabus

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TA's: TBA

Location: A brief introduction for most labs will be held in Workman 116 on the day of the lab. Please be on time. If a pre-lab was required, turn it in at this time. Then we will either stay in the digital lab (Workman 116) or move to the analog lab (Workman 189).

Grading/Homework/Preparation: Your grade for the lab portion of this course will be integrated with the lecture portion as described in the lecture syllabus. You will receive the same combined grade for both.

Prelab assignments are homework for that lab and are due immediately at the beginning of lab time. Prelab is worth 25% of the grade for the lab. Late or missing prelabs will receive a zero. The prelab typically contains preparation work essential to that day's lab so you must have it finished before you arrive (remember to start early so you have time to find help if needed). If it is not finished you will not be able to do the lab work. Make a copy of your prelab so that you have one to hand in and another to put in your lab notebook.

As part of preparations for each lab, you will be expected to have a copy of the lab instructions printed and ready to use before lab begins. They can be found at this web address: www.ee.nmt.edu/~tubesing/ee101. You may arrive at the lab early and print it there if you wish. You can use printing options cleverly to lay out the page in a useful way. Try experimenting with portrait and landscape modes, printing multiple pages per sheet, adjusting margins and other settings to make the most of your printout.

The essential component of grading for this lab is your lab notebook. All your work will be documented in it, and this is where the work will be graded. Lab books do not leave the lab and are due at the end of lab session. They will be graded and returned to the designated location. You may pick up your graded lab notebook shortly before the next lab. Thorough information about the lab book is detailed in the next section.

Questions or concerns about lab grades should be brought to the attention of the Lab TA's. If there are any unresolved differences after first doing this, the matter may be brought to the lab instructor.

Lab Notebooks: All laboratory exercises are to be completed in a Comp Book (graph paper style is preferred), which will be required starting with the first lab session. No lab work will be graded unless it is in a proper lab notebook.

- All work is to be completed in black or blue ink. Mistakes should be crossed out with one line only, not scribbled out. This is standard procedure in industry and academia. When looking at your lab book at a later time, you may want to know what mistakes you made as well as what you did correctly. Also, you may find that what you scribbled out is actually not a mistake and it will be easier to refer back to it if it is not obliterated.
- All pages of your book should be numbered. If your notebook does not have numbers pre-printed you will have to add them yourself. As is standard in academia and industry, you should never remove pages from your book.
- Only one side of the pages in the lab book should be used for actually writing up the lab. The other side can be used as scratch paper for calculations. When the book is open, your lab write-up belongs on the right side, and your scratch work belongs on the left.
- The first page of your lab notebook is to be reserved for a table of contents. You will add to this table as you complete each lab exercise. Make columns for the date, lab number, lab name, page numbers and the grade (which the grader will fill in as it is graded.)

- The lab report becomes a record of what you have done in that lab. The fundamental perspective to remember is that you want to accurately represent your work in such a way that a person with your qualifications could, by reading your lab notebook, reproduce the experiment exactly as you did it – including any mistakes you might have made. In industry the lab book often serves as a legal document which represents ALL your work. It should be thorough and clearly written. Often you will be able to accomplish some of this by cutting out portions of the instructions, pasting them into the notebook, and writing your results and analysis underneath. Other times you'll have to write a description of your activities. Watch for indicators that suggest that you should write something down – words such as *record*, *compare*, *observe*, *determine*, and *notice* usually point out data you should be writing down.
- Your lab reports should be broken down into the following sections. Each of these should have its own label in the lab write-up.
 1. Prelab – the first thing to put in the lab book is a copy of the prelab you prepared for this exercise. This data will be used during the lab so it is important to include it here.
 2. Title - the name of the lab exercise
 3. Data & Procedure – The procedure you followed and the data you collect in the lab, along with any calculations you are asked to perform. It is permissible to literally cut out the lab instructions and paste them into your lab notebook, and to complete the data gathering and calculations under these cutouts. Use tables to represent data and organize your information so it is easy to understand.
 4. Questions - if applicable, answer the questions following the lab exercise in this section. Again, you may cut and paste from the lab instructions when practical.
 5. Summary - required! Write a few sentences summarizing, in your own words, what you did and learned in the lab. Discuss your results and whether or not they matched your expectations and why. Furthermore, if you have any insights on how you could have improved your results, or how to make the lab better, please note them here.

Lab Rules: Food, drinks, gum and tobacco are all prohibited in the EE labs. You may leave these items on the bookshelf outside the digital lab.

Lab time is reserved for your use, so use it wisely. All of the lab exercises can be finished in the allotted time if you come prepared, stay focused, and do the work. It is expected that when you come to lab you're there to work. Do not bring headphones or other distractions, keep social conversations to a minimum, keep computer use to class-related activities, and most of all, be sure you are not a distraction to others.

There are other rules for lab use which you will learn on the first day of lab. You are required to follow lab policies at all times.

Hints: When working with the computers in the EE labs, be sure to save your work often! Any one of a million things could result in loss of your files. Furthermore, it is best to have copies of your important files on floppy disks or a jump drive. Also, be sure to completely log out of your computer when you are done, or you may inadvertently offer someone else access to your files. Keep this in mind throughout your career here at New Mexico Tech.

Do not leave personal items unattended in the lab. We are not immune to theft!

Write your name on your lab kit and anything else you intend to keep. If you lose or misplace something it can only be returned to you if it can be identified as yours.