

**Control systems Laboratory:**

Laboratory In-charge : Mrs. M.Jeyapriya

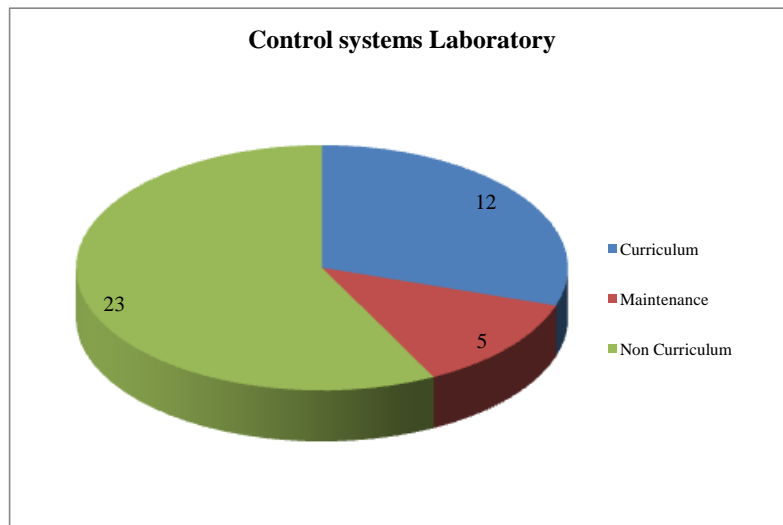
Technical supporting staff : Mr.A.Raghupathi



Figure 6.14 Snapshot of Control systems Laboratory

Area of the laboratory:  $20.3\text{m} \times 8.7\text{m} = 176.61 \text{ sq.m}$

## Utilization Chart



### Major Equipment:

- DC servo motor
- AC servo motor
- Stepper motor
- DC motor
- Trainer kit for Lead and lag compensator

### Major Experiments:

- Determination of transfer function of DC servo motor
- Stepper motor control system
- Digital simulation of first order and second order systems
- Stability Analysis of linear systems
- Simulate frequency response of lag and lead network

### Utilization of the laboratory:

- Control systems Laboratory for third year EEE students

M.KUMARASAMY COLLEGE OF ENGINEERING (Autonomous) – KARUR 639113

Department	ELECTRICAL AND ELECTRONICS ENGINEERING				R 2016	Semester	V
Course Code	Course Name	Hours / Week			Credit	Total Hours	Maximum Marks
16EE512	CONTROL SYSTEMS LABORATORY	L	T	P	C		
		0	0	2	1	30	100

**Course Objective (s):** The purpose of learning this course is to

- Learn about knowledge on applications of machines and electronics devices in control systems.
- Expose the students will have strong knowledge on MATLAB.
- Analyze the frequency response various compensators.
- Learn about basic knowledge in practical control system.
- Illustrate about simulation of control system required for its planning, operation and control.

**Course Outcomes:** At the end of this course, learners will be able to:

1. Ability to formulate transfer function for given control system problems
2. Expose strong knowledge of MATLAB software.
3. Determine time response of given control system model
4. Illustrate frequency response Lag, Lead networks for given control system model
5. Examine P, PI controllers in DC position control system.

Exp No.	Name of Experiments
1	Determination of transfer functions of self excited DC generator
2	Determination of transfer functions of separately excited DC generator
3	Determination of transfer function of armature controlled DC shunt motor
4	Determination of transfer function of field controlled DC shunt motor
5	Determination of transfer function of DC servo motor
6	Determination of transfer functions of AC servo motor
7	DC position control system
8	Stepper motor control system
9	Digital simulation of Type-0 and Type-1 systems
10	Digital simulation of first order and second order systems
11	Stability Analysis of linear systems
12	Simulate frequency response of lag and lead network



**Proficient faculty list**

<b>S.NO</b>	<b>FACULTY NAME</b>
1	Dr. D.C.Kumaresan
2	Mr.M.Ramesh
3	Mr.G.N.Sachin Amreiss
4	Mrs.M.Jeyapriya