



ROHINI

COLLEGE OF ENGINEERING & TECHNOLOGY

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



ELEKTRA

Voice of EEE

NEWSLETTER

Electrical &

Electronics Engineering

2018



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 sociological activities.

PROGRAM EDUCATIONAL OBJECTIVES

- PEO 1: Graduates of the programme will possess 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.

P05 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.

P06 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.

P07 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.

P08 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

P09 Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

P010 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

Dr.R.Rajesh,M.E.,Ph.D.

Principal

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".

The magazine is presenting a glimpse of the growth of the institution on many fronts. Our students and faculties have performed exceedingly well and competent enough in all the fields. Beyond academics, the research activities are being conducted.

The college also motivates and encourages staff and students to undertake research and enterprising skills. The faculty members plays major role in the overall development of department and institute.

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. A.Ashok Kumar (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 design 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, circuit etc. 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 Kramer 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 meet 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.	Dr.D. SAM HARISON	FDP on recent trends and applications of High Voltage engineering	14 days	National engineering College, Kovilpatti
2.	Dr.T.SREEDHAR	FDP on recent trends and applications of High Voltage engineering	14 days	National engineering College, Kovilpatti
3.	Mr.GOPAKUMAR. S	ISTE SSTP on Electric Power System	14 days	St.Xaviers Catholic College of Engineering, Chunkankadai
4.	Mr.PONSELVAN. V	1.FDP on recent trends and applications of High Voltage engineering 2.ISTE SSTP on Electric Power System	1. 14 days 2. 14 days	1.National engineering College, Kovilpatti 2.St.Xaviers Catholic College of Engineering, Chunkankadai
5.	Mrs.THANGASAKTHI	FDTP on Renewable Energy Systems	7 days	St.Xaviers Catholic College of Engineering, Chunkankadai
6.	Mr.SANJU S	FDTP on Renewable Energy Systems	7 days	St.Xaviers Catholic College of Engineering, Chunkankadai
7.	Mr.PADMA KUMAR.R	FDTP on Renewable Energy Systems	7 days	St.Xaviers Catholic College of Engineering, Chunkankadai

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
12-1-2018	110/11KV Substation Karungulam TNEB	To study about transmission and distribution of grid system
23-8-2017	Dalmia Wind farm	To study about power quality issues
6-7-2017	Koodangulam Atomic power station	Waste disposal of power plant
23-8-2017	110/11KV Substation Aralvoimozhi TNEB	Practical study of testing of insulators and relays

INDUSTRIAL VISITS



Participation of students in National and International Conferences:

RENUKA DEVI S	Real Time Detection System Of Electrical Distrubances In Remort Communication Stations And Smart Grid	International conference	Tamizhan college of Engineering and Technology
SANTHIYA J	Real Time Detection System Of Electrical Distrubances In Remort Communication Stations And Smart Grid	International conference	Tamizhan college of Engineering and Technology

Paper Presentation in Other Colleges

No.	Name	Event	Venue	Date
1.	N.K.Saravanan	LECTRON2K18	Loyola Institute of Technology and science, Thovalai	09-01-2018
2.	H.Rahul	STROMSTYRKE'18	DMI Engineering College, Kumarapuram.	23-02-2018
3.	H.Rahul	CASTILO'18	Ponjesley college of Engineering	09-03-2018
4.	Jimson Cardoz	CASTILO'18	Ponjesley college of Engineering	09-03-2018
5.	Jimson Cardoz	ASPIRE-2k18	Annaivailankanni college of Engineering	14-03-2018



6.	H.Rahul	ASPIRE-2k18	Annaivailankanni college of Engineering	14-03-2018
7.	Jimson Cardoz	TECH BIYO_18	St.Xavier's Catholic College of Engineering	15-03-2018
8.	H.Rahul	TECH BIYO_18	St.Xavier's Catholic College of Engineering	15-03-2018
9.	H.Rahul	ZEUS2K18	James college of Engineering ,Navalkadu.	16-03-2018
10.	Jimson Cardoz	ZEUS2K18	James college of Engineering ,Navalkadu.	16-03-2018
11.	Jimson Cardoz	SYNERGIX 2K18	James college of Engineering ,Navalkadu.	16-03-2018
12.	H.Rahul	SYNERGIX 2K18	James college of Engineering ,Navalkadu.	16-03-2018
13.	Vino Bharath	INVICTA 2K18	Noorul Islam University,Kumarakoil.	21-03-2018
14.	N.Nisha	INVICTA 2K18	Noorul Islam University,Kumarakoil.	21-03-2018
15.	N.K.Saravanan	INVICTA 2K18	Noorul Islam University,Kumarakoil.	21-03-2018
16.	R.Kavitha	INVICTA 2K18	Noorul Islam University,Kumarakoil.	21-03-2018
17.	D.Jennifer	.INVICTA 2K18	Noorul Islam University,Kumarakoil.	21-03-2018

18.	N.K.Saravanan	.ALTIUS 2K18	Noorul Islam University,Kumarakoil	22-03-2018
19.	H.RAGUL	.ALTIUS 2K18	Noorul Islam University,Kumarakoil	22-03-2018
20.	H.Rahul	Techliga'18	Noorul Islam University,Kumarakoil	27-03-2018
21.	N.K.Saravanan	TRONTRICALS'18	KNSK college of Engineering	23-03-2018
22.	Vino Bharath	TRONTRICALS'18	KNSK college of Engineering	23-03-2018
23.	H.Rahul	TRONTRICALS'18	KNSK college of Engineering	23-03-2018

The students who undergo training/internships

Kavitha.R	1 Month	ELCOMPO
Renuka Devi	1 Month	ELCOMPO
Vishnu	3 Weeks	DS CONNECTORS AND CABLES
Vejin.M	1 Month	NICE PANEL electrical and Automation

PRODUCTS OF THE YEAR

No	Name of the Product	Image of the Product	Description & Application
1.	RASPBERRY PI Based Home Automation		<p>Low cost and flexible home control and monitoring system using an embedded microprocessor and microcontroller with IP connectivity for accessing and controlling devices and appliances remotely using smart phone application</p>
2.	Hybrid solar and wind Turbine		<p>Renewable Energy system is the growing generating area in present century. The characteristic of PV and wind turbine is studied. Study of MPPT algorithm is done.</p>

LIST OF STUDENTS PLACED IN ACADEMIC YEAR

(BATCH 2014 – 2018)

S.no.	Student Name	Enrollment no.	Company Name	Appointment No
1	ABINAYA G	963314105001	Taiwan Surface Mounting Technology Corp	VS/TSMT/GT18/E69
2	AJAY S	963314105002	Elcompo Electronic Industries Private Limited	ELCO/ET18/E-113
3	ARUL ROBINSON.N	963314105004	Perfect Electronics Ltd	PEIPL/TE/18E-32
4	ASHOK KUMAR A	963314105005	DS Connectors and Cables India Pvt Ltd	DSCACIPL/ET18/E-14
5	BALA MURUGAN T	963314105006	AQUA EXCEL	AEPL/PT18/E-67
6	MUTHU PRIYA M	963314105008	Taiwan Surface Mounting Technology Corp	VS/TSMT/GT18/E72
7	NAVEEN PRABHAKAR P	963314105009	Perfect Electronics Ltd	PEIPL/TE/18E-35
8	SAKTHI GANESH R V	963314105012	Elcompo Electronic Industries Private Limited	ELCO/ET18/E-116
9	SARANYA A	963314105013	iled lighting systems pvt ltd	ILEDLS/ET18/E-68
10	SARIKA VANI M	963314105014	AQUA EXCEL	AEPL/PT18/E-69

11	SUBITHRA C	963314105016	Vishay Precision Group	VPG/PE18/TE118
12	SUTHA R	963314105017	Taiwan Surface Mounting Technology Corp	VS/TSMT/GT18/E74
13	GOVINDHAN K	963314105302	DS Connectors and Cables India Pvt Ltd	DSCACIPL/ET18/E-16
14	SANTHIYA.S	963314105309	Elcompo Electronic Industries Private Limited	ELCO/ET18/E-118
15	THAMPURAN.S	963314105311	Vi Microsystems Pvt. Ltd	VIMS/AM-1831
16	VIJITHA.E	963314105313	TVS Supply Chain Solutions	TVSSCS/P&A/6361-3191

Congratulations!



TECHNICAL CORNER

ONE DAY WORKSHOP ON “ENERGY CONSERVATION AND ELECTRICAL SAFETY”

A training workshop for students of EEE on Energy conservation and Electrical Safety was organized by Department of EEE in coordination with Tamilnadu Electricity Board. The objective of this workshop is to add value to the engineering education by adding the important aspect of Energy Conservation & Management. The students were trained on various tools and methods for energy conservation and efficient use of energy. Training module was distributed to all the participants.



Resource Person Mr. M. Sivalingam, Superintendent Engineer, Non-Conventional Energy Source, Tirunelveli addresses the gathering.

The Heads of Departments, Student Secretary and Treasurer, Respected Chief Guest Mr. M. Sivalingam, Superintendent Engineer, Non-Conventional Energy Source, Tirunelveli and 15 members of his team were present on the occasion along with other officials. In the inaugural function, Prof. Jeyakumar, Head of Department, Electrical Engineering introduced the chief guest which was followed by the Chief Guest Address by Mr. M. Sivalingam, Superintendent Engineer, Non-Conventional Energy Source, Tirunelveli. While addressing the students, Mr. M. Sivalingam highlighted the importance of incorporating energy into different subjects. He urged the entire team to inculcate the inputs gained during the workshop in the classroom and he also pointed out various steps that can be taken up at individual levels to conserve energy and use it efficiently. The technical session started with the overview of the energy sector and Energy scenario in India, where Mr. M. Sivalingam pointed out that, India has less than 1% of world oil & gas reserves and 17% of world population. He remarked that heavy dependence on imported energy (80% of oil, 15 to 20% of coal and Gas), poses serious questions about energy

security and balance of payment. To meet challenges of climate change and environmental pollution, improving energy efficiency is a cost effective solution. He also discussed about why energy should be saved. This was explained with several examples. He explained how the investment can be reduced using energy efficient tube lights, fan etc.

In the technical session II, measures of saving electricity in motors & pumps were highlighted. To make the sessions interesting, various case studies were included to highlight the energy conservation practices employed by various industries towards energy conservation, cost reduction and sustainable development. All the sessions were highly interactive and participants actively interacted with the experts. The workshop was very interesting and successful and met the objective for which it was planned and organized. Final year student Sarika Vani concluded the inaugural function by presenting the vote of thanks. Student Saravanan and Latha of Second EEE, beautifully and successfully anchored the program.

HYBRID SOLAR AND WIND ENERGY SYSTEM



Our final year Mechanical and Electrical and Electronics Engineering students of RCET are jointly working with a World level project on “Hybrid Solar and Wind Energy System” in collaboration with the National Institute of Wind Energy (NIWE) and supported by KST Wind Engineering India Ltd, under the authority of the Ministry of Renewable Energy, Govt. of India. To apply advanced techniques in this project recently scientist from 20 different countries visited the college campus and congratulated the students for their efforts.

EEE STUDENT RECOGNIZED FOR WORLD RECORD IN ETHICAL HACKING



Second year Electrical and Electronics Engineering students R. Merbin and K. Nadarajan Made World Record in code hacking conducted by Wiki-techy & Microsoft research community group, Chennai with the theme of " Ethical Hacking & Security and prevention Techniques". This workshop covered the topics like Hardware Level Hacking & Security Prevention, Website Hacking & Security Prevention, Web server Hacking & Security Prevention, Virus Creation /Antivirus Creation, Mobile Hacking with its Prevention, WhatsApp Hacking With its Prevention. It is a world record workshop with hands on practicals by world top most hacking experts. It's a part of world record events.

Modern Technologies Demand The Highest Level If Education



- SCHOLARSHIPS
- CAMPUS INTERVIEWS
- RAGGING FREE CAMPUS
- SPORTS QUOTA
- WIFI CAMPUS
- 100% PLACEMENT ASSISTANCE
- FEE CONCESSION FOR MERITORIOUS STUDENTS
- SITUATED ON THE MAIN ROAD



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UG COURSES

- BE-Civil Engineering
- BE-Computer Science And Engineering
- BE-Electronics And Communication Engineering
- BE-Electrical And Electronics Engineering
- BE-Mechanical Engineering

PG COURSES

- ME-Communication Systems
- ME-Computer Science And Engineering
- ME-Thermal Engineering
- ME-Construction Engineering And Management

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