WEST VIRGINIA UNIVERSITY
College of Engineering and Mineral Resources
Lane Department of Computer Science and Electrical Engineering
Spring 2015

EE 222 Intro to Electrical Eng. Laboratory ESB – 853

Instructor: John Lucas

Lab Hours & Credit: Monday (Section 5) 5:00 p.m. – 7:50 p.m. 1 credit hour

Office Hours: I will be willing to help anytime I am in my office.
Please email to schedule an appointment.

E-mail: jlucas9@mix.wvu.edu

1. **Course Material**: Laboratory handouts given by the instructor.

2. **Prerequisites**: Coreq: EE 221

3. **Objective:**
The objective of this course is to provide students with the fundamental skill sets required in the design and analysis of basic electrical circuits, using resistors, capacitors and inductors with the help of devices such as power supplies, oscilloscopes, function generators, multimeters and simulation software such as PSPICE and MATLAB.

4. **Learning Outcomes:**
Students are expected by the end of the course to:
   - Be able to use laboratory equipments such as power supplies, oscilloscopes, function generators and multimeters.
   - Be able to simulate basic circuits using PSPICE and MATLAB.
   - Be able to design basic circuits using resistors, inductors and capacitors.
   - Be able troubleshoot circuits in lab.
   - Be able to present clear and organized lab reports.

5. **Attendance:**
You are expected to attend every laboratory session. Attendance will be taken and will reflect on your final grade. The decision to allow a makeup lab will be at the discretion of the instructor. Appeals to this decision should be directed to the Associate Dean of Academic Affairs.

6. **Lab Reports and Portfolio:**
   - Lab reports for each experiment are due at the ***beginning*** of the lab session for the following experiment. Multi-part labs will be discussed during the lab session as to their due date.
   - ***Late*** reports will be assessed a ***10% reduction*** in score each late day. Reports submitted *more than 1(one) week* after the due date *will* ***not*** be accepted.
   - Lab reports must be word-processed and presented in a professional manner. Each group is to submit ***one report per member***. If a group has 3 members, that means 3 reports, one report from each member of the group.
   - Members of the same group may share the results but the remaining material (theory, inferences etc.) must be your own.

- Format of Lab Report:
  - Title page
    - Experiment No.
    - Title of Experiment
    - Date conducted
    - Your name in bold
    - Group members
    - Class section
  - Objective
  - Equipment used
  - Brief theory
  - Procedure – Brief description of steps involved in the experiment.
  - Results – include code, waveforms, calculations and graphs.
  - Inferences –concluding remarks about the lab and material learnt.

7. Lab Portfolio:

Each student is required to submit a portfolio at the end of the semester. The portfolio must be organized in a **3-ring binder** with major sections as follows:

- One-page summary of what was learned in the laboratory.
- Syllabus
- Lab notes
- Lab handouts
- All pages must be numbered (with ink), signed and dated.
- A table of contents should be included on the first page of the portfolio. It should list the title of the lab and the page numbers it covers.
- All lab handouts, notes, procedures, experimental data, calculations, design ideas etc should be kept in the lab portfolio.
- Attachments (if any), should be fastened permanently.
- All entries should be made in ink, and mistakes should be crossed out with a single line, not erased or heavily marked out.
- The portfolio should be a chronological order of all work done..

Note: *We encourage you to finish experiments during the laboratory schedule. Students in a scheduled period will always have the first priority to the use of the equipment of the laboratory.*

8. Grading Policy:

Lab Reports: 40%
Final Exam : 30%
Portfolio : 20%
Attendance : 10%

9. Grade Assignment:

90 - 100% A
80 - 89 % B
70 - 79 % C
60 - 69 % D

10. Social Justice Statement:

West Virginia University is committed to social justice. I concur with that commitment and expect to foster a nurturing learning environment, based upon open communication, mutual respect, and non-discrimination. Our University does not discriminate people on the basis of race, color, national origin, sex, age, disability, veteran status, religion or sexual orientation. Any suggestions as how to

further such a positive and open environment in this class will be appreciated and given a serious consideration. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise me and make appropriate arrangements with Disability Services (293-6700). If you feel that you are being treated inappropriately or unfairly in any way, please feel free to bring your concerns into my attention. Please be assured that doing so will not prejudice the grading process. In return, I expect you to behave professionally and ethically.