ROHINI

COLLEGE OF ENGINEERING & TECHNOLOGY

Approved by AICTE and Affiliated to Anna University, (An ISO Certified Institution)

ELEKTRA

Voice of EEE

NEWSLETTER

2017

Electrical & Electronics Engineering

Email:hodeee@rcet.org.in

VISION AND MISSION OF THE DEPARTMENT

VISION

To create technically competent technocrats to meet the demand of Electrical and Electronics industry and societal need for the well being of human kinds.

MISSION

M1. To provide knowledge and skills necessary for professional Development in Electrical and Electronics Engineering.

M2. To promote research and creativity in the area of Electrical and Electronics Engineering.

M3. To promote team work and professional conduct in sociologicalactivities.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1: Graduates of the programme will posses career in technical and allied fields.

PEO 2: Graduates will have the ability to adapt to the growing technological requirement of the society through lifelong learning and team work.

PEO 3: Graduates of the programme will possess knowledge to pursue higher studies.

Programme Outcomes (POs)

Graduates of Electrical and Electronics Engineering will be able to:

PO1 Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2 Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3 Design/development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4 Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5 Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6 The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7 Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11 Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

Programme Specific Outcomes (PSOs)

Graduates of Electrical and Electronics Engineering will able to:

PSO1. Develop skills to the expectations of the dynamic industrial practices in Electrical Engineering and allied areas.

PSO2. Analyse, design and integrate various renewable energy sources to meet the energy demand.

FOUNDER'S MESSAGE

Shri.K.NEELA MARTHANDAN
CHAIRMAN
Rohini College of Engineering and Technology

I am very glad to know that the students of the Department of EEE are bringing out a newsletter to throw light on the activities and achievements of their department. Such activities among the students will enhance their communication skills, technical skills, innovative thinking, analytical thinking and knowledge as well. I congratulate the students of department of EEE for taking up this task and I wish all the students of EEE can have a great future which is ahead.

"Be attentive at your work to achieve your goal"

MANAGING DIRECTOR'S MESSAGE

Dr.N.NEELA VISHNU
MANAGING DIRECTOR
Rohini College of Engineering and Technology

It is a great pleasure for me that our Electrical and Electronics Engineering department is releasing E- Newsletter "ELEKTRA". As the Managing Director of Rohini College of Engineering and Technology, I feel proud about it. We have taken an oath that we will develop RCET to world class standard and provide an overall development to all the students. We march towards that goal. We are happy that the students of RCET are properly shaping up, facilitating us to meet our goal. I wish all success to the EEE students.

"Training your minds to become engineers of innovation should be the first motto during your under graduation"

I wish you all success for your bright future.

PRINCIPAL'S MESSAGE

Prof.N.SUBRAMONIA PILLAI
PRINCIPAL
Rohini College of Engineering and Technology

It is a great pleasure for me that our Electrical and Electronics Engineering department is releasing a Newsletter. The essential purpose of a Newsletter is to inform, engage, inspire and entertain a diverse readership - including alumni, parents, students, faculty, staff and other friends of the college - by telling powerful stories that present a compelling, timely and honest portrait of the college and its extended family. This Newsletter has made an earnest attempt in this direction and brought out certain aspects of the college to the eyes of the public so that they may understand and know the college even better.

The college has been simply unstoppable in its progress as it has been actively involved in various activities that have brought to light the hidden talents of the college students and staff. The highly qualified and dedicated members of staff have always stood shoulder with the management and have carried out their duties with a level of commitment. This Newsletter has recorded achievements of staff members and students of EEE Department, competitions won by the hugely talented EEE students, innovative projects carried out by EEE students with the guidance of EEE staff, among others. They stand as a witness to the monumental efforts taken by the management to make the college a center of excellence in education and research.

I extend my greetings and best wishes to the faculties and students of the department and wish their endeavors my very best.

Head of Department's Message

Prof. P.JEYA KUMAR
HOD / EEE
Rohini College of Engineering and Technology

Dear students of the Department of Electrical & Electronics Engineering, I am happy with an immense pleasure to convey my message for newsletter. Such activities will help the professional students to begin and pursue their voyage into new realms of knowledge.

On behalf of our students and faculty, it is my privilege to welcome all. We take pride in our faculty, a team of highly capable and dedicated professionals, most of whom have academic and industrial experience and degrees from leading universities of the India. We provide ample opportunities to our faculty and students, through in house trainings, workshops and trainings outside the college campus for further growth and development.

The main objective of department of Electrical and Electronics Engineering is to conduct competitive research and deliver high quality teaching. We want to develop graduate engineers with the skills, knowledge and imagination to help shape our country.

I congratulate the department of EEE for delivering such a wonderful newsletter.

"Where hope would otherwise become hopelessness, it becomes faith".

EDITORIAL MESSAGE

'Creativity comes from trust. Trust your instincts.
And never hope more than you work."

It is an occasion of immense pleasure for the Department of Electrical and Electrical & Electronics Engineering to publish the E- Newsletter "ELEKTRA".

This newsletter is a digital way for us to communicate with our students, faculty members, alumni and industrial partners. This newsletter will provide a glimpse of the departmental activities and achievements.

This Newsletter focusing about different activities of department and achievement of students, Also it enlightens the readers about the latest happenings in Electrical department.

We look forward for more activities and achievements for the department to march towards excellence in the future.

The Editorial board also wants to thanks the Management of the Institute and Head of the department for inspiring us to go forward in publishing this newsletter.

Editorial Board

Prof. G.K.Jabash Samuel (Editor in Chief)

Prof. V.Ponselvan (AssociateEditor)

Mr. N.Naveen (Assistant Editor)

About the Department

The Department of Electrical and Electronics Engineering was established in the year 2012 with an intake of 60 students with an objective of creating a leader in engineering education and research with the application of knowledge for uplifting the society globally. The Department stands as a unique centre for promotion of excellence in Electrical Engineering and has been successful in fulfilling its role in the rocketing technologies. The department is in the process of forming research groups in some of the key areas and collaborating with various institutions and corporations.

Electrical and Electronics Engineering discipline is multi-disciplinary by nature, representing a veritable synergy of different technologies. To meet the challenges of the new millennium, we train our students in the areas of artificial neural networks, fuzzy logic, finite element analysis, computer aided de- sign of electrical machines, micro-controllers and digital signal processing, generation, transmission and distribution of power, power system operation and control, Electrical Machines, Power Electronics and their control using computer methods etc.

The field of electrical and electronics engineering is one of the most important engineering disciplines that have changed the course of the world. The aim of the department is to establish itself as a center of excellence of teaching in its chosen areas. We are committed to establishing human and material infrastructure in this cause. A number of laboratories are in the process of being established for make teaching a effective way.

Basic Electrical Engineering Laboratory:

This lab aims at familiarizing the students with the basic electrical components,their characteristics & applications in day to day life. Moreover in this lab we are making the students aware with the different theorems, laws, networks, circuitsetc. which are the basic building materials of all those huge electrical equipments, transmission lines, motors, generators etc. The purpose of this lab is to provide a clear concept with basic idea related to electrical circuits RC, RL,LC, RLC, etc. with which they will have to carry for better understanding in the coming semesters. The lab has all the facilities to perform the experiments.

Electrical Machines Laboratory:

Machines laboratory is one of the biggest lab of the department. It is equipped With various conventional AC , DC machines along with other accessories like DC voltage source, loads, rheostats, modern ammeters, voltmeters, watt meters, millimeters etc for conducting various experiments & developmental works .

All these machines are used for training the students to impart sound knowledge in the area of electrical machines. Some of the major setups are:-

- 10 KVA alternator coupled with synchronous machine
- 5HP –Slip ring IM
- IM coupled with DC shunt motor.
- 1-phase transformers.
- Coupled DC Machine (shunt, series, compound).

Electrical machines lab is one of the oldest lab established in the Institute. The machine lab has DC machines, AC machines and special type of machines. This lab is used by undergraduate students in their regular lab work. All available machines are having a set up bench with latest supporting measuring equipment. Lab also supports students in their different type of project work and various experiments based on machines are performed in Electrical machines course.

Control System Laboratory:

It is well equipped lab with all the facilities like multi meters, voltmeters etc. including proper guidance as in all other labs .Major setups available with this lab are DC Servomotor speed torque characteristics trainer, AC servo position control system trainer, AC servomotor speed torque characteristic trainer etc. Here students can exercise their theoretical knowledge to gather an overall sound knowledge in this area.

Power electronics & drives Laboratory:

Power electronics & drives laboratory has all the facilities to gather sufficient knowledge .Here students are provided with all the facilities like electronics components, DSO's, Multimeters etc so that students can make their own circuits like control, triggering , power circuits etc requires to perform different experiments to correlate with the theoretical studies. This lab has the major setups like Speed control of 3 phase SRIM using static Kramar drive, DC Motor control using Jons Chopper, Thyristorised drive for 1- HP DC Motor with closed loop control trainer, 3 Phase IGBT based PWM Inverter & V/F control trainer, Closed loop speed control of 3 Phase/0.5 HP Induction using vector controlled method etc.

Scope and Objective of the Course/Laboratory:

Power Electronics (PE) is a branch of engineering which requires the knowledge of Analog/Digital Electronics and Control Systems domain. Nowadays, PE is employed in applications ranging from few Watts residential to several Megawatts industrial systems and processes. PE is the integral part of modern technology. Application of semiconductor switching devices such as Diode, BJT, SCR, MOSFET, IGBT, GTO etc. to convert and control the amplitude and direction of power flow to met the load requirements is the main objective of this course/laboratory. Practical design issues are also covered in laboratory experiments. After successful completion of this laboratory, students will be able to design, simulate, develop and analyze the performance of various power electronic converters including AC/AC Converters, AC/DC Converters, DC/DC Converters & DC/AC Converters.

Softwares/Controllers:

- Power System Computer Aided Design (PSCAD): 3.1 Version
- Electrical Transient and Analysis Program (ETAP)
- Solar PV Emulator

SEMINARS/WORKSHOPS ATTENDED BY FACULTY

No	Name of the Faculty	FDP/SSTP Topic	Duration	College Name
1.	Mr.JEYAKUMAR. P	FDTP on EE6009 Power Electronics for Renewable Energy Systems	7 days	V.V College of Engineering , Tirunelveli
2.	Mr.G.K.JABASH SAMUEL	FDP on EE6801 – Electric energy Generation Utilisation & Conservation	7 days	Arunachala College of Engineering for Women
3.	Mr.PONSELVAN. V	1.FDP on EE6703 – Special Electrical Machines 2.FDP on EE6801 – Electric energy Generation Utilisation & Conservation	1. 7 days 2. 7 days	1.Arunachala College of Engineering for Women 2.Arunachala College of Engineering for Women
4.	Mr.MURUGAN. G	FDP on EE6801 – Electric energy Generation Utilisation & Conservation	7 days	Arunachala College of Engineering for Women
5.	Mr.BASKER .C	FDP on EE6801 – Electric energy Generation Utilisation & Conservation	7 days	Arunachala College of Engineering for Women
6.	Mrs.NITHYA. S	FDTP on EE6009 Power Electronics for Renewable Energy Systems	7 days	V.V College of Engineering , Tirunelveli
7.	Mrs.THANGASAKTHI.T	FDTP on EE6009 Power Electronics for Renewable Energy Systems	7 days	V.V College of Engineering , Tirunelveli

INDUSTRIAL VISITS:

The department is associated with various government, quasi-government and private industries in the field of Electrical Engineering.

Our students visit these companies to get a practical exposure to current work practices.

The details of the industrial visits are furnished below

Date of Visit	Name of Industry	Scope of Visit
10-8-2016	Transformer maintenance Unit/Thuckalay	Practical study of testing of transformer
31-3-2017	Koodangulam Atomic power station	To study about generation and distribution.
22-2-2017	Dalmia wind form	TO study about FACTS devices

Participation of students in National and International Conferences:

ARAVIND V	A Novel Study Of 12kva Grid Tie Inverter In Hybrid Solar And Wind Power Plant	International conference	Tamizhan college of Engineering and Technology
NAVEEN K	A Novel Study Of 12kva Grid Tie Inverter In Hybrid Solar And Wind Power Plant	International conference	Tamizhan college of Engineering and Technology
SUKANYA	Design Of Charge Controller For Solar System	International conference	Tamizhan college of Engineering and Technology
JENIFA ROSE J	Design Of Charge Controller For Solar System	International conference	Tamizhan college of Engineering and Technology
PUNITHA K	Study Of Power Transmission For 10kw Hybrid Solar And Wind Power System	International conference	Tamizhan college of Engineering and Technology
ABASH G P	Study Of Power Transmission For 10kw Hybrid Solar And Wind Power System	International conference	Tamizhan college of Engineering and Technology

The students who undergo training/internships

NaveenPrabhakar.P	1 Month	DS Connectors and cables
Abinaya	1 Month	DS Connectors and cables
Arshad.S	1 Month	NICE PANEL electrical and Automation

List of students placed in Academic Year

(Batch 2013 – 2017)

S.no.	Student Name	Enrollment no.	Company Name	Appointment No
1	ARAVIND V	963313105001	Elcompo Electronic Industries Private Limited	ElCO/ET17/E-2143
2	JENIFA ROSE J	963313105002	Perfect Electronics ltd	PEIPL/TE17/E-14
3	ABASH G P	963313105301	iled lighting systems pvt ltd	ILEDLS/ET17/E-08
4	ANUSUYA DEVI S	963313105302	Elcompo Electronic Industries Private Limited	ElCO/ET17/E-2145
5	PUNITHA K	963313105304	Perfect Electronics ltd	PEIPL/TE17/E-16
6	SUKANYA R	963313105305	iled lighting systems pvt ltd	ILEDLS/ET17/E-11
7	SUTHAN S	963313105306	Tessolve semiconductor Pvt ltd	TSCB/DE/17-127

TECHNICAL CORNER

A Two days International Conference On
ADVANCED INNOVATION IN ENGINEERING AND TECHNOLOGY

Department of Electrical and Electronics Engineering organized International Conference On Advanced Innovation In Engineering And Technology to empower the student community and research scholars in the field of Electrical and Electronics Engineering. The Board of Directors, Chief Guests and Dept. Heads and Faculty members presided over the function which was followed by lamp lightning session. CD on the proceedings of the ICRICC'17 was released.

The Conference had two sessions spread over the day with expert's key note addresses and interactive discussions. More than 70 participants from various Universities and Institutions across the country have been selected to register and presented papers in the Conference. The experts and the resource persons were invited who have sound knowledge in the field of Advanced Innovation in Engineering and Technology. The chief Guest released a book of abstract, comprising of the papers presented during the International Conference. Prizes for winners and Participation certificates were distributed to students of different colleges. Certificates and Awards were given to winners.

CONTACT :

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