



NORTH SOUTH UNIVERSITY

DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING

Summer 2023

EEE 111/ ETE 111 Lab | Analog Electronics-I Lab Course Outline

Course Faculty: Dr. Monir Morshed (DMM)

Lab Instructor: Rokeya Siddiqua

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Mobile: 01950595324

Office Room: LIB600-C7

Office Hours: Saturday 01:30 PM - 04:30 PM

Monday/Tuesday 08:00 AM – 10:00 AM

Thursday 04:30 PM -07:00 PM

Appointment must be made through email

Lab Section: 11

Lab Timing: A 04:30 PM - 07:00 PM

Lab Room: SAC508

Lab Outline

Lab 1	Introductory Class & Grouping
Lab 2	I-V Characteristics of diode
Lab 3	Zener Diode applications
Lab 4	Diode Rectifier circuits
Lab 5	Clipper and Clamper circuits
Lab 6	Practice Class + Quiz 1 (Written)
Lab 7	Midterm Exam (Written + Simulation)
Lab 8	The Input-Output characteristics of CE (common emitter) configuration of BJT
Lab 9	The BJT Biasing Circuits
Lab 10	Practice Class + Quiz 2 (Written)
Lab 11	Study of Switching Characteristics
Lab 12	Final Exam (Written + Set-up)
Lab 13	Final Exam (Set-up)

Marks Distribution (Tentative)

Attendance	10 %
Lab Performance	5 %
Lab Report	15 %
Quiz (Best 1 out of 2)	15%
Midterm Exam (Written + Simulation)	(20+5)%
Final Exam (Written + Set-up)	(20+10)%

Software: NI MultiSim

Lab Report Writing Guidelines:

After completion of a lab experiment, the Lab Report is due in the next immediate lab class. Below is a detailed description of what each Lab Report must contain and the marks of each section in brackets. The total marks for the lab report is **15 marks**.

1. Cover Page **(1)** - All lab reports should have a cover page and the same cover page should be used for all the lab reports.
2. Objective **(1)** – You should briefly write what was the aim of the experiment. In other words, write what you intent to achieve by doing the experiment.
3. Theory **(1)** – In this section of the Lab Report, you will specifically write only the things that you learned from the theory at the beginning of the lab. This section should be concise and to the point. The maximum length should not exceed 2 pages. You can add diagrams and graphs if necessary.
4. List of Equipment **(1)** – A simple list of all the apparatuses and Equipment you used to do the lab experiment.
5. Circuit Diagram **(1)** – Give all the circuit diagrams for the experiment; it must be hand drawn and should be clean and legible.
6. Results/Data/Readings **(2)** – This section of the lab report will contain the data that you have collected practically and it should be presented in a tabular form (make a fresh clean table of the data obtained in class). Draw the necessary tables and show calculations or the steps needed in this section. Also, answer the questions asked in the report part of the manual.
7. Discussion **(2)**: Explain what you learned by performing the experiments in this section. It can also include the problems you faced while conducting the experiment.
8. Simulations **(2)** - The necessary simulation of the circuits that were done in the lab. The simulation must be done in Multisim.
9. Graphs **(3)** : There are few graphs that need to be done according to each manual. The graph must be hand drawn in a graph paper with proper labels and scale in both axis. Try to make use of at least 70% of the graph instead of using a small section of the graph paper with a small vertical and horizontal scale.
10. Attachment **(1)** – Finally, you must attach the photocopy of the data sheet signed by the instructor in the lab.

RULES:

- If you are inattentive and miss your attendance in the process, you will be marked as absent.
- If any lab is missed, one will get 0% in Attendance and Lab performance.
- Use of mobile phones during the offline class is strictly prohibited.

- Lab Report copied from others will be marked negatively.
- You must bring printed lab manuals to the class.
- No Late Submissions will be accepted
- All information in the cover page must be typed; handwritten cover pages will be rejected.
- All submissions are due at the beginning of the class.
- Ensure that your group prints all necessary materials well ahead of the class.
- Grading will be done according to NSU Grading Policy.