



SECOND SEMESTER 2022-2023

Course Handout Part II

Date: 16/01/2023

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

Course No. : EEE F245
Course Title : Control systems Laboratory
Instructor-in-Charge : **Dr. Joyjit Mukherjee**
Instructors team : **Dr. Ankur Bhattacharjee**

Scope and Objective of the Course: Feedback automatic control systems are an essential feature of numerous industrial processes, scientific instruments and even commercial, social and management situations. A thorough understanding of the elementary principles of this all-embracing technology is of great relevance for all engineers and scientists. This laboratory course gives hands-on experience to the theoretical concepts covered in the theory course.

Textbooks:

1. Nagrath I. J. and M. Gopal, Control Systems Engineering, New Age International (P) Limited, 5th ed, 2007.
2. LabVIEW manuals, Quanser-QUBE-Servo manuals.

Reference books

1. Kuo, B. C., and Golnaraghi, F., Automatic Control Systems, John Wiley & Sons, 8th ed, 2003.
2. Dorf, R. C., and Bishop, R. H., Modern Control Systems, Addison Wesley, 7th ed, 1995.

Course Plan:

The laboratory classes will be conducted in the Control system lab. The practicals are intended to provide hands-on experience in LabVIEW environment upon the concepts learned in the class under Control Systems course. Details of the experiments will be available in the “Laboratory Manual”. Laboratory marks mentioned includes marks for record and attendance in lab practical.

Evaluation Scheme:

| Component | Duration | Weightage (%) | Date & Time | Nature of Component |
|-----------------------------------|-----------------------------|---------------|-------------------|---------------------|
| Regular Laboratory Practical work | Each lab session of 2 hours | 50% | Timetable | Open Book |
| Mid-Sem | During lab hours | 10% | Will be announced | Closed Book |



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|---------|------------------|-----|-------------------|-------------|
| End-Sem | During lab hours | 40% | Will be announced | Closed Book |
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Chamber Consultation Hour: Chamber consultation hours of Instructors will be announced separately.

Notices: All notices of this course will be displayed in CMS

Make-up Policy: Make-up for components will be granted for genuine reasons, only when prior-permission is taken from Instructor-in-charge.

Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

INSTRUCTOR-IN-CHARGE

