INSTRUCTION DIVISION
SECOND SEMESTER 2015-2016
Course Handout Part II

Date: 13-1-2016

In addition to part-I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course No.   : EEE F246
Course Title   : Electrical and Electronic Circuits Laboratory
Instructor-in-Charge   : H. D. Mathur .
Instructors   : Tulsi Ram Sharma

Scope and Objective of the Course: A thorough understanding of the elementary principles of Electrical and Electronics circuits and Signals and response of Systems to signals is fundamental to Electrical, Electronic and Instrumentation Engineers. This Laboratory course gives hands-on experience to the theoretical concepts covered in the theory course.

Textbooks:
   Fundamentals of Electrical Engineering by Leonard S. Bobrow
   Laboratory Experiments manual of Analog Electronics by L.K. Maheshwari and M.M.S. Anand
   Laboratory Experiments manual of Electric and Electronic Circuits Lab by H.D. Mathur and Tulsi Ram Sharma

Course Plan:

The laboratory classes will be conducted in the Microelectronic Circuits and Signals and Systems Laboratories. The practicals are intended to provide hands-on experience on the concepts learned in the Microelectronic Circuits and Signals and Systems courses. Details of the experiments will be available in the "Laboratory Manual". Laboratory marks mentioned includes marks for record and attendance in lab practical.

   List of Experiments

1. **Introduction to electronics laboratory: (a) Passive and active components (b) Measurement equipment.**

2. **Applications of diode (a) Diode Characteristics (b) Clippers and Peak detector (c) Voltage multipliers**

3. **Performance measurement of regulated DC power supply and design of voltage regulator.**

4. **Verification of Network Theorems experimentally**

5. **Characteristics of BJT in different configurations**

6. **Power measurement in 3 phase balanced circuits**

7. **Determination of sensitivity of LVDT**

8. **Study the behavior of capacitor and inductor**

9. **Speed control of DC motor using PWM method**

10. **Programmable logic controller**

Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Nature of Component
Laboratory Practical Regular class work	2 hours/ week	20%	Regular lab Performance	Open Book
MATLAB Assignment		5%		
Home Assignment		15%	Will be announced	Open Book
Mid Semester	1 Hour	15%	TBA	Closed Book
Quiz	30 Min	15%	Will be announced	Closed Book
Comprehensive Exam	1 hour	30%	TBA	Close Book

Chamber Consultation Hour: Chamber consultation hours of Instructors will be announced separately.

Notices: All notices of this course will be displayed in Power Electronics Lab Room No. 2118

Make-up Policy: One Lab Make-up will be granted for genuine reasons; only when prior-permission is obtained from Instructor-in-charge.

INSTRUCTOR-IN-CHARGE