

ABOUT THE INSTITUTION

Rajalakshmi Institute of Technology started in the year 2008, under the aegis of Sabari Foundation. Rajalakshmi Institute of Technology looks at education differently. The college grooms students academically, professionally and personally for a successful career. The college prepares students of diverse abilities, talents and interests to meet the new realities, challenges and requirements of the global market. The college aims not only to impart knowledge but also helps the students to be technocrats with high personal integrity. While encouraging liberal learning, the institution also nurtures ethical standards and values. The college is approved by All India Council of Technical Education, New Delhi & Government of Tamil Nadu and is affiliated to Anna University, Chennai. The College is certified by the ISO 9001:2008 for academic standards.

COURSES OFFERED

- B.E. – Computer Science and Engineering
- B.E. – Electronics and Communication Engineering
- B.E. – Electrical and Electronics Engineering
- B.E. – Mechanical Engineering

The college is located in Kuthambakkam village, 3 kms from Chennai, on National highway leading to Bangalore providing the right ambiance for the budding Engineers.

ABOUT THE DEPARTMENT

The Electrical and Electronics Engineering department was started in the year 2012. The broad spectrum of courses under Anna University is taught by a group of highly-committed academic and supporting faculty. The faculty members available in the department are specialized in all streams of Electrical and Electronics Engineering such as Power Systems, Power Electronics and Drives, Embedded Control of drives, Control and Instrumentation and Applied Electronics. The department has well equipped laboratories such as Engineering Practices, Electrical Machines I & II, Electric Circuits, Electronics, Linear and Digital IC, Control and Instrumentation, Power Electronics, and System Simulation.

VISION OF THE DEPARTMENT

To educate the students with adequate knowledge in Electrical and Electronics Engineering to get recognized at International level.

To develop the department as a centre of excellence in all aspects.

To graduate engineers with the quality of responsible citizens of the country to serve the society.

MISSION OF THE DEPARTMENT

To provide quality based technical education to students.

To empower the students with professional skills to face the challenges with confidence, courage and ethics.

To trigger the innovative minds to engage in research activities.

To identify the capabilities and encourage the students to become entrepreneurs.

CHIEF PATRONS

Thiru. S. Meganathan,
Chairman, Rajalakshmi Institutions

Dr. (Mrs.)Thangam Meganathan,
Chairperson, Rajalakshmi Institutions

PATRON

Dr. M.Velan, Principal, RIT

CONVENER

Dr. Anitha Karthi, Prof. & Head.

CO-ORDINATOR

Mr.B.Manimaran, AP

ORGANISING COMMITTEE

Mr. R.Elavarasu, Asso.Prof.
Mrs.K.Ranjitha, AP
Ms. P.Kalaivani, AP
Mrs.M.Monica, AP
Mrs.B.Sasikala, AP
Mr. S.Sathishkumar, AP
Mr. M.Poomanirajan, AP
Ms.S.Laksana, AP
Ms.G.Dharanya, AP

FACULTY DEVELOPMENT PROGRAMME



on



BASIC ELECTRICAL, ELECTRONICS, MEASUREMENT AND INSTRUMENTATION ENGINEERING



8th to 11th November 2017

Organized by

**Department of Electrical and Electronics
Engineering**

**RAJALAKSHMI INSTITUTE OF TECHNOLOGY,
KUTHAMBAKKAM (PO), CHENNAI – 600 124.**

Rajalakshmi
Institutions

ABOUT THE FDP

The objective of the FDP is to fulfill the course objective:

- To impart knowledge on fundamental laws, theorems of electrical circuits, wiring.
- To explain the working principles of Electrical Machines, Various electronic devices and measuring instruments.
- To learn the fundamental laws, theorems of electrical circuits and also to analyze them.
- To study the different energy sources, protective devices and their field applications.
- To understand the principles and operation of measuring instruments and transducers.

PROGRAMME SCHEDULE

08.11.2017

SESSION I : AC CIRCUITS

Three phase power supply – Star connection – Delta connection – Balanced and Unbalanced Loads- Power equation – Star Delta Conversion – Three Phase Power Measurement

SESSION II : DC CIRCUITS

Basic circuit components -, Ohms Law - Kirchhoff's Law – Instantaneous Power – Inductors - Capacitors – Independent and Dependent Sources - steady state solution of DC circuits - Nodal analysis, Mesh analysis

SESSION III : NETWORK THEOREMS

Thevenin's Theorem, Norton's Theorem, Maximum Power transfer theorem- Linearity and Superposition Theorem.

SESSION IV : SIMULATION OF DC & AC CIRCUITS USING Pspice

09.11.2017

SESSION V : DC MACHINES

Introduction – Constructional Features– Motoring and generation principle - Emf And Torque equation – Circuit Model – Methods of Excitation and magnetisation characteristics – Starting and Speed Control – Universal Motor

SESSION VI : AC MACHINES

Principle of operation of three-phase induction motors – Construction –Types – Equivalent circuit, Single phase Induction motors - Construction– Types–starting and speed control methods. Alternator-working principle–Equation of induced EMF – Voltage regulation, Synchronous motors- working principle-starting methods – Torque equation – Stepper Motors – Brushless DC Motor

SESSION VII : TRANSFORMER

Introduction - Ideal Transformer – Accounting For Finite Permeability And Core Loss – Circuit Model Of Transformer – Per Unit System – Determination Of Parameters Of Circuit Model Of Transformer – Voltage Regulation – Name Plate Rating – Efficiency – Three Phase Transformers - Auto Transformers.

SESSION VIII : POWER SYSTEM

Transmission & Distribution of electrical energy – Over head Vs Underground system – Protection of power system – types of tariff – power factor improvement

10.11.2017

SESSION IX : UTILIZATION OF ELECTRICAL POWER

Renewable energy sources-wind and solar panels. Illumination by lamps- Sodium Vapour, Mercury vapour, Fluorescent tube. Domestic refrigerator and air conditioner-Electric circuit, construction and working principle. Batteries-NiCd, Pb Acid and Li ion–Charge and Discharge Characteristics. Protection-need for earthing, fuses and circuit breakers. Energy Tariff calculation for domestic loads.

SESSION X: ELECTRONIC DEVICES & CIRCUITS

Types of Materials – Silicon & Germanium- N type and P type materials – PN Junction –Forward and Reverse Bias –Semiconductor Diodes –Bipolar Junction Transistor – Characteristics – Field Effect Transistors – Transistor Biasing

SESSION XI: INTEGRATED CIRCUITS

Introduction to operational Amplifier –Inverting Amplifier –Non Inverting Amplifier –DAC – ADC, Multi vibrator using 555 Timer IC . Voltage regulator IC using LM 723, LM 317

SESSION XII: SIMULATION OF LINEAR INTEGRATED CIRCUITS

11.11.2017

SESSION XIII: ELECTRICAL MEASUREMENTS

Characteristic of measurement-errors in measurement, torque in indicating instruments- moving coil and moving iron meters, Energy meter and watt meter

SESSION XIV: ELECTRICAL INSTRUMENTS

Introduction to transducers - Classification of Transducers: Resistive, Inductive, Capacitive, Thermoelectric, piezoelectric, photoelectric, Hall effect and Mechanical - ,Classification of instruments - Types of indicating Instruments - multimeters –Oscilloscopes- – three-phase power measurements – instrument transformers (CT and PT)

SESSION XV: MEASUREMENT & INSTRUMENTATION LAB

PARTICIPANTS

Faculty members to handle subjects with Code **BE8253, BE8254 and BE8255**(Anna University Regulation 2017 CBCS) and other interested faculty Members of Engineering Colleges and Universities.

REGISTRATION FEE PER PARTICIPANT: RS. 750/-

Online Registration:

<https://goo.gl/forms/Hcf9SjjEBn4wRUxg2>

**Payment mode : Cash / DD/ Online
DD & Cheque in the name of "Rajalakshmi Institute of Technology"
payable at Chennai.**

**Bank Name : Punjab National Bank
A/c No. : 6076002100000266
IFSC : PUNB0607600
Last Date : 06.11.2017**

REGISTRATION FORM

Faculty Development Programme on Basic Electrical, Electronics, Measurement and Instrumentation Engineering

08th to 11th November 2017

Name:

Designation & Department:

Institution:

Address:

Mobile No.:

E-mail:

Accommodation: Yes / No

PAYMENT DETAILS: Cash/ DD/ Cheque/ Online

Online Transaction ID:

SIGNATURE

Registration Form to be sent to

The Coordinator,

FDP on BEEMIE,

Rajalakshmi Institute of Technology,

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