



# SYED AMMAL ENGINEERING COLLEGE

Approved by the AICTE, New Delhi, and Affiliated to Anna University, Chennai, Govt. of Tamilnadu  
Dr. E.M.Abdullah Campus, Ramanathapuram – 623 502.

## Department of Electrical and Electronics Engineering



### ELECTRICAL MACHINES LABORATORY

Laboratory Incharge : Mr.G.S.Naganathan

Technician : Mr.J.Saravanan



Area of the laboratory:  $31.03\text{M} \times 12.11\text{M} = 375.77\text{Sq.M}$

Description:

- Electrical machines laboratory has well furnished by AC and DC power supply.
- AC power supply given to the induction motors through AC panel board
- 100 Amps , 230 Volt Rectifier unit is used to obtain DC supply which is given to the DC motors Through DC panel board.

- There are 26 experimental working table are provided in this laboratory.
- This laboratory is covering all the Electrical machines related laboratory courses prescribed by Anna university.
- Each experiments working table having proper protecting devices such as fuse and MCB.
- If required Suitable starters are provided to protect motor during starting.
- **Major Equipments Cost in Electrical Machines Lab: Rs. 14,77,752.56**

The following courses are conducted in this Laboratory for the Academic Year (2016-17)

EE6365	Electrical Engineering Laboratory	3 <sup>rd</sup> Semester (Mech)
EE6411	Electrical Machines Laboratory – I	4 <sup>th</sup> Semester(EEE)
EE6512	Electrical Machines Laboratory – II	5 <sup>th</sup> Semester (EEE)
EE6461	Electrical Engineering and control Systems	4 <sup>th</sup> Semester (ECE)
EE6811	Project work	8 <sup>th</sup> Semester (EEE)

### **Power Electronics Laboratory**

Laboratory Incharge : Dr.S.Aiswariya

Technician : Mr.S.Ponpandian

Store Room:





Area of the laboratory:  $13.29\text{M} \times 9.12\text{M} = 121.88\text{Sq.M}$

Description:

- All the experimental kits and components are stored in the separate store room. having selves and racks
- There are 9 double sided experiment working table in this laboratory.
- This laboratory is covering the Electronic devices and power electronics related laboratory courses prescribed by Anna University.
- Each experiments working table having proper protecting devices such as fuses and MCBs.
- **Major Equipments Cost in Power Electronics Lab: Rs.16,43,172.35**

The following courses are conducted in this Laboratory for the Academic Year (2016-17)

EC6361	Electronics Laboratory	3 <sup>rd</sup> Semester (EEE)
EE6611	Power Electronics and Drives Laboratory	6 <sup>th</sup> Semester (EEE)
EE6811	Project work	8 <sup>th</sup> Semester (EEE)

## Instrumentation & Control system Laboratory

Laboratory Incharge : Mr.M.Senthil Kumar  
Technician : Mr.S.Ponpandian

Store Room:



Area of the laboratory:  $13.75\text{M} \times 9.12\text{M} = 125.40 \text{ Sq.M}$

Description:

- All the experimental kits and components are stored in the separate store room. having selves and racks
- There are 9 double sided experiment working table in this laboratory.
- This laboratory is covering the Control and Instrumentation, Engineering Practices and Electrical Circuits related laboratory courses prescribed by Anna University.

- Each experiments working table having proper protecting devices such as fuse and MCB.
- **Major Equipments Cost in Instrumentation & Control Lab: Rs. 7,05,851.22**

The following courses are conducted in this Laboratory for the Academic Year (2016-17)

GE6162	Engineering Practice Laboratory	I <sup>st</sup> Semester (All UG Programmes)
EE6211	Circuit Theory Laboratory	2 <sup>nd</sup> Semester (EEE)
EE6511	Control and Instrumentation Laboratory	5 <sup>th</sup> Semester (EEE)
EE6811	Project work	8 <sup>th</sup> Semester (EEE)

### Computer and Embedded systems Laboratory

Laboratory Incharge : Mr.G.Prabhakar  
 Technician : Mr.Sabapathi



Area of the laboratory: 13.29M×9.14M=155.59 Sq.M

Description:

- There are 72 systems with 16Mbps internet connections provided in this laboratory.
- The Lab is completely air –conditioned with 6 ton A/C.
- This laboratory cover Anna university syllabus belongs to the Computer, power system simulation related experiments.
- **Major Equipments Cost in Lab: Rs. 20, 15, 928**

Configuration Details: Intel Core i3 4130 Processor (4<sup>th</sup> Generation), Intel H81 Chipset Mother board Integrated Gigabit Ethernet card, 4 GB DDR3 Ram @ 1066 MHz (2 RAM Slots), 500 GB 7,200 RPM HDD, 18.5” Flat Panel Monitor

The following courses are conducted in this Laboratory for the Academic Year (2016-17)

CS6461	Object Oriented Programming Laboratory	4 <sup>th</sup> Semester (EEE)
EE6711	Power System Simulation Laboratory	7 <sup>th</sup> Semester (EEE)
EE6811	Project work	8 <sup>th</sup> Semester (EEE)

### **Project & Research laboratory:**

Laboratory Incharge : Mr.A.Jeya Saravanan  
Technician : Mr.J.Saravanan

### **Sample Project**

#### **An Intelligent Control of mini Drone**



The Mini Drone is done by using wireless communication system. It has design to become an indispensable tool for the military. This project includes a camera and telemetry that will allow watching live video from the mini drone on a laptop that is located up to two miles away. The mini drone is controlled through graphical user interface. All signals from sensors are processed by Arduino Uno microcontroller.

**Area of the laboratory:  $6.7\text{M} \times 9.12\text{M} = 61.10 \text{ Sq.M}$**

- This Laboratory was established to encourage the students for doing projects and research work.
- This Laboratory contains BLDC Motor, Switched Reluctance Motor, Stepper Motor, Power Quality Analyser for analyzing proto-type experimental models related to Power Electronic Converters
- This Laboratory also used to do proto-type models related to Robotics and Control.
  - **Establishing Cost of the Laboratory: Rs.3,00,000.**