Course Outline
Department of Electrical and Computer Engineering
School of Engineering and Physical Sciences
North South University, Bashundhara, Dhaka-1229, Bangladesh

1. **Course Number and Title:** EEE 111/ETE 111 Analog Electronics-I
   EEE 111L/ETE 111L Analog Electronics-I Lab

2. **Number of Credits:** 3+1=4 credits

3. **Type:** Core, Engineering, Lecture + Lab

4. **Prerequisites:** EEE 141/ETE 141 Electrical Circuits-I

5. **Contact Hours:** Lecture - 3 Hours/week, Lab - 3 Hours/week

6. **Instructor:** Kazi Safkat Taa Seen
   Faculty initial: KSE
   Office: SAC 1196
   Email: kazi.seen@northsouth.edu
   Office Hours: MW 09:40 AM – 12:50 PM (Appointment basis)

7. **Class Time: Theory:** ST 08:00 AM - 09:30 AM

   Lab: T 11:20 AM – 02:30 PM

8. **Classroom:** NAC 991 (Theory), SAC 504 (Lab)

9. **Course Summary:**
   In this course, a variety of electronic devices used in the design of analog electronics are studied. Basic understanding of semiconductor devices is covered. Emphasis is placed on diodes, BJT, and FET. Small and large signal characteristics and models of electronic devices, analysis and design of elementary electronic circuits are also included. This course has separate mandatory laboratory sessions every week as EEE 111L.

10. **Course Objectives:**

    The objectives of this course are:

    a. to possess a solid understanding of semiconductor devices used in the design of analog electronics
    b. to learn the required skills to use electronic devices in designing practical circuits to solve practical problems
    c. to gain the ability to conduct, analyze, and interpret experiments and apply experimental results to improve processes or circuit systems

11. **Course Outcomes (COs):**

Upon Successful completion of this course, students will be able to:

Sl.	CO Description	Weightage (%)
CO1	**explain** the characteristics of diode, BJT and FET	30
CO2	**analyze** simple electronic circuits using diodes and transistors.	30
CO3	**apply** simple models of BJT and FET for analyzing the small signal behavior of BJT and FET.	15
CO4	**conduct** experiments, as well as to **analyze** and **interpret** data	25

12. **Mapping of CO-PO:**

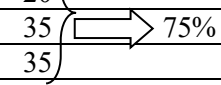| Sl.	CO Description	PO	KP	Bloom's taxonomy domain/level	Delivery methods & activities	Assessment tools
CO1	**Explain** the characteristics of diode, BJT and FET	a	K1	Cognitive/ Understand	Lecture	Assignment, Exam
CO2	**Analyze** simple electronic circuits using diodes and transistors.	a	K3	Cognitive/ Analyze	Lecture	Assignment, Exam
CO3	**Apply** simple models of BJT and FET for analyzing the small signal behavior of BJT and FET.	a	K3	Cognitive/Apply	Lecture	Assignment, Exam
CO4	**Conduct** experiments, as well as to **analyze** and **interpret** data	e	K6	Psychomotor/ Precision	Lab experiments	Lab Report, Lab Exam

13. **Resources**

Textbooks:

No	Name of Author(s)	Year of Publication	Title of Book	Edition	Publisher's Name	ISBN
1	R. Boylestad, L. Nashelsky	2016	Electronic Devices and Circuit Theory	11th	Pearson	ISBN978-93-325-4260-0

Reference books:

No	Name of Author(s)	Year of Publication	Title of Book	Edition	Publisher's Name	ISBN
1	Adel S. Sedra and Kenneth C. Smith	2013	Microelectronic Circuits	6th	Oxford University Press.	ISBN 13: 978-0-19-808913-1
2	Albert Malvino and David J. Bates	2016	Electronic Principles	8th	McGraw Hill	ISBN 978-0-07-337388-1

14. **Weightage Distribution among Assessment Tools**

Assessment Tools	Weightage (%)
Attendance	10
Assignments	20
Midterm	35
Final Exam	35
Lab Work	25%

75%

15. **Grading policy:** As per NSU grading policy available in

http://www.northsouth.edu/academic/grading-policy.html