EE 41458/61558 **Microwave Circuit Design and Measurements Laboratory**

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Laboratory Policy:

1. Attendance at all scheduled labs is expected; the instructor should be informed of any conflicts at least a week in advance so that suitable arrangements for an alternate time for you and your lab partners to complete the lab can be found.
2. Be on time–the beginning of each lab session will contain a brief discussion and important notes regarding the lab to be performed.
3. An engineering notebook must be kept. The specific format and guidelines are outlined below.
4. Notebooks will be collected several times (possibly unannounced) during the semester, and after the final exam.
5. No eating, or drinking is permitted at the test benches in the microwave measurements lab.

Notebook Guidelines:

An engineering notebook is intended to act as the engineer's diary of ideas, theories, measurements and results, comments, and any other details related to the work being done. In both corporate and academic research settings, it is considered a legal document an can be used as evidence in patent suits or other legal actions. Notebooks are to be kept such that a technically literate person not specifically involved in your work could duplicate the work at a later time.

For this class, **the notebook will not consist of a collection of formal lab reports–there are no such reports for this class**. The notebook itself is the final product of the course, and most of the work on the notebook should be done during the lab period.

Notebook Requirements:

1. The notebook must be bound, with consecutively numbered pages
2. All entries must be in ink. If an error is made, cross out the error with a single line, and continue. **Do not erase or obliterate errors**. Be neat enough so that others can follow what you are doing.
3. The first page or two should be set aside for use as a table of contents; add entries to the table as appropriate, including a label, range of page numbers, and date for a particular section or experiment.
4. The entries in an engineering notebook must be consecutive–**you may not leave blank spaces for later entries**, or insert or remove pages. A line should be drawn through any blank space remaining on a page.
5. Each page of the notebook should be dated and initialed to document when the work was performed.
6. If you find that you have made an error on a previous page, do not return to that page and make corrections. Instead, leave the original erroneous entries as they are, and make a note on the current page as to the nature of the error, and include any corrections or new measurement data.
7. You may use both sides of the page or front sides only at your discretion, but be consistent throughout the notebook.
8. Please include sample calculations when they will enhance the clarity of your notes, but the decision as to how much detail to include is up to your own judgment.
9. You must include **all** data <u>in</u> the notebook – the use of separate sheets of paper for data collection ***is not permitted***. Be sure to include units with all measurements. Be certain to securely fasten any plots, graphs, or computer-generated tables in the notebook with tape or glue so that they cannot fall out.
10. Each section in the notebook should begin on a new page, and should follow the following general format outlined below. This is not a report, but note that these steps form an orderly progression through a typical laboratory experiment; each of these steps should be completed before going on to the next step.
    - ➤ Title of section
    - ➤ Brief statement of the purpose of work to be performed
    - ➤ Equipment set-up, including equipment type and models, block diagrams of equipment configuration
    - ➤ Measurement and other procedures, including calibration procedures if applicable
    - ➤ Measured data and results
    - ➤ Analysis, discussion of applicable theory, and summary