

JEE2330 – Electrical and Electronic Circuits Laboratory

Spring 2025

Text: Laboratory Exercise Manual. This can be found online on the course web page. Students should print out the current week's experiment prior to coming to the lab each week.

Prerequisite: JEE2300 (Introduction to Electric Networks)

Credit: 3 units

Instructor: David Kuefler, 233-4333 (work), dkuefler@wustl.edu

Office Hours: I have no office hours, but will be available most evenings after class (typically in Urbauer Hall, Room 211F). I also may be available before class, by appointment only.

Course Consultants: Nicole Ejedimu, ejedimu@wustl.edu & Niayan Wu, naiyan@wustl.edu

Course Web Page: <http://classes.engineering.wustl.edu/jee2330/>

Class Times: Tuesday, 7:37 – 9:00 PM, Jubel Hall – Room 120 (Lecture)
Thursday, 7:37 – 10:00 PM, Urbauer Hall – Room 208 (Laboratory)

<u>Grading:</u>	Lab Reports	40%
	Lab Problems	10%
	Midterm Exam	20%
	Individual Lab Exam	10%
	Final Exam	20%

Attendance, level of effort, and improvement over the course of the semester will influence marginal grades. Numerical scores will be turned into letter grades according to the following scale. Note that this is only a guideline; the instructor reserves the right to assign letter grades in a more generous manner if warranted.

90-100 (A), 80-89 (B), 70-79 (C), 60-69 (D), 0-59 (F)

Course Goals:

- 1) Review of circuit analysis techniques from prior courses
- 2) Design a system, component, or process to meet desired specifications
- 3) Learn to use basic electrical engineering measuring equipment and tools
- 4) Perform experiments, analyze and interpret data
- 5) Learn to work on multi-disciplinary teams
- 6) Practice effective oral and written communication skills

Lab Problems:

Lab problems for each experiment will be assigned at the lecture at which the lab is discussed, and are due on the date indicated in Canvas, typically the start of the lab period at which the experiment is performed. Last minute completion of lab problems or lab reports will not be a valid excuse for coming late to the lab. Completion of lab problems or lab reports during lab time is not acceptable. Lab problems for students missing a lecture or lab will not be accepted without a valid excuse. Delays due to difficulty uploading the assignment to Canvas will not be considered a valid excuse. Late lab problems will be graded for 50% credit, and will not be accepted more than one week after their due date.

Lab Reports:

Lab reports will be graded on a basis of 100 points total. Of these 100 points, 10 points will be for raw data sheets, and 10 points will be for the design problems (as marked in the lab manual for most labs). Cover sheets and/or lab reports that a) do not comply with the directions regarding report preparation given in the supplemental handout on the course webpage, b) are poorly organized, c) are badly written, or d) are not neatly done may incur a penalty up to 10 points at the discretion of the grader. Note that you may lose points for stuff that is correct if the grader cannot follow your report, so efficient organization and clarity are important here.

Students must perform all ten laboratory experiments and must write and turn in at least eight lab reports. Reports for labs #1, #3, #4, #6, #7, and #9 are mandatory. Reports for labs #2 or #5 and #8 or #10 are also mandatory. Students must turn in a cover sheet and data sheets for the two reports that are not written.

Lab reports are due two weeks following the completion of the lab. They will be turned in via Canvas at the date and time indicated (generally at noon on the day following the nominal due date). Fifteen points will be deducted if the report is not handed in on that date but is turned in within one week, and thirty points will be deducted if the report is turned in between one and two weeks late. No lab reports will be accepted more than two calendar weeks after the due date unless a valid excuse is provided to the instructor. Delays due to difficulty uploading the assignment to Canvas will not be considered a valid excuse.

Tentative Schedule:

<u>Tuesday Date</u>	<u>Tuesday Lecture</u>	<u>Thursday Laboratory</u>
1/14	Lab Intro and Lab #1 Lecture	Lab #1
1/21	Lab #2A	Lab #2A (2.5.1 – 2.5.3)
1/28	Lab #2B	Lab #2B (2.5.4 – 2.5.5)
2/4	Lab #3	Lab #3
2/11	Lab #4	Lab #4
2/18	Lab #5	Lab #5
2/25	Lab #6	Lab #6
3/4	Lab #7	Lab #7 (start)
3/11	No Class	No Class
3/18	Midterm Exam	Lab #7 (finish)
3/25	Lab #8	Lab #8
4/1	Lab #9	Lab #9
4/8	Lab #10	Lab #10
4/15	Review	Individual Lab Exams
4/22	Final Exam	No Class or Makeup
4/29	No Class	No Class
5/6	Final Exam – Tues 4/22 or as Scheduled (Tues 5/6)	

Class Guidelines:

- 1) Please feel free to work in groups and to seek advice from either other students or the course consultant in completing the lab reports. **However, under no circumstances should a student copy another student's work and represent it as his or her own. Please see the university's statement on student academic integrity for more information.**
- 2) Partial credit will be given on lab reports and exams provided that sufficient work is shown to indicate that you understand some of the material relating to the problem. If the numerical answer is incorrect, but it is clear that you understand the method of solution, very little credit will be deducted. However, no credit will be given for a correct answer with either no work or work that cannot be followed.
- 3) All exams are closed book and closed notes. One 8½ by 11" sheet of notes is allowed on the midterm exam, and two 8½ by 11" sheets of notes are allowed on the final exam. Communication devices of any type are not permitted during exams.