DEPARTMENT BROCHURE 2022-23

Electrical and Electronics Engineering

CVR COLLEGE OF ENGINEERING

(An Autonomous Institution, Recognized under 2(f) and 12 (B)of UGC Act)
with NAAC 'A' Grade, NBA Tier 1 Accrediated (11 Branches)
(Approved by AICTE & Government of Telangana and Affiliated to JNTU, Hyderabad)
Vastunagar, Mangalpalli (V), Ibrahimpatan (M), R.R. District, TS- 501 510
Ph.No. 08414-661601 / 661674 / 661675

Block Wise Solar PV Plant Installation Capacities

Name of the Sub-Plant	Installed Power
PG Block (Seasonal Tilting)	120 kWp
Main Block (Single Axis Tracking)	40 kWp
Main Block (Sing Axis Polar Tracking)	40 kWp
CSE Block (Single Axis Tracking)	60 kWp
Library (Seasonal Tilting)	20 kWp
First Year Block	80 kWp

PREAMBLE

Dear Students and Parents,

I welcome one and all to CVR College of Engineering, Hyderabad, an autonomous institution affiliated with JNTU, Hyderabad.

CVRCE is committed in providing quality/relevant education and enhancing its practices by applying Best National and International practices.

The Technological revolution and the forces of globalization are changing the very functioning of organizations significantly in recent years. We at CVRCE are alive to these changes and taking all the steps to mould our products accordingly.

We strive for search results continuously to enable our students to move forward and confidently to embrace change rather than follow; to innovate rather than stagnate and initiate rather than merely respond thereby becoming efficient technocrats and dynamic entrepreneurs.

We are committed to having an environment that provides expanded employment opportunities to our students and an enriched knowledge base for our faculty. We are happy to observe that employers' interest in CVRCE is very high as evidenced by the excellent placement opportunities offered to our students in several industries & organizations.

Our Alumni occupy important positions in prestigious Organizations in India and abroad. Attaining excellence in Quality Technical Education is the goal of CVRCE which has tremendous potential of developing into a great academic institution. The Management, the Faculty, the Students, and the supporting staff are all working forever towards achieving the goal.

I invite you to our CVRCE campus and experience the difference with a new breed of budding technocrats of tomorrow.

Dr. S. Venkateshwarlu
Professor & Head,
EEE Department

INDEX

80 KW SOLAR POWER PLANT WITH SINGLE - AXIS ROTATION INSTALLED ON THE ROOFTOP OF MAIN BLOCK

POSITION–1

POSITION - 2

POSITION - 3

PG BLOCK

CSE DEPARTMENT

LIBRARY BLOCK

HOSTEL

360 kWp –Grid Connected Solar Plant on Rooftop

Overall Energy Statistics of Different Solar Power Plants

Location of the Plant	Nature of the Plant	Installed Capacity	Energy Produced as on date (kWh)	Reduction in CO_2 Emission (Tonnes)
EEE Block	Seasonal Tilt	120.00 kWp	1145324	630
Admin Block	Single Axis tracking	40.00 kWp	276912	152
Library	Seasonal Tilt	20.00 kWp	111162	61
Admin Block	Single Axis Polar tracking	40.00 kWp	252675	140
CSE Block	Single Axis tracking	60.00 kWp	233784	130
First Year Block	Single Axis tracking	40.00 kWp	208993	114
	Seasonal Tilt	40.00 kWp		
Overall Plant Capacity		360.00 kWp	2228850	1227

VISION:

To emerge as a premier centre in Electrical and Electronics Engineering with scientific quest and focusing on human values and professional ethics.

MISSION:

- Provide good academic environment for pursuing high quality Undergraduate and Postgraduate in Electrical & Electronics Engineering that will prepare our graduates for successful career.
- Provide service to practicing engineers, industry, educational and technical societies through effective engagement with these groups and by providing professional knowledge.
- Ensure that our students are well trained in interpersonal skills, teamwork, professional ethics, practical training and participate in professional society activities.
- To promote well-built research culture in students for life-long learning and to develop qualities of service to economically and socially backward citizens of the country.

ABOUT THE DEPARTMENT:

- The Department was started in the year 2001 with an intake of 40 (B.Tech. in Electrical & Electronics Engineering) and at present intake is 60.
- Dr. S. Venkateshwarlu is heading the Department since November 2013. The Department was previously led by Dr. S. Kamakshaiah, Professor of EE (Retd.), JNTUH who has served as HOD for a period of 6 years (from 2003 to 2009) and Dr. K. Dhanvantri, Professor of EE (Retd.), OU who has served as HOD during 2009-2013.
- The Department has 12 state-of-art laboratories with an investment of more than 2 crores.
- Accredited by NBA in the year 2007 for 3 years, reaccredited in 2013 for 2 years, again in 2016 for 2 years under Tier-1 &extended for one more year and then in 2019 for 3 years under Tier-1.
- M. Tech program in Electrical Power Engineering was started in the year 2010.
- The Department has a Technical Association (ELECTROCRUISE) which organizes various technical workshops, training programs and service to society activities every year on regular basis.
- Well qualified and committed faculty: 26 with 5 Professors, 8 Associate Professors and 13 Assistant Professors. Out of these all the faculty members are postgraduates with first class in UG and PG degrees. There are 10 doctorates and 13 faculty members are pursuing their Doctoral work at reputed universities.
- As a part of social responsibility, Eco-Friendly Solar Power Plants of capacities 120kW, 80kW, 60kW, 20kW and 80kW are installed on the roof tops of college buildings.
- All Professors of the Department are reviewers for National & International Journals.

PROFILE OF FACULTY MEMBERS OF THE DEPARTMENT

TEACHING STAFF, QUALIFICATIONS, EXPERIENCE WITH SPECIALIZATIONS

	Dr. S. Venkateshwarlu *Professor and Head of the Department* *B. Tech. (EEE), M. Tech. (NIT-W), Ph. D. (OU)* **Specialization**: Electrical Machines and Industrial Drives. **Experience:** He has a total experience of 28 years in teaching. He was Assistant Professor at Arbaminch University, Ethiopia under UNDP scheme during 2004-07. He was professor in EEE Dept. at SNIST for 2 years. He was Professor and Head of the department of Electrical and Electronics Engineering in SNIST for 3 years. He has taken charge as HOD in CVR college of Engineering from November 2013. He is a reviewer for IEEE and other peer reviewed journals. He has received "Best Teacher Award" twice at SNIST, Hyderabad in the years 2002 & 2003. He has completed *1 JNTU-TEQIP III Project* and one AICTE sponsored FDP. He is an associate editor of CVR Journal of science and technology. He is the BOS chair of EEE Department. He is the president of Ek Bharat Shrestha Bharat club of CVR college of engineering. **Publications:** *International Journals – 14, National Journals –10, International Conferences – 10, National Conference -3* *Ph.D. Guided: 1 (completed), 3 (Under Progress)* Cell: 9490749568, Email: Official- hod.eee@cvr.ac.in Personal- svip123@gmail.com
	Dr. G. Sree Lakshmi *Professor* *B. Tech. (EEE), M. Tech., Ph. D. (JNTUH)* **Specialization:** Power Electronics and Industrial Drives She is the NBA coordinator for EEE Dept., CVRCOE and Faculty coordinator for IEEE-WIE in CVRCOE. She is Chair for WIE AG IEEE Hyderabad Section. **Experience:** Teaching -20 years **Publications:** *International Journals – 18, National Journals –5, International Conferences – 20, National Conferences– 4* Cell: 8897893714, Email: Official- g.sreelakshmi@cvr.ac.in Personal- sreelakshmisampath@gmail.com

Dr. K. Shashidhar Reddy
Professor
B. Tech. (EEE), M. Tech., Ph. D. (JNTUH)
Specialization: *Energy Systems*
He was Professor and Head of the department of Electrical and Electronics Engineering in St. Martins Engineering College for 10 years. He has received best teacher award in the year 2016 (St. Martins Engineering College). He is presently NBA coordinator for M.Tech. (EPE) Program in CVRCOE. He is presently Department AICTE 360 degree feedback coordinator and M.Tech. EPE Program coordinator.
Experience: Teaching -20 years, Research -12 years
Publications: International Journals –10, National Journals –4,
International Conferences – 8, National Conferences -2
Cell: 9849649385, Email: Official- drshashidhar@cvr.ac.in
Personal- shashidhar.kotha5@gmail.com

Dr. M. Lakshmiswarupa
Professor
B. Tech. (EEE), M. Tech., Ph. D. (JNTUH)
Specialization: Control Systems
She was Professor and Head of the department of Electrical and Electronics Engineering in Malla Reddy Engineering College for 10 years. She also served as Dean R&D. She has completed 1 *UGC Minor Research Project, 1 AICTE STTP , 1 JNTU-TEQIP III Project, 2 DST-NewGen IEDC project.*
She is presently department R& D Coordinator, IIC Coordinator and ARIIA Coordinator of the college.
Experience : Teaching -17 years
Publications: International Journals – 20,
International Conferences –20, National Conferences -7
Cell:9849732190, Email: Official- swarupamalladi@cvr.ac.in
Personal- swarupamalladi@gmail.com

Dr. Ch. Lokeshwara Reddy
Professor
B. Tech. (EEE), M. Tech., (JNTUH), Ph. D (JNTUH)
Specialization: Power System- High Voltage Engineering.
Experience: Teaching - 20 years
He has served as college academic counsel member for 3 years. He is presently B.Tech. NBA Co-Coordinator in the department.
Publications: International Journals – 15
International Conferences –11
Cell: 9701114325, Email: Official- lokeshwar.reddy@cvr.ac.in
Personal- reddy.lokeshwar@gmail.com

	Dr. R. Vijay
	Associate Professor
	B. E. (EEE), M. E., (Anna University) Ph.D (Anna University)
	Specialization: Power System Engineering
	Experience: Teaching -10 years
	He had worked as an Assistant Professor in the Department of EEE, Anna University Coimbatore, India. He has reviewed about 150 articles in the refereed SCI Indexed Impact Factor Journals. He has guided 24 M.E. Dissertations also made him eligible for Ph.D Guideship under Anna University Chennai. He is the honorary member of Indian Society for Technical Education, Institution of Engineers, etc.,
	Publications: *International Journals – 27,*
	        International Conferences – 8, National Conferences – 2
	        Book Chapters – 3
	Cell: +91-9952322511, Email: Official- vijai.mtp@cvr.ac.in
	Personal- vijai.mtp@gmail.com

	Dr. A.S.S. Murugan *Associate Professor* *B. E. (EEE), M. E. (MK University). Ph.D. (Anna University)* **Specialization:** *Power System Engineering* **Experience:** Teaching -19 years ***Publications:*** *International Journals – 10, National Journals – 1* *International Conferences – 5, National Conferences 29* He has published a book titled, "Electrical Engineering and Instrumentation" AR Publication, Chennai, 2017 along with two more authors. He is a life member in Indian Society for Technical Education (ISTE), Institution of Engineers (India) IE. He is a member, International Association of Engineers (IAENG). He is also a fellow, International Society for Research and Development (ISRD). He is Reviewer of Journal COMPEL (The International Journal for Computation and Mathematics in Electrical and Electronic Engineering) Cell: 9344661182, Email: Official- assm17174@cvr.ac.in Personal- assm17174@gmail.com
	Dr. D Obulesu **Associate Professor** **B. E. (EEE), M.Tech. (Dr. MGR UNIVERSITY). Ph.D. (JNTUH)** **Specialization:** Power Electronics and Electrical Drives **Experience:** Teaching -17 Years ***Publications:*** *International Journals – 20, National Journals - 2* *International Conferences – 3, National Conferences 6* He was Professor and Principal for 1 year in Vemu Institute of Technology, Chittor. He also worked as Professor and Vice-Principal for 2 years & Associate Professor and Head of the department for 5 years in Vemu Institute of Technology, Chittor. He is reviewer for 2 International Journals. He has life memberships in MISTE, MSSI, MIETE. Cell: 9441078630, Email: Official- dakkaobulesh@cvr.ac.in, Personal- dakkaobulesh@gmail.com

Mr. G. Manohar
Associate Professor
B.E. (Elec.), M. E (OU), (Ph.D. pursuing in -JNTUK)
Specialization: Industrial Drives and Control.
He has reviewed 2 text books for TMH Publications.
Experience: Teaching - 24 years
He is department coordinator for Continuous Internal Evaluation of students
Publications: *National Journal –5 International Journals:3,*
International Conferences – 4, National Conferences -8
Cell: 9440486972, Email: Official- manohar.gangikunta@cvr.ac.in
Personal- manohar.gangikunta@gmail.com

Mr. B. Kalyana Chakravarty
Associate Professor
B. Tech. (EEE), M. E. (OU), (Ph.D. pursuing in -OU)
Specialization: Industrial Drives and Control.
Experience: Teaching - 15 years
He is placement coordinator of the department
Publications: *National Journal –3*
International Conferences – 1, National Conferences -2
Cell: 9502266039, Email: Official- bk.chakravarthy@cvr.ac.in
Personal- bkalyan@gmail.com

Mrs. R. Naveena Bhargavi
Associate Professor
B. Tech. (EEE), M. Tech. (JNTUH), (Ph.D. pursuing in -OU)
Specialization: Electrical Power Engineering.
Experience: Teaching - 20 years
She is the IQAC coordinator for EEE Dept,CVRCOE.She has served as reviewer for IEEE -TALE conference held during the last 4 years since 2018. She has also served as reviewer for Springer Nature journal, Journal of Electrical Engineering in 2020. She is a member of the women grievance cell and anti ragging committee of the college.
Publications: *International Journals – 6, National Journal –4,*
International Conferences – 8 National Conferences-2
Cell: 9885994857, Email: Official- rn.bhargavi@cvr.ac.in
Personal- bhargavi.rn5@gmail.com

Mr. P. Rajesh Kumar
Associate Professor
B. Tech. (EEE), M. E. (OU), (Ph.D. pursuing in GITAM UNIV)
Specialization: Power Systems
Experience: Teaching - 18 years
He was Head of the department of Electrical and Electronics Engineering in VMTW for almost 3 years. He is electrical Maintenance In-Charge of the college.
Publications: *International Journals –8,*
International Conferences – 4, National Conference -4
Cell: 9100505739, Email: Official- p.rajeshkumar@cvr.ac.in

	Mr. P. Vinodh Kumar *Associate Professor* *B. Tech. (EEE), M. Tech. (GRIET), (Ph. D pursuing in JNTUH)* **Specialization :** Power Electronics **Experience:** Teaching -9 years He is Faculty advisor for student Technical Association 'ELECTROCRUISE' in EEE Dept., CVRCOE. He is the ISTE Coordinator of the college. He is the in-charge for R&D Lab of the department. ***Publications:*** *National Journals –4, National Conferences -2* Cell: 9866940740, Email: Official- p.vinodkumar@cvr.ac.in Personal- onlyvinod56@gmail.com
	Mr. Rajib Kumar Kar *Senior Assistant Professor* *B. E. (Elec.), M. E. (Punjab Engineering college)* **Specialization:** Power Systems **Experience:** Industry – 20 years, Teaching - 15 years He was a technical officer in the Indian Air Force for a period of 20 years. He is presently the department SPOC for faculty and course-file in-charge ***Publications:*** *International Conference – 3* Cell: 9885541579, Email: Official- rk.kar@cvr.ac.in Personal- rajibkrkar@yahoo.co.in
	Mrs. Vimala Gupta **Senior Assistant Professor** **B. Tech. (EEE), M. E. (OU), (Ph. D pursuing in NIT, Warangal)** **Specialization:** Industrial Drives and Control **Experience:** Teaching - 17 years She is the Newsletter In-charge and Main Library In- charge and NPTEL Coordinator from the Department **Publications:** International Conference – 2 Cell: 8712876411, Email: Official- vimalagupta@cvr.ac.in Personal- vimala.cvreee@gmail.com
	Mr. G. Janardhan **Senior Assistant Professor** **B. Tech. (EEE), M. E. (OU), (Ph. D pursuing in JNTUH)** **Specialization:** Industrial Drives and Control **Experience:** Industry – 1 year, Teaching - 9 years He is the in-charge of guest lectures in the Department **Publications:** National Journal –2, International Journals -2 International Conferences–2,National conferences-2 Cell: 9959960459, Email: Official- g.janardhan@cvr.ac.in Personal- janumtech009@gmail.com

	Mrs. M. Rajitha
	Senior Assistant Professor
	B.Tech. (EEE), M.Tech. (CVR college of Engineering)(Ph. D pursuing in JNTUH)
	Specialization: Electrical Power Engineering
	Experience: Teaching: 10 Years
	Publications: International Conferences –1
	                National Conferences –5
	Responsibilities–She is Alumni affairs Coordinator and AICTE 360 degree feedback coordinator for the department. She is also M.Tech. NBA Co coordinator
	Contact number: 9666013723
	Email: Official- m.rajitha@cvr.ac.in
	        Personal- morampudirajita@gmail.com

	Mr. D. Sreenath Reddy **Asst. Professor** **B. Tech. (EEE), M. Tech. (VNIT, Nagpur), (Ph.D. pursuing in JNTUA)** **Specialization:** Integrated Power Systems **Experience:** Industry -1 year, Teaching - 11 years **Publications:** National Conference -4, National Journal-1 Cell: 9642146765, Email: Official- sreenadh.reddy@cvr.ac.in Personal- d.sreenadhreddy@gmail.com
	Mrs. Ch. Shravani **Senior Assistant Professor** **B. Tech. (EEE), M. Tech. (college of Engineering & Technology,), (Ph. D. pursuing in JNTUK)** **Specialization :** Power Electronics **Experience :** Teaching -14 years She is presently Department timetable Incharge, Faculty Incharge for lab examination and Faulty In-charge for Industrial Visits **Publications :** International Journals –6 International Conferences–12,NationalConference- 5 Cell: 9493963558, Email : Official- ch.shravani@cvr.ac.in Personal- shravanic2@gmail.com
	Dr. K.S.V. Phani Kumar **Senior Assistant Professor** **B. Tech. (EEE), M. Tech. (SRM University), (Ph. D. at JNTUH)** **Specialization:** Power Systems **Experience:** Teaching – 11 years He is projects lab in-charge of the department and takes care of all the projects done by students **Publications:** International Journal –10, National Journal –4 International Conference – 3 Cell: 9652974377, Email: Official- ksv.phani@cvr.ac.in Personal- phani5016@gmail.com

Mrs. K. Deepika
Asst. Professor
B. Tech (EEE), M. Tech. (College of Engineering, Pune), (Ph. D pursuing in GITAM, Hyderabad)
Specialization: Power Systems
Experience: Industry – 2 years, Teaching -8 years
She is presently department website in-charge
Publications: International Conference – 4, National Journal –2, National Conference -4
Cell: 9849842024, Email: Official- k.deepika@cvr.ac.in
Personal- deepika.kalluri@gmail.com

Mr. R. Harsha Vardhan
Assistant Professor
B. E. (EEE), M. Tech. (VNR-VJIET)
Specialization: Power Electronics
Experience: Industry – 3 years, Teaching – 12 years
He is presently the Department Library in-charge. He is chief editor of the department magazine "VIDHYOUTH"
Publications: International Journal –2,
International Conference – 4 National Conferences: 3
Cell: 7801005657, Email: Official- r.harshavardhan@cvr.ac.in
Personal- 83.harsha@gmail.com

Mrs. G. Divya
Assistant Professor
B. Tech. (EEE), M. Tech. (SNIST),(Ph. D pursuing in GITAM, Hyderabad)
Specialization: Electrical Power Engineering
Experience: Industry – 3 years, Teaching – 5years
She is Faculty advisor for Student Technical Association 'ELECTROCRUISE' in EEE Dept., CVRCOE
Publications: National Conference -2NationalJournal-2
International Conference-10, International Journal-1
Cell: 9703244042, Email: Official- divya.gongidi@cvr.ac.in
Personal- divya.gongidi@gmail.com

Mrs. V.Ch.S.N. Lavanya
Assistant Professor
B. Tech. (EEE), M. Tech. (CVR college of Engineering), (Ph. D pursuing in GITAM, Vizag)
Specialization: Electrical Power Engineering
Experience: Teaching – 4 years
Publications: *National Conference -2, International Conference-3*
National Journal-1
Responsibilities: She is presently the ISTE EEE Department coordinator, M.Tech. timetable In-charge and M.Tech. EPE Program co-coordinator
Cell:8885640200, Email: Official-chaya.lav@cvr.ac.in
Personal- chaya.lav@gmail.com

Ms. M. Tejasvi
Assistant Professor
B. Tech. (EEE), M. Tech. (CVR college of Engineering)
Specialization: Electrical Power Engineering
Experience: Teaching – 2 years
Publications: *National Conference - 1*
She is presently the co-coordinator for the B. Tech Timetables
Cell: 9704535745, Email: Official- tejureddy929@cvr.ac.in
Personal- tejureddy929@gmail.com

Dr. Vishwanatha Siddhartha
Assistant Professor
B. Tech. (EEE), M. Tech., (NIT Kurukshetra), Ph.D (IIT Roorkee)
Specialization: Power Electronics
Experience: Teaching - 2 years
He is presently the IEEE Coordinator for the Department coordinator
Publications: *International Journals – 4*
                    International Conferences –6
Cell: 7416664951, Email: Official- vsiddhartha@cvr.ac.in
Personal- vsiddhu251@gmail.com

LABORATORY FACILITIES AVAILABLE IN EEE DEPARTMENT

- Electric Circuits Lab
- Electrical Machines Lab
- Circuit Design and Fabrication Lab
- Electrical Measurement Lab
- Electrical & Electronics Engineering Lab (Service Lab)
- Control Systems and Simulation Lab
  Microcontrollers Lab
- Power Systems Lab
- Power Semiconductor Drives Lab
- Computer Aided Electrical Engineering Lab
- Renewable Energy System lab
- Design Lab
- Project Lab
- Research Lab
- Computer Centre
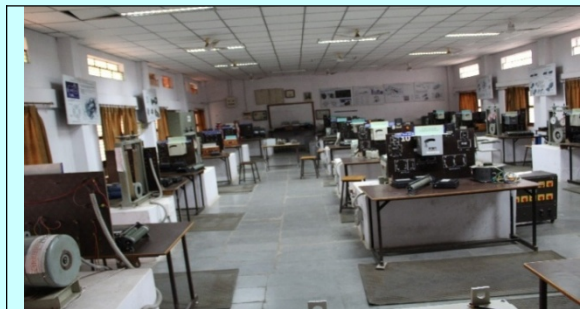
Electrical Machines Lab
This lab facilitates students in performing experiments on various DC and AC Machines which are widely used in industry.
Major equipment:
DC Generators and Motors
AC Generators and Motors
Transformers,
Rectifier Unit 220V, 100 A

Electrical Circuits & Simulation Lab
Experimental verification of various network theorems and basic analysis of circuits using trainer kits and simulation tools can be performed in this lab.
Major equipment:
Regulated power supplies
PSPICE Simulation Tool
Training Kits for theorems.

Control Systems & Simulation Lab

Students implement various types of compensators; control of servo drives and PLCs using experimentation and simulation.

Major equipment:

DC & AC Servo motors

PLC trainer kit with Traffic Light Control Application

Synchros & CROs

MATLAB & PSPICE

Power Electronics & Simulation Lab

Students perform experiments to obtain characteristics of power semiconductor devices, Phase controlled Rectifiers, Inverters, choppers and Cyclo-converters with various loads.

Major equipment:

Converters (Rectifiers, Inverters)

Firing circuits

Storage oscilloscopes

PSPICE

Microcontrollers Lab

Hands-On Experience on 8086 Micro-Processors & 8051 Controllers for real-time control applications using MASM and Keil software.

Major equipment:

Embedded Controller Boards

PCs

Electrical Measurements Lab

Testing of CT, PT and characteristics of various sensors, along with measurement of various electrical parameters.

Major equipment:

HT Oil Testing Kit

CTs, PTs & Phase shifting transformers

R,L,C bridges

LVDT, Strain Gauge

Power Systems Lab

This is a state-of-the-art lab and CVR is one of the few colleges having this laboratory. The fault analysis in transmission lines, performance characteristics of various relays and protection schemes for generators and transformers are carried out.

Major equipment:

Transmission line simulator
Relays
Synchronous machines and Transformers

Projects Lab

Students develop hardware models as part of mini and major projects.

Major facilities:

Work benches with Regulated Power Supplies And Digital Storage Oscilloscopes
Cutting Machines
Tool Kits

Electrical& Electronics Engineering Lab

Major equipment: DC Machine, AC Machine, Transformers, Rectifier Unit, Regulated power supplies, Bread boards

M.Tech (EPE) Lab

Major equipment: PCs, MATLAB/Simulink software, PSCAD, PSPICE software, Proteus

Research Lab

Major equipment:PCs, Work Benches, PCB Machine
DSP card, Scope-Corder, Storage Oscilloscopes, 3D Printer.

Department Library

The department library has 425 volumes, 264 titles, reports of main project and mini projects. The library is open during working hours for the EEE students and faculty.

ELECTROCRUISE(A Student Technical Association)

Technical Association Inauguration

Rangoli made by III Year Students

Chairman Dr. Cherabuddi V. Raghava felicitating Chief Guest Dr. V. T. Soma Sekhar, NIT Warangal

Ms. Mounika, III Year Student briefing about her project to the Chairman, Principal and Professors

"Elecrocruise" is a student technical association formed in 2014 by the students of EEE. The body consists of 24 student members. The association regularly conducts technical and non-technical events like PCB workshop, Microcontroller workshop, Community outreach (Swatch Bharath) activities etc. A special activity A. R. I. S. E (A Revolution In Social Empowerment) involves in social activities like water bottles distribution for drinking, career awareness programs & teaching basic computer skills to nearby government school students. The association organizes technical events like Faraday Birthday celebrations, project expo and 'FUERZA' (EEE technical fest) on regular basis.

LIST OF ACTIVITIES (AY 2021-22)

1. II EEE students visited Nagarjuna Sagar Hydro Power Plant on 02.07.2022

2. II, III year students attended a guest lecture on the topic "General Structure of Power System, Rules of Electricity" delivered by Mr. Manikya Chakravarthi Divisional. Engineer, TSSPDCL, on 8.07.2021.

3. III, IV year students attended a guest lecture on the topic "PFC Converters for EV applications delivered by Dr. Naveen Yalla, Asst. Professor, NIT Tirucharapalli on 22.09.2021.

4. III, IV year students attended a guest lecture on the topic "EHV Substations" by Mr. Ramakrushna Reddy, Assistant Engineer, TS Transco on 23.11.2021.

5. II, III year Students attended a 2 day workshop on "Power Electronics Circuits Design Hands-On Training" on 28th, 29th March 2022.

6. II, III year students conducted a community outreach activity at patelguda high school on 10th December 2021.

7. II, III-year students conducted Celebrations on the event of Michael Faraday's Birthday On 22nd September 2021.

LIST OF ACTIVITIES (AY 2019-20)

1. II EEE A&B students visited Kotthagudem Thermal Power Station KTPS, Palvancha during 25.01.2020&26.01.2020

2. III EEE A&B students visited Vizag Steel Plant, Vishakapatnam during 04.01.2019&06.01.2019

3. III yr EEE attended a guest lecture on the topic "Trends in Power System Protection Practices" delivered by Mr. B. Neelakantam DE, TS Transco by 19.07.2019.

4. II & III &IV EEE attended a guest lecture on the topic "Quantum Dot Circuits" delivered by Mr. Sourav Karmakar, Founder & Head, Infinos Tech LLP on 10.08.2019.

5. III & IV EEE attended a guest lecture on the topic " Solar Photo voltaic technologies & trend" delivered by Col Dr. T.S. Surendra, Chief Advisor, Surabhi institute of renewable Energy on 11.10.2019.

6. III&IV EEE attended a guest lecture on the topic" Recent Trends in Charging Stations/Chargers for Electric Vehicles" delivered by Mr.John Zacharia, CEO,M/s High Energy Plast Chem, Hyderabad on 06.01.2020.

7. III&IV EEE attended a guest lecture on the topic" Grid-Integration of Renewable Energy sources and Electric Vehicles Dr. Chandrasekhar Perumalla Asst. Prof, EEE Dept., IIT Bhuvaneshwar 02.05.2020.

8. II, III-year students conducted a Community Outreach Activities At Z.P.H.S High School-Patelguda 5th September 2019.

9. II, III, IV year students conducted a Technical Feast "Fuerza-2019" on 25th October 2019.

10. II, III-year students conducted a Community outreach activity at Kongarakalan Primary School on 10th February 2020.

LIST OF ACTIVITIES (AY 2018-19)

1. III EEE A&B students visited Srisailam Hydel Power Plant during20.07.2018 & 21.07.2018

2. A guest lecture titled "Automation in Distribution sector SCADA" is conducted on 07.08.2018 to B. Tech. III year students and the speaker is Mr. Puppala Narender Kumar, Retd. DE, APSPDCL.

3. A 2 day workshop is conducted by the IV year students to the III year students on "Electronic Circuit Design & PCB fabrication" 30th and 31thAugust, 2018 under the guidance of Mr. P-. Vinodh Kumar, Assoc. Professor and Mr. T. Murali Krishna., Asst. Professor. A total of 79 students registered for the event.

4. Faraday's Birth Anniversary Celebrations on 25thSeptember, 2018

   - EEE Dept. Celebrated Birth Anniversary (22nd September) of Eminent Scientist Michael Faraday, who is Ancestor ofModern Power Generators & Electric Motorson25th Sept 2018 Under Technical association "Electrocruise". This Program is organized by Mr. P. Vinodh Kumar, Asst. Professor.&Mr. T. Murali Krishna, Asst. Professor.

   - The chief guest for the event is Mr. P, Narender Kumar, Retd. DE, APSPDCL.

5. On the eve of this celebration EEE dept. Conducted various events like Guest Lecture on "Indian power sector generation transmission distribution issues and challenges" and Technical quiz for II, III and IV year students.

6. A guest lecture titled "Power system Stability studies" is conducted on 25.09.2018 to B. Tech. III-year, IV-year, M. Tech. students and the speaker is Mr.B.Neelakantam DE,TS Transco.

7. A 2 day workshop is conducted by the IV year students to the III year students on "Electronic Circuit Design & PCB fabrication" 26th and 27thSeptember, 2018 under the guidance of Mr. P. Vinodh Kumar, Assoc. Professor and Mr.T. Murali Krishna, Asst. Professor. . A total of 77 students registered for the event.

8. III EEE A&B students visited Vizag Steel Plant,Vishakapatnam during 04.01.2019&06.01.2019

9. II EEE A&B students visited Kotthagudem Thermal Power Station KTPS, Palvancha during 16.03.2019&18.03.2019

LIST OF ACTIVITIES (AY 2017-18)

1. A 2 day workshop is conducted by the IV year students to the III year students on "Electronic Circuit Design & PCB fabrication" 28th and 29th July, 2017 under the guidance of Mr. P. Vinodh Kumar, Assoc. Professor and Mrs. K. Deepika, Asst. Professor

2. In this workshop, the students learn various circuits like power supply, audio amplifier, IR circuit which will give them basic ideas on the electronic circuits.

3. Electrocruise, the Technical Association, of the EEE department have conducted ARISE activity on 12th September, 2017. ARISE – A Revolution in Social Empowerment have formed a team of 21 students of III yr EEE lead by Mrs. K. Deepika, Asst. Professor, Mr. K. S. V. Phani Kuamr, Asst. Professor and Mr. M. Suresh, Asst. Professor to conduct a social awareness program in the nearby Z.P.H. School, Pocharam.

4. The team has reached there by 9.45 am and taken classes to the high school sections from VI to IX classes. Classes were conducted on various topics like Nutrition and its effects, Sports & Fitness, Communication skills and Patriotism.

5. For X class students a practical approach to their physics academics has been introduced. Projects were demonstrated for the concepts like series parallel connection of resistors, working of motors, generators which are there in their syllabus.

6. Also, few projects like traffic density control, light intensity control, line followers are demonstrated. We have also donated two kits for the high school which will help them in explaining the concepts.

7. It was a wonderful social outreach program which gave motivation to the school children and also triggered the importance of technology to their minds.

8. Faraday's Birth Anniversary Celebrations on 22nd September, 2017

9.   EEE Dept. Celebrated Birth Anniversary of Eminent Scientist Michael Faraday, who is Ancestor of Modern Power Generators & Electric Motors On 22nd Sept 2017 Under Technical association "Electrocruise". This Program is organized by Mr. P. Vinodh Kumar, Asst. Professor & Mrs. K. Deepika , Asst. Professor.

10.   The chief guest for the event is Dr. B. Mangu, Professor in Electrical Engineering Department, College of Engineering, Osmania University.

11.   On the eve of this celebration EEE dept. Conducted various events like Guest Lecture on "Introduction to Power Evacuation Strategies from Solar Photo Voltaic Energy Systems" for II, III & IV Year EEE), Technical quiz (II, III and IV year). The Technical Quiz is conducted by Mrs. K. Deepika, Asst. Prof. , Mrs. M. Suresh, Asst. Prof. and Mr. K. S. V. Phani Kumar, Asst. Prof.

12.   An Inter College Department Technical Fest – "FUERZA'18" held on Jan 10th,2018

13.   As a part of student technical association of EEE Dept., Electrocruise, Department of Electrical and Electronics Engineering has organized inter college technical fest for aspirants from various engineering colleges with a very high competitive spirit to participate in this event.
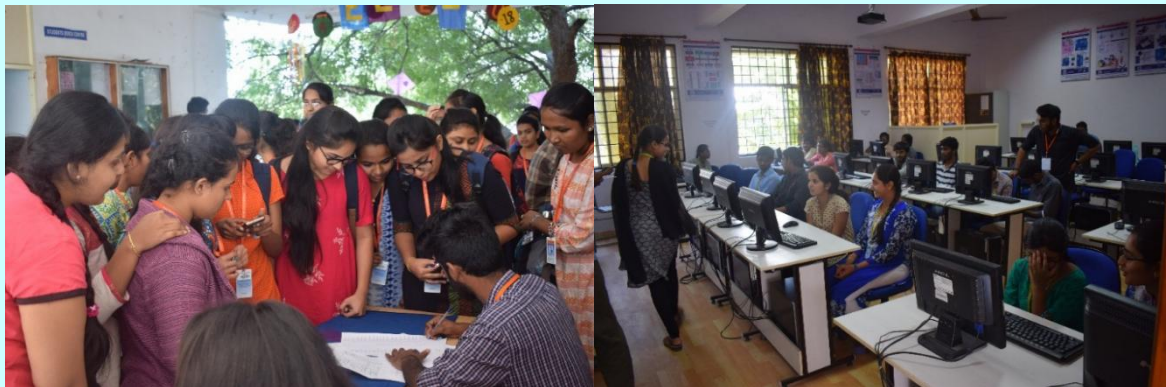
- With the funding provided by the college, **FUERZA'18** has been organized with great enthusiasm and determination of the student coordinators, student volunteers and faculty coordinators on Jan 10th,2018. It has provided the platform for the students to showcase their talent. The event was successful enough to attract as many as 465 registrations in total in one day including all the events.

- The fest was executed with a total of 11 events consisting of 3 technical events and 8 non-technical events planned and organized at its best of quality. The Technical events conducted are Paper Presentation, Project Expo, Poster Presentation and the Non-technical events conducted are Electro Riddle, Fun from Junk, Friendship Meter, Tasky Ludo, Selfie Kecho, Beg-Borrow-Steal, Cvrite Alchemy, Mini-militia.

- The no of participants in various events are as follows:

Technical Events	No of Participants
Paper Presentation	20 Teams
Project Expo	08 Teams
Poster Presentation	06 Teams
Non-Technical Events	**No of Participants**
Electro Riddle	70
Fun from Junk	100
Friendship Meter	168
Tasky Ludo	200
Selfie Kecho	120
Beg Borrow Steal	50
Cvrite Alchemy	41
Mini-militia	106

- Many innovative ideas were acknowledged in various papers and problem statements from various colleges like Sri Indu, Guru Nanak, Shreyas college along with CVR College of Engineering. A small valedictory function was conducted and the winners were encouraged with a cash prizes for Technical events.

Event Name	Paper presentation	ProjectExpo	Poster Presentation
1st prize	750/-	750/-	750/-
2nd prize	500/-	500/-	500/-
3rd prize	250/-	250/-	-

- Department feels proud to organize such a successful event under the consistent support and guidance of the management in all aspects.

LIST OF ACTIVITIES (AY 2016-17)

1. 2-day workshop on "PCB making and circuit design" for II EEE students senior students, 26 to 27- July, 2016. Faculty coordinator: Mr. P. Vinodh Kumar

2. A.R.I.S.E. (A Revolution In Social Empowerment) teaching campaign in Kongarakalan high school by III EEE students on 9th September, 2016.

3. Celebration of Eminent Scientist Michael Faraday's Birth Anniversary, who is Ancestor of Modern Power Generators & Electric Motors On 22nd Sept 2016 Under Technical association "Electrocruise". This Program is organized by Mr. P. Vinodh Kumar, Asst. Prof. & Ms. K. Deepika , Asst. Prof.

- The chief guest for the event is Mr. H. V. Babu, JGM, Head- traction & Power Supply, L&T Metro. On the eve of this celebration EEE dept. Conducted various events like Guest Lecture (I, II, III & IV Year EEE), Technical quiz (II, III and IV year)&Brain Teasers . The Lecture is given by Mr. H. V. Babu, JGM, Head- traction & Power Supply, L&T Metro. The Technical Quiz is conducted by Ms. K. Deepika, Asst. Prof. , Mr. M. Suresh, Asst. Prof. , Mr. K. S. V. Phani Kumar, Asst. Prof. and Ms. V. Sarada, Asst. Prof. The Brain Teasers is conducted for II year students by Mr. C. Krishna Reddy, Asst. Prof .

4. A 2 day workshop on " Design& Fabrication of VFD using ARDUINO" is conducted on 21st and 22nd December 2016 under the aegis of ELECTROCRUISE

5. II EEE A&B students visited BHEL, Hyderabad on 9th Jan 2017. The following faculty accompanied the students during the visit:

   Mrs. K. Deepika, Asst. Prof., Ms. K. Navya, Asst.Prof., Mr. M. Appa Rao, Asst. Prof., Mr.Ch. Krishna Reddy, Asst. Prof., Mr. D. Sreenath Reddy, Asst. Prof., Mr. R. Harshavardhan, Asst. Prof., Mrs. M. Swapna, Accd. Asst.

6. A guest lecture titled "Renewable Energy Sources – PV plant orientation, Job opportunities" is conducted on 25.01.2017and the speaker is Mr. Rama Krishna Kaviti from Solar Semi-Conductor Pvt. Ltd.

7. III EEE A&B students visited KTPS during 20th - 21st Feb, 2017. The following faculty accompanied the students during the visit: Mrs. K. Deepika, Asst. Prof., Ms. K. Navya, Asst. Prof., Mr. K.S.V. Phani Kumar, Asst. Prof., Ms. M. Amani, Asst. Prof., Mr. R. Harshavardhan, Asst. Prof., Ms. G. Sravani, Asst. Prof.

8. A guest lecture titled "Importance of Discipline and ethical Values" is conducted on 24.03.2017and the speaker is Dr. Y. Shiva Rama Prashad Psychologist.

9. II EEE A&B students visited Srisailam Hydel Power Plant during 8th - 9th April, 2017. The following faculty accompanied the students during the visit:

- Mrs. V. Vimala Devi , Sr. Asst. Prof., Mrs.Ch. Shravani, Asst. Prof., Ms. K. Navya, Asst. Prof., Mr. K. Suresh, Asst. Prof., Mr. K.S.V. Phani Kumar, Asst. Prof., Ms. M. Amani, Asst. Prof.

LIST OF ACTIVITIES (AY 2015-16)

1. A Guest lecture is conducted on a topic titled "Understanding Building Electrical services" by Mr. Srinivas Dinavahi, Engineer Raheja Corporation on 27th July 2015.
2. 2-day workshop on "ARDUINO and its applications" for III EEE(13B) by their senior students on august 11,12-2015.
3. Faculty- Mr. P. Vinodh Kumar and Mr. K. S. V. Phani Kumar
4. A.R.I.S.E. (A Revolution In Social Empowerment) teaching campaign in Kongarakalan high school by III EEE(13B)students on 7th September, 2015.
5. KTPS- BHADRACHALAM-PAPIKONDALU –III EEE(13B) on 09-11, September 2015.
6. Project Expo "INGENIUM-2K15" on Engineer's Day 15th September, 2015
7. A Guest lecture is conducted on a topic titled "Power Electronic applications for Transportation Systems" by Dr. P.V. Rajgopal, Retd. from BHEL on 22nd September 2015.
8. Michael Faraday Birth Anniversary Celebrations on 22nd Sept 2015 Under Technical association "Electro Cruise". This Program is organized by Mr. P. Vinodh Kumar, Asst. Professor & Ms. E. Hima Bindu , Asst. Professor . On the eve of this celebration EEE dept. Conducted various events like Inspiring Lecture, Guest Lecture (IIIrd & IV Year EEE), Technical quiz & Brain Teasers .
   - The Inspiring Lecture is given by M. Gopala Krishna, Formerly Secretary to the Govt. Of India & CMD of Rural Electrification Corporation
   - Guest Lecture is given by S. Eshwar Rao, Sr. Manager, PES divison, BHEL(R&D) on Role Of STATCOM in Power Systems .
   - The Technical Quiz competition is conducted by Ms. K. Deepika, Asst. Professor, Mr. M. Suresh, Asst. Professor and Mr. KSV Phani Kumar, Asst. Professor. For this competition preliminary test is conducted for 2nd and 3rd year students and 5 teams are selected for the final round. The winners list is as follows.
9. "PCB Design and Circuit Making"

   A two day workshop for 2nd year EEE students is organized by 3rd year EEE students during 15th and 16th March 2016 at CVR college of Engineering. Its unique, because senior Students organizing workshop for their junior students.

10. II EEE A & B students visited Srisailam Hydel Power Plant during 18th and 19th March, 2016.

Professional Societies

Professional Societies/Chapters and Organizing Engineering Events

Electrical and Electronics Engineering Department has the following Professional Societies

(i)   **Electrocruise: Electrocruise** has been formed by the students of the Department for the benefit of students to impart additional knowledge in the field of **Electrical and Electronics** Engineering apart from the prescribed curriculum by organizing Guest lectures by eminent specialists from universities and industry, Technical Quiz, Workshops, Project Expos by students that help to develop organizing capabilities among the students. The Project Expo, Technical presentations, prepare them to face the competitive world.

(ii)   **ISTE Chapter:** The ISTE Chapter in our college is basically aimed at providing an all-around development of our students to fully equip them to participate in contests, mock group discussions and personal interviews, seminars on current topics and many more. Thirty – 58 students from EEE are registered under ISTE.

(iii) **IEEE Chapter:** The IEEE chapter was formed at our college to provide multi-directional knowledge for our students for prepare students for tests, mock group discussions, interviews and seminars on current topics and many more.

Photographs of guest lectures organized in the department

Dr. Pradeep, Asst. Prof, IIT Hyderabad delivering a lecture on Smart Grid

Prof. L.C Siva Reddy Vice-Principal felicitating
Dr. Pradeep

List of workshops conducted by the department

S.No	A.Y.	Date	Topic
Academic Year (2018-19)			
1	2018-19	30-08-2018 to31-08-2018	PCB workshop for III Year Students
2	2018-19	26-11-2018 to27-11-2018	PCB workshop for II Year Students
Academic Year (2017-18)			
1	2017-18	28-29, July 2017	Electronic Circuit Design and PCB Fabrication

30-31 August 2018 PCB design Workshop

for III year EEE

26-27 November 2018 Pcb Design Workshop

For Ii Year Eee

INDUSTRIAL VISITS

S.No.	Date(s) of Visit	Industries Visited	No. of Students/Class	No. of Faculty accompanied
1	25.01.2020 to 26.01.2020	Kotthagudem Thermal Power Station KTPS, Palvancha	94, II Year EEE	6
2	16-3-2019 to 18-3-2019	Kotthagudem Thermal Power Station KTPS, Palvancha	71, II Year EEE	5
3	04-01-2019 to 06-01-2019	Vizag Steel Plant, Vizag	82 III Year EEE	6
4	20-7-2019 to 21-07-2019	Hydroelectric Power Plant, Srisailam, Telangana	95, II Year EEE	5
5	05-03-2018 to 08-03-2018	Madras Atomic Power Station (MAPS) & SHAR Sriharikota	40, III Year EEE	5
6	26-2-2018 to 1-03-2018	Vizag Steel Plant	45, III Year EEE	4
7	09-09-2017	Nagarjuna Sagar Hydro Power Plant	98, II Year EEE	4

Third Year EEE Students Industrial Visit to Vizag Steel Plant in March 2019

Third Year EEE Students to Industrial Visit to Kothagudem Thermal Power Station (KTPS) Stage VI (1X 500MW) in Feb 2017

SERVICE TO SOCIETY

EEE Students visited Kongarakalan ZP High School and primary schools (Ibrahimpatnam mandal) to interact, counsel and motivate the students regarding Career Guidance and awareness on Cleanliness.

Students of EEE Interacting with X class Students

Students of EEE Taking classes to X class Students

Teaching compaignon communication skills

Teaching compaign to primary children

Anna daata Sukheebhava - Students of EEE serving the food to young citizens

Students of EEE distributing water bottles to X class students at school

SWACHH BHARAT

III Year Students Cleaning Computer Lab

IIIrd Year Students arranging the infrastructure

SUMMARY OF WORKSHOPS /FDPs/STTPs ATTENDED BY FACULTY FROM 2019 TO 2022

Academic Year	Total No Attended
2021-22(till date)	92 (online)
2020-21	182 (online)
2019-20	46 (offline)+42 (online)
Total	**362**

SUMMARY OF TOTAL NUMBER OF WORKSHOPS /FDPs/STTPs ATTENDED BY FACULTY FROM 2019 TO 2022

Academic Year	FDPs	STTPs	Work Shops
2021-22(till date)	50	32	10
2020-21	110	57	15
2019-20	64	13	11

NUMBER OF DAYS WORKSHOPS /FDPs/STTPs ATTENDED BY FACULTY FROM 2019 TO 2022

Count	5 days and above	4 days	3 days	2 days	1 day
2021-22 (till date)	283	9	30	23	17

FACULTY PUBLICATIONS

No. Of International and National Journals / Conferences   :   169
No. Of Book Chapters   :   6

S. No.	Academic Year	Journal Publications		Conferences	
		International Journals	National Journals	International Conferences	National Conferences
1	2021-2022	7	4	16 + 4 (Book/Chapter)	-
		11		20	

No. of SCOPUS/SCI/WoS/ other Journal Publications

S.No	Academic Year	No. of Scopus Journals	No. of WoS Journals (ESCI)	No. of SCIE Journals	No. of Other Journals
1	2021-2022	4	1	2	4

No. of SCOPUS/SCI/WoS/ other Conference Publications

S.No	Academic Year	No. of Scopus	No. of WoS/SCIE	No. of Other Conferences
1	2021-2022	4	3	9

No. of SCOPUS/SCI/WoS/ other Chapters/Books Publications

S.No	Academic Year	No. of Scopus	No. of WoS/SCIE	No. of Other publishers
1	2020-2021	-	04 (SCIE)	-

				International Journals (2021 - 2022)		
S. No	**Name(s) of the Authors(s)**	**Title of Publication**	**Refereed &Indexed by SCOPUS/ SCI/Any Other**	**Name of Journal/Publishers**	**Vol. No /Issue. No/ Page Nos./ISSN/IS BN**	**DOI/Jou rnal Link**
1	Naveena Bhargavi Repalle Pullacheri Sarala Lucian Mihet-Popa Shashidhar Reddy Kotha NagalingamRaj eswaran	Implementation of a Novel Tabu Search Optimization Algorithm to Extract Parasitic Parameters of Solar Panel	SCIE	Recent Advances in Power Distribution Networks: Applications and Technologies for Local Energy Communities Integration (MDPI Energies)	2022, 15(13), 4515	10.3390/e n1513451 5
2	Dr. R.Vijay	Performance Enrichment in optimal Location and Sizing of Wind and Solar PV centered Distributed Generation by Communal Spider Optimization Algorithm	SCIE	COMPEL - The international journal for computation and mathematics in electrical and electronic engineering	Vol. 41 Issue:5 Aug 2022 PP: 1971 - 1990 ISSN:0332-1649	10.1108/ COMPEL -12-2021- 0495
3	G Janardhan N.N.V Surendra Babu G.N Srinivas	Transformerless single phase inverter for grid connected Photo voltaic system with reduced leakage current	ESCI	Electrical Engineering & Electromechanics	ISSN 2309-3404 (Online) (Under Press)	http://eie. khpi.edu.u a/
4	Janardhan Gurram, Nukala Surendra Babu, GondlalaNarsa iah Srinivas	Artificial neural network-based DC-DC converter for grid connected transformerless PV system	Scopus	International Journal of Power Electronics and Drive Systems (IJPEDS)	Vol: 13 Issue: 02 PP: 1246-1254 June 2022 ISSN: 2088-8694	10.11591/ ijpeds.v13. i2.pp1246- 1254
5	K. Shashidhar Reddy R. Naveena Bhargavi M. Lakshmi Swarupa	Optimal power flow in deregulated power systems by using Optimization techniques	Scopus	Journal of Harbin Institute of Technology	Vol. 54 Issue: 5 May 2022 PP: 12 - 34 ISSN:0367-6234	10.11720/ JHIT.540 52022.8
6	M.Tejasvi M.LakshmiSwa rupa	Digital simulation of interline power flow controller System with artificial intelligence techniques	Scopus	Journal of Harbin Institute of Technology	Vol. 54 Issue:5 May 2022 PP: 77 – 88 ISSN:0367-6234	10.11720/ JHIT.540 52022.9
7	Ch.Lavanaya K.Sri Chandan Kondamudi	Performance Analysis of Rechargeable Batteries for Electric Vehicles	Scopus	Journal of Harbin Institute of Technology	Vol. 54 Issue:5 May 2022 PP: 16 - 22 ISSN:0367-6234	10.11720/ JHIT.540 52022.3

S.No.	Academic Year	Journal Publications		Conferences	
		International Journals	National Journals	International Conferences	National Conferences
1	2020-2021	7	9	17	9 + 2 (Books)
Total		16		28	

No. of SCOPUS/SCI/WoS/ other Journal Publications

S. No	Academic Year	No. of Scopus Journals	No. of WoS Journals	No. of SCI Journals	No.of UGC Journals	No. of Other Journals
1	2020-2021	06	-	-	01	09

No. of SCOPUS/SCI/WoS/other Conference Publications

S. No	Academic Year	No. of Scopus	No. of WoS	No. of SCI	No. of Other Conferences
1	2020-2021	15	-	-	11

No. of SCOPUS/SCI/WoS/ other Chapters/Books Publications

S.No	Academic Year	No.of Scopus	No.ofWoS	No.of SCI	No. of Other
1	2020-2021	-	-	-	02

International Journals (2020 -2021)						
S. No	Name(s) of the Authors(s)	Title of Publication	Refereed &Indexed by SCOPUS/ SCI/ Any Other	Name of Journal/Publishers	Vol.No/Issue. No/ Page Nos./Month & Year /ISSN/ISBN	DOI/Web Link
1	Dr.K. Shashidhar Reddy Dr.D.Obulesu	Performance Improvement of Grid-Connected DFIG-Based Wind Turbine with a Fuzzy-Based LVRT Controller	Scopus	Turkish Journal of Computer and Mathematics Education.	Vol 12 Issue 6 PP: 3599 – 3605 April 2021 ISSN:1309-4653	https://turcomat.org/index.php/turkbilmat/article/view/7152
2	Rubanenko Olena GundebommuSree Lakshmi Hunko Iryna Peroutka Zdenek	Analysis of Development Directions of Online Diagnostics of Synchronous Generator	Scopus	PRZEGLĄD ELEKTROTECHNICZNY	R. 97 NR 4/2021 ISSN: 0033-2097	10.15199/48.2021.04.04
3	T. Divya Dr. Ch. Lokeshwar Reddy	Integration of Improved Active Power Filter for Mitigation of Harmonics in Non-Linear Load Connected to a Multi bus System	UGC	The International journal of analytical and experimental modal analysis	Volume XIII, Issue I PP. 1161- 1166 January & 2021 ISSN: 0886-9367	10.1088/1742-6596/1495/1/012014

4	G Manohar S Venkateshwarlu, AJayaLaxmi	A DFIG-based wind energy conversion system for LVRT enhancement using a hybrid approach: An efficient MEHRFA technique	Scopus	Soft computing, Methodologies and Application	Volume 25 Sep 2020 ISSN: 2559–2574	https://link.springer.com/article/10.1007/s00500-020-05276-x
5	Dr. Shankarappa F KodadManjunatha S C Dr. Dakka.Obulesu	Performance Comparison of IPFC- Based Controllers for to Dampen Oscillations in the Power system	Scopus	International Journal of Emerging Trends in Engineering Research	Vol: 8 Issue No: 8 Aug 2020 ISSN: 2347 - 3983	10.30534/ijeter/2020/36882020
6	Dr.Vishwanatha Siddartha	Polynomial Controller Design and its Application: Experimental Validation on a Laboratory Setup of Non-ideal DC-DC Buck Converter	Scopus	IEEE Transactions on Industry Applications	Vol. 56, No. 6 Nov – Dec2020 Page(s): 7020 - 7031 ISSN:0093-9994	10.1109/tia.2020.3014895
7	Dr J Viswanatha Rao MrG.Lakshminarayana Dr D.Obulesu	Reduction of Torque Ripples in PMSM using Fuzzy Controlled based Driving Converter	Scopus (from 2018 to 2020)	Turkish Journal of Computer and Mathematics Education.	Vol 12 Issue 3 PP: 4652 – 4658 March 2021 ISSN:1309-4653	https://doi.org/10.17762/turcomat.v12i3.1876

| S. No. | Academic Year | Journal Publications | | Conferences | |
		International Journals	National Journals	International Conferences	National Conferences
1	2019-2020	13	8	23	21
Total		21		44	

No. of SCOPUS/SCI/WoS/ other Journal Publications

S.No	Academic Year	No. of Scopus Journals	No. of WoS Journals	No. of SCI Journals	No. of UGC Journals	No. of Other Journals
1	2019-2020	12	-	-	-	09

No. of SCOPUS/SCI/WoS/ other Conference Publications

S. No	Academic Year	No. of Scopus	No. of WoS	No. of SCI	No. of Other Conferences
1	2019-2020	19	03	-	24

International Journals (2019 -2020)					
S. No	Name(s) of the Authors(s)	Title of Publication	Refereed & Indexed by SCOPUS/SCI/ Any Other	Name of Journal/Publishers	Vol.No /Issue. No/ Month & Year/ISSN/ISBN	DOI
1	Dr.Vishwanatha Siddartha	Experimental validation of fractional order internal model controller design on buck and boost converter	Scopus	Measurement and Control	Volume: 54 Issue: 5-6, page(s): 748-766 Issue published: May 1, 2020 ISSN: 0020-2940	10.1177/0020294020922264
2	Chapala Shravani	Implementation of 5-Level H-Bridge Inverter with Multicarrier Based Modulation Techniques	Scopus (From 2018 to 2019)	International Journal of Recent Technology and Engineering	Vol: 8 Issue: 5 PP: 5180 - 5185 Jan 2020 ISSN:2277-3878	10.35940/ijrte.E6862.018520
3	R.Naveena Bhargavi, Dr.G.Yesuratnam	Transient Stability Improvement using SSSC and STATCOM	Scopus (From 2016 to 2020)	International Journal of Advanced Science and Technology	Vol: 29 Issue: 4 PP:896-903 Feb 2020 ISSN:2005-4238	http://sersc.org/journals/index.php/IJAST/article/view/4755

4	K.S.V. Phani Kumar S.Venkateshwarlu	Integrated Operation of Distributed Resources to Enhance Frequency Regulation in an Isolated Microgrid Environment	Scopus (From 2018 to 2019)	International Journal of Recent Technology and Engineering	Vol: 8 Issue: 3 Sep 2019 ISSN: 2277-3878	10.35940/ijrte.C4649.098319
5	Rajesh Kumar Prakhya K.Shashidhar Reddy Ch. Lokeshawar Reddy	Estimating Degradation Factor by Performance Ratio of Rooftop Solar PV Plant	Scopus (From 2018 to 2019)	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	Vol: 8 Issue: 9S2 July 2019 ISSN: 2278-3075	10.35940/ijitee.I1126.0789S219
6	Phani Kumar K.S.V Venkateswarlu S	Fuzzy Controller Based Reserve Management in Hybrid Microgrid for Frequency Regulation	Scopus (From 2018 to 2019)	International Journal of Engineering and Advanced Technology (IJEAT)	, Vol: 9 Issue:1 Oct 2019 ISSN: 2249 – 8958	10.35940/ijeat.F8853.109119
7	K. Shashidhar Reddy M.LakshmiSwarupaD.Mamtha	Application of Zone Selective Interlocking in Electrical Power Distribution System	Scopus (From 2018 to 2019)	International Journal of Engineering and Advanced Technology (IJEAT)	Vol: 9 Issue: 2 Dec 2019 ISSN: 2249-8958	10.35940/ijeat.B3622.129219
8	Mrs.Ch. Shravani	Enhancing Electric Power Quality in Distribution System with DSTATCOM	Scopus	International Journal for scientific Research & Development	Vol:8 Issue:1 PP: 1103 - 1108 April 2020 ISSN: 2321-0613	http://www.ijsrd.com/articles/IJSRDV8I10887.pdf https://ijsrd.com/Article.php?manuscript=IJSRDV8I10887
9	Ch. Lokeshwar Reddy G. Janardhan	Enhancing the Performance of Multilevel Inverters using Modified SVPWM Techniques	Scopus (From 2018 to 2019)	International Journal of Engineering and Advanced Technology (IJEAT)	Vol: 9, Issue:3 PP: 3632 - 3640 Feb 2020 ISSN: 2249 – 8958	10.35940/ijeat.B4402.029320
10	Dr.Dakka. Obulesu K. S. V Phani Kumar Rajibkumar Kar	Design and Implementation of Cost-Effective IoT Energy Meter to Monitor Energy Flow in Smart Grids	Scopus (From 2018 to 2019)	International Journal of Recent Technology and Engineering (IJRTE)	Vol: 9 Issue:1 May 2020 ISSN: 2277-3878	https://doi.org/ 10.35940/ijrte.A1195.059120
11	Dakka.Obulesu, Arunkumar G B.P. Mishra Spoorthi J T.C.Manjunath	Recent Advances in the Design & Development of A Drone Used for Bio-Medical Engineering Applications: Medi-Sky	Scopus (From 2018 to 2019)	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	Vol: 8 Issue: 9S PP: 796-800 July 2019 ISSN: 2278 - 3075	https://doi.org/10.35940/ijitee.I1128.0789S19
12	Dakka. Obulesu, K. S. V Phani Kumar V. Mahesh	Design and Implementation of IoT Energy Meter to Monitor Energy Flow at the Consumer End	Google Scholar Scientific Indexing Services	Asian Journal of Electrical Sciences	Vol: 8 Issue: 2 PP: 1 - 4 June 2019 ISSN: 2249 - 6297	https://www.trp.org.in/issues/design-and-implementation-of-iot-energy-meter-to-monitor-energy-flow-at-the-consumer-end
13	Dr. R. Vijay	Optimal Scheme and Power Controlling aspects in Shipboard System	Scopus	Innovations in Electrical and Electronics Engineering (Springer Proceeding)	(LNEE, Volume 626) March 2020 978-981-15-2256-7_36	10.1007/978-981-15-2256-7_36

RECENT STUDENT ACHIEVEMENTS

Inter - Institute student's achievements year wise in various events

Academic Year (2021-22)			
S.No	Name of the Student	Name of the Event	Achievement	Name of the Institution
1	Vishal Pawar	AR&VR, Blockchain Workshop	Participation	NXT Wave

Academic Year (2020-21)				
S. No	Name of the Student	Name of the Event	Achievement	Name of the Institution
1	Arindam Kar	Coursera	Passing Certificate (Linear Circuits1: DC Analysis)	Georgia Tech University
2	R Sai Koushik	Coursera	Passing Certificate (Linear Circuits1: DC Analysis)	Georgia Tech University
3	A Harshini	MATLAB Online Course	Participation	Math Works

Academic Year (2019-20)				
S. No.	Name of the Student	Name of the Event	Achievement	Name of the Institution
1	R Sravani	Electrica 2k19	First Position Project Expo	Geetanjali College of Engineering and Technology
2	K Shiva Kumar	Electrica 2k19	First Position Project Expo	Geetanjali College of Engineering and Technology
3	D Haneesh	Electrica 2k19	First Position Project Expo	Geetanjali College of Engineering and Technology
4	D Aditya	Electrica 2k19	First Position Project Expo	Geetanjali College of Engineering and Technology
5	T Vaishnavi	Electrica 2k19	Third Position Project Expo	Geetanjali College of Engineering and Technology
6	R Sai Koushik	Electrica 2k19	Third Position Project Expo	Geetanjali College of Engineering and Technology

7	Md Nadeem	Electrica 2k19	Third Position Project Expo	Geetanjali College of Engineering and Technology
8	Sai Teja	V3 open 2019	Third Position	Indonesia
9	K Pratyusha	NPTEL	Basic Electrical Circuits (61/100)	IIT Kanpur
10	R Pavan Kaushik	NPTEL	Electrical Machines (52/100)	IIT Madras
11	M.R Niharika	NPTEL	Electrical Machines (52/100)	IIT Madras
12	K Dharani	NPTEL	Electrical Machines (52/100)	IIT Madras
13	M.Lahari	NPTEL	Electrical Machines (52/100)	IIT Madras
14	S Mounika	NPTEL	Electrical Machines (52/100)	IIT Madras
15	B Nikesh	NPTEL	Network Analysis (97/100)	IIT Khargpur
16	T Vaishnavi	NEWGEN IEDC	Automatic Protection and Drying of cloth from rain	NSTEDB, Department of Science and Technology
17	S Rishi	NEWGEN IEDC	Automatic Protection and Drying of cloth from rain	NSTEDB, Department of Science and Technology
18	B Anusha	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
19	T. Divya	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
20	E. Akhila	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
21	T Bhavana	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
22	P Kalyani	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
23	KDeepthi	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
24	D Nitesh	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
25	P Manasa	Creative and innovative Project	Participation	Institute of Engineers, AP State

		Idea Contest		Center
26	S Lokesh	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
27	B Anusha	Creative and innovative Project Idea Contest	Participation	Institute of Engineers, AP State Center
28	Rishi Shrestam	WCSER-20 International Conference	Participation	Society For Education, Warangal
29	T Vaishnavi	WCSER-20 International Conference	Participation	Society For Education, Warangal

Academic Year (2018-19)				
S. No.	**Name of the Student**	**Name of the Event**	**Achievement**	**Name of the Institution**
1	V.Sree Pranav	EFFICYCLE-2018	All India Position 30	Lovely Professional University, Punjab
2	Sai Goutam	EFFICYCLE-2018	All India Position 30	Lovely Professional University, Punjab
3	V.V.V.Sai Teja	EFFICYCLE-2018	All India Position 30	Lovely Professional University, Punjab
4	B. Mrudul	EFFICYCLE-2018	All India Position 30	Lovely professional University, Punjab
5	P Shatabish Naidu	State Level EPL	Second Prize	CVR College of Engineering
6	Keerthana R	State level Engineering Premiere league	Second Prize in Basketball	CVR College of Engineering
7	D Manoj Kumar	2 day workshop on Leadership and Research Challenges for professional women	Participation	Osmania University Hyderabad
8	D Manoj Kumar	Run for a cause 5.0	Participation	Street Cause, largest student NGO, Hyderabad
9	Sai Sharan Reddy	WIE Conference 2.0	Participation	SNIST, Hyderabad
10	Pavan Koushik	Section Student Congress	Participation	University of Hyderabad
11	Pavan Koushik	Women Conclave	Participation	IEEE WIE Hyderabad
12	Sai Teja	Workshop- Self Driving Car	Participation	CBIT, Hyderabad

PRODUCT DEVELOPMENT:

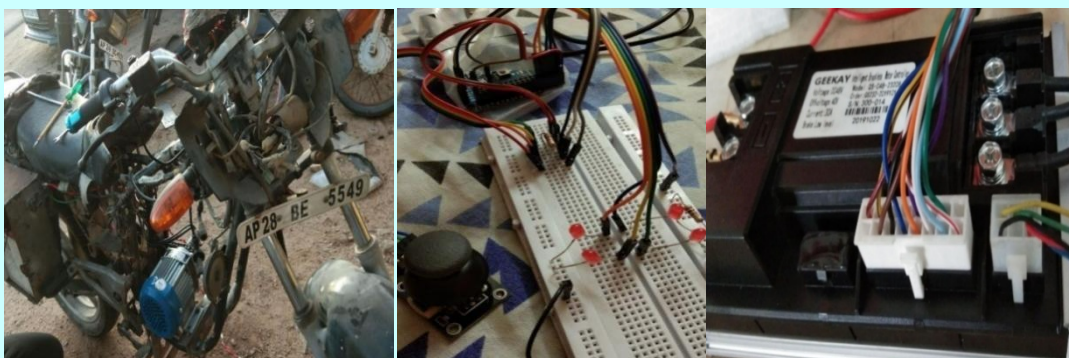1. **SOLAR DUSTER:**

2. **SOLAR CAR:**

3. **3D PRINTER:**

4. **PROSTHETIC ARM:**

5. **RETROFITTING OF THE PULSAR BIKE:**

BEST B.TECH PROJECTS

List of Top 3 Best Projects of the Department

Top 3 Best B.Tech. Projects from the department for the Academic year 2020-21

Sl. No.	Project Title	Students	Guide
1	Device load monitoring with programmable meter for energy audit	K. Shiva Kumar (18B81A0295) K. Pavan Sai (18B81A0286) P. Sai Revanth (18B81A0293) V. Shivani (18B81A0297)	Dr. D. Obulesu, Assoc. Professor - EEE
2	Deep learning based load forecasting	K. Karthik (18B81A0274) Nadeem (18B81A0277) R. Sai Koushik (18B81A0294) M. Yathish Kumar (18B81A02C0)	Mr. KSV Phani Kumar Sr. Asst. Professor – EEE
3	Multi-purpose non-contact temperature detection system	AV Shree Anurag (18B81A02A0) NupurKumari (18B81A0285) T Naga Nitej (18B81A0279) ArindamKar (18B81A0207)	Mr. G. Janardhan Sr. Asst. Professor – EEE

S. No.	Roll No.	Name of student	Project Title	Guide
1	17B81A0267 17B81A0268 17B81A02A3	M. ROHAN S. ROHITH K. VAMSI CHARAN	DTMF CONTROLLED METAL DETECTING ROBOT	Mrs.K. DEEPIKA
2	17B81A0201 17B81A0214 17B81A0225	G. ABHI ROHITH K. BHANU SURAJ MOHAMMED HAFEEZUDDIN	HEALTH MONITORING SYSTEM	Dr. VISWANATH SIDDHARTHA
3	17B81A0282 17B81A0284 17B81A02A8	K. SHRAVYA G. SINDHU REDDY K. VIJAY KUMAR	IOT BASED SMART ENERGY METER MONITORING AND CONTROL	Mr. P. RAJESH KUMAR

Top 3 Best B.Tech. Projects from the department for the Academic year 2019-20

S. No.	Roll No.	Name of student	Project Title	Guide
1	16B81A0262	DEVIREDDY RAJASHAKAR REDDY	SMART BILLING TROLLEY SYSTEM	Mr. B. KALYANA CHAKRAVARTHY
	16B81A0278	GARRESAI GOUTHAM		
	16B81A0279	NANDI SAI KUMAR		
	16B81A0299	VUKKUSILA SREE PRANAV		
2	16B81A02B5	GURUGUBELLI VENKATA GAYATHRI NIHARIKA	AUTOMATED GREENHOUSE	Mr. K.S.V. PHANI KUMAR
	16B81A02A8	GUBBALA TARA THRUSHTYA		
	16B81A02A7	ERGU SWARNA KUMARI		
3	16B81A0236	PUTTA MANASA	ANDROID APPLICATION BASED BLUETHOOTH CONTROLLED ROBOTIC CAR	Mr. T. MURALI KRISHNA
	16B81A0250	NITESH GULERIA		
	16B81A0229	DARWAJA KEERTHANA		

Top 3 Best B.Tech. Projects from the department for the Academic year 2018-19

Sl. No.	Roll No.	Name of student	Project Title	Guide
1	15B81A0210	N ANUSHA	IOT BASED AUTOMATIC WATER LEVEL CONTROLLER	Dr.S.VENKATESHWARLU
	15B81A0209	P AMRITHNATH		
	15B81A0201	ABDUL AFRIDI		
2	15B81A0287	V SAI SAMHITH	SMART INVERTER	Dr. G. SREE LAKSHMI
	15B81A0288	V SHIV KUMAR		
	15B81A0296	B SAI ROHITH		
3	15B81A0286	K. SAIKUMAR	DESIGN OF 120W SOLAR PANEL CLOSED LOOP TRACKER	Dr. R. VIJAY
	15B81A0269	R RAJEEV		
	15B81A0295	B SHIREESHA		

ROLL OF HONORS

BATCH	H.T. NO	NAME OF THE STUDENT	PERCENTAGE
2001-2005	01B81A0240	Vidoot P R	74.57
2002-2006	02B81A0245	Srikanth Kotla	79.0
2003-2007	03B81A0253	Sunil Kumar T	81.04
2004-2008	04B81A0253	Tarun Singh T	83.88
2005-2009	05B81A0238	Ravi Kiran Reddi	81.26
2006-2010	06B81A0231	Nishanth P. M	84.80
2007-2011	07B81A0223	Muddam Naga Swarna	84.11
2008-2012	08B81A0256	Bajjuri Nikhil Krishna	83.29
2009-2013	09B81A02B5	N. Venkata lakshmilavanya	89.60
2010-2014	10B81A0224	Shaik Irshad Hussain	85.54
2011-2015	11B81A0296	ChityalaSruthi	93.3
2012-2016	12B81A0227	V Harini	89.43
2013-2017	13B81A0219	GangulaDilip Reddy	94.16
2014-2018	14B81A0220	Solipuram Karthik Reddy	87.82
2015-2019	12B81A0227	Pasupulenti Sri Ram	9.97
2016-2020	12B81A0227	VukkusilaSree Pranav	9.85
2017-2021	12B81A0227	M. R. Niharika	9.96
2018-2022	12B81A0227	Nupur Kumari	9.5

PLACEMENTS

Academic Year	20-21	19-20	18-19
No. of Students Placed	56	65	53

*Further placements process undergoing

HIGHER STUDIES

Academic Year	20-21	19-20	18-19
No. of Students	22	17	21

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

The Program Educational Objectives for the Electrical Engineering Program are broad statement that describe what graduates are expected to attain within a few years after graduation to accomplish in their career and profession, that the program prepares graduates to achieve.

PEO	PEO Statements
PEO 1	To prepare students to excel in higher education or to succeed in the electrical industry or in technical professions, through global rigorous training during the program.
PEO 2	To provide the students a solid foundation in engineering basics, scientific and technical fundamentals required to solve engineering problems in an industry or in a profession or to pursue higher studies.
PEO 3	To train students with good scientific and engineering so as to comprehend, analyze, design and create novel products and solutions for the real-life problems.
PEO 4	To inculcate in students, a professional, social, and ethical attitudes, an effective communication skill, teamwork skills, a multidisciplinary approach, and an ability to relate engineering issues to a broader social context.
PEO 5	To provide student with an academic environment aware of excellence leadership, written ethical codes and guidelines and the life-long learning needed for a successful professional career.

PROGRAM OUTCOMES (POs)

Program Outcomes are broad statements which describe what students will know and able to do immediately after they graduate from a program. They incorporate many areas of inter-related knowledge and skills developed over the duration of the program through a wide range of credential framework and program standards set by the College/University. They represent the big picture, describe broad aspects of behavior, and encompass multiple learning experiences.

PO Nos	PO Statements
PO 1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	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.
PO 3	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.
PO 4	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.
PO 5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO 6	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.
PO 7	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.
PO 8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	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.
PO 11	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.
PO 12	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.

FIRST YEAR B.TECH – 1ST SEMESTER COURSE OUTCOMES

Subject Name: Mathematics- I	Subject code: 68102
CO1.	Find rank of a matrix and solve a linear system of equations.
CO2.	Evaluate Eigen values, Eigen vectors and find the Modal matrix under a linear transformation.
CO3.	Evaluate surface areas and volumes of solids of revolution, Apply Mean value theorems in relevant engineering domains
CO4.	Determine the convergence/divergence of a given infinite series
CO5.	Find the extremum of a multi-variate function with or without constraints

Subject Name: Engineering Chemistry	Subject code: 68103
CO1.	Rationalize periodic properties such as ionization potential, electron affinity, oxidation states and electro negativity.
CO2.	Understanding the importance of EMF, corrosion and treatment of water.
CO3.	List major chemical reactions that are used in the synthesis of molecules.
CO4.	Analyze microscopic chemistry in terms of atomic and molecular orbitals and intermolecular forces.
CO5.	Would develop ability to handle situations involving problems associated with chemical substances in engineering situations.

Subject Name: Problem Solving through 'C	Subject code: 65101
CO1.	Ability to understand programming concepts and analyze a problem, design a solution and develop an algorithm to solve it.
CO2.	Ability to modularize a problem and implement the solution using basic programming concepts, control statements and functions.
CO3.	Ability to evaluate the use of macros and implement solutions to complex problems using recursion and homogeneous data types.
CO4.	Ability to implement pointers for problems of relevance and use different dynamic memory allocation methods.
CO5.	Design and implement appropriate user defined structures to a given problem definition and apply various functions for processing files.

Subject Name: Environmental Science	Subject code: 68105
CO1.	Define the concepts of ecosystem and emphasize the importance of biodiversity and its conservation.
CO2.	Gain knowledge on natural resources and advantages and disadvantages on renewable energy sources and technologies
CO3.	Develop awareness on pollution control technologies and global atmospheric changes.
CO4.	Emphasize the importance of Environmental impact assessment and green technologies.
CO5.	Understand about Environmental legislation and the concept of Sustainable development

Subject Name: Engineering Drawing	Subject code: 63102
CO1.	Know the Standard conventions, design scale for drawing engineering components and draw geometrical constructions
CO2.	Apply fundamentals of theory of projections, and draw orthographic projections of points and lines in any position.
CO3.	Construct orthographic projections of simple planes and regular solids in any position
CO4.	Draw sectional views and developments of various basic 3D objects.
CO5.	Construct isometric views and construct multi view drawings of simple and complex 3D objects

Subject Name: English Language and Communication Skills Lab	Subject code: 63102
CO1.	Emerge as good speakers and listeners
CO2.	Develop critical and analytical thinking.
CO3.	Write effectively
CO4.	Develop effective presentation skills using the multimedia tools
CO5.	Neutralize mother tongue influence on their English and make them proficient speakers.

Subject Name: Computer Programming Lab	Subject code: 65131
CO1.	Familiarity of programming environment in Linux operating system and to translate given algorithms to a working and correct program.

CO2.	Ability to interpret syntax errors as reported by the compilers and to be able to identify and correct logical errors encountered at run time using debuggers like GDB
CO3.	Ability to write iterative as well as recursive programs.
CO4.	Ability to represent data in arrays, pointers, strings and structures and manipulate them through a program and use them in defining self-referential structures or structures or designing a user defined data type.
CO5.	Ability to implement file processing functions and be able to store, retrieve and process data in text and binary formats.

Subject Name: IT Workshop Lab	Subject code: 67131
CO1.	Identify the peripherals of PC, assemble and disassemble PC components.
CO2.	Install the System software MS Windows, Linux and required device drivers.
CO3.	Work with productivity tools for Word Processing, Spread Sheet and Presentations along with Designing basic Web Pages.
CO4.	Understand the main features of the SCILAB program development environment to enable their usage in higher learning.
CO5.	Interpret and visualize simple mathematical functions and operations using plots or display

Subject Name: Engineering Chemistry Lab	Subject code: 68133
CO1.	Estimate rate constants of reactions from concentration of reactants/products as a function of time.
CO2.	Measure molecular/system properties such as surface tension, viscosity, conductance of solutions, redox potentials, absorbance
CO3.	Understand the concepts of distribution and adsorption phenomena
CO4.	Synthesize a small drug molecule.
CO5.	Develop analytical skills and learn how to analyze and present results of an experiment.

FIRST YEAR B.TECH – 2ND SEMESTER COURSE OUTCOMES

Subject Name: English	Subject code: 68151
CO1.	Write coherent, unified, and complete sentences.
CO2.	Identify word meaning and know the use of familiar lexical items.
CO3.	Understand explicit and implicit information and draw inferences for the given task.
CO4.	Communicate according to place, relation and medium.
CO5.	Know, emphasize, conceptualize, comprehend, apply, synthesize, and evaluate the given text, and other authentic texts such as magazines/newspaper articles.

Subject Name: Mathematics-II	Subject code: 68152
CO1.	Solve the first order O.D.E and appreciate their applications
CO2.	Solve higher order O.D.E and appreciate their applications in engineering problems
CO3.	Evaluate double and triple integrals and apply them in engineering problems
CO4.	Evaluate the line, surface and volume integrals and converting them from one to another
CO5.	Solve first order linear and non-linear P.D.E

Subject Name: Computational Mathematics	Subject code: 68153
CO1.	Find the real roots of Algebraic and Transcendental equations
CO2.	Understand interpolation and obtain approximate solutions for evenly and unevenly spaced data.
CO3.	Fit a given data to a linear/non-linear curve and appreciate the concepts of numerical differentiation and integration
CO4.	Develop the skill of finding approximate solutions to problems arising in first order initial value problems in differential equations.
CO5.	Find finite difference solutions of certain P.D.E

Subject Name: Applied Physics	Subject code: 68157
CO1.	The concepts involving the physics of lasers, lasing action, construction and working of He-Ne laser, semiconductor laser and propagation of light through optical fibers
CO2.	Schrodinger wave equation and its application, free electron models, formation of bands in solids and electron occupation in bands
CO3.	Estimation of charge carrier concentration in semiconductors and understand the formation of pn

	junction, construction and characteristics of different diodes like rectifying, Zener & Tunnel diodes.
CO4.	Transistor current components, characteristics of CB, CE and CC configurations, also understand the construction, working and characteristics of JFET & MOSFET.
CO5.	The principles of nanotechnology, types of nonmaterial, synthesis: Top-downandbottom-upmethods, characterization: XRD, SEM& TEM.

Subject Name: Data Structures Through 'C'		Subject code: 65151
CO1.	Understand basic concepts, Design and implement linear data structures such as linked lists, stacks, queues by using C as the programming language using static or dynamic implementations	
CO2.	Able to understand and analyze, differentiate and implement elementary algorithms: sorting, searching and hashing and will also be able to compare and contrast algorithms with respect to time and space complexity	
CO3.	Able to implement nonlinear data structures like trees and graphs and apply appropriate data structures to designing solutions to real world complex problems.	
CO4.	Demonstrate sound understanding of graph traversals and ability to implement various algorithms on graphs and interpret the results.	
CO5.	Ability to implement hashing techniques for storing and searching efficiently.	

Subject Name: English Language and Communication Skills Lab- II		Subject code: 68181
CO1.	Evolve as effective communicators and will develop narrative skills	
CO2.	Emerge as decision makers and autonomous learners	
CO3.	Develop critical and analytical skills	
CO4.	Gather ideas and information, and organize them coherently.	
CO5.	Develop leadership and team building skills.	

Subject Name: Data Structures Through 'C' Lab		Subject code: 65181
CO1.	Understand basic data structures such as arrays, linked lists, stacks and queues	
CO2.	Ability to interpret syntax errors as reported by the compilers and to be able to identify and correct logical errors encountered at run time using debuggers like GDB.	
CO3.	Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data	
CO4.	Solve problems involving graphs, trees and heaps	
CO5.	Apply Hashing techniques for efficient storage and retrieval of data.	

Subject Name: Engineering Workshop		Subject code: 63181
CO1.	Acquire skills of basic engineering trades like Carpentry, Tin smithy etc.	
CO2.	Demonstrate an understanding of and comply with workshop safety regulations.	
CO3.	Identify and use marking out tools, hand tools, measuring equipment and to work to prescribed tolerances	
CO4.	Apply the knowledge of the above trades in their day –to –day activities.	
CO5.	Select appropriate equipment and consumables for required applications.	

Subject Name: Applied Physics Lab		Subject code: 68187
CO1.	Get an understanding of errors and their estimation in determination of Physical quantities.	
CO2.	Get an understanding of the laws of physics associated with the experiments	
CO3.	Would develop skills in handling various kinds of laboratory instruments	
CO4.	Get awareness of the magnitudes of the different physical parameters and learn how to Present the observations and results at the end of an experiment.	
CO5.	Get an understanding of the physical concepts involved in the experiments.	

Subject Name: Computational Mathematics Lab		Subject code: 68183
CO1.	Write a program to find real roots of Algebraic and Transcendental equations	
CO2.	Write a program to determine functional value at any given intermediate point of the given data for an unknown function by interpolation	
CO3.	Write a program for a best fit curve by Least Squares method for a given set of data points	
CO4.	Write a program for numerical integration by Trapezoidal, Simpson"s 1/3 and 3/8 rules	
CO5.	Write a program to find the value of the solution of a given first order initial value problem of O.D.E	
CO6.	Write a program to find the value of the solution One-dimensional Heat equation and two-dimensional Laplace equation	

SECOND YEAR B.TECH – 1ST SEMESTER COURSE OUTCOMES

Subject Name: Mathematics – III (M-III)		Subject code: 68202
CO1.	Develop the skill of evaluating Laplace and Inverse Laplace transform of functions which are required to solve linear systems under initial conditions.	
CO2.	Develop the skill of evaluating Fourier transform of functions which are required to solve Partial Differential equations under given conditions.	
CO3.	Understand the concepts of analyticity and integration of complex functions, construction of analytic functions if a part of it is known.	
CO4.	Evaluate integrals using Cauchy's Integral formulae around a simple closed contour.	
CO5.	Find the Taylor's and Laurent's series expansion of complex functions and to evaluate contour integrals using Residue theorem	

Subject Name: Analog Electronics		Subject code: 64204
CO1.	Analyze different rectifier circuits	
CO2.	Analyze different biasing circuits for BJTs and FETs	
CO3.	Analyze different types of applications of FETs	
CO4.	Analyze different JFET amplifiers and multi stage BJT and JFET amplifiers.	
CO5.	Analyze Feedback Amplifiers	

Subject Name: Electric Circuits-I		Subject code: 62201
CO1.	Apply knowledge of mathematics, science, and engineering to the analysis and design of electrical circuits.	
CO2.	Solve the complex AC & DC electric circuits by applying the suitable principles and theorems.	
CO3.	Understand the concept and applications of Resonance and able to solve the problems related to magnetically coupled circuits.	
CO4.	Study and Analyze magnetic circuits and able to solve problems related to coupled circuits.	
CO5.	Acquire sufficient knowledge about the Network theorems and to analyze the circuits.	

Subject Name: Electromagnetic Fields		Subject code: 62202
CO1.	Learn the basic concepts of Electric field, epotential, Maxwell's equation, Laplace and poisons equations.	
CO2.	Analyze the current and current density. And will study the electro-magnetic principles on capacitors.	
CO3.	Study the Magnetic field due to different charge distributions.	
CO4.	Understand the effect of Magnetic field on the other current sources can be studied.	
CO5.	Understand the applications of the Electromagnetic Fields to other subjects like Electrical Machines, Power systems etc.	

Subject Name: Electrical Machines-I		Subject code: 62203
CO1.	Identify different parts of a DC machine & understand its operation.	
CO2.	Understand different excitation, Control the voltage and speed of a DC machines and starting methods of DC machines.	
CO3.	Carry out different testing methods to predetermine the efficiency of DC machines.	
CO4.	Analyze singe phase and three phase transformers circuits.	
CO5.	Judge the performance of transformers using different testing methods	

Subject Name: Electric Circuits Lab		Subject code: 62232
CO1 :	Verify the network theorems practically and can apply wherever is necessary in the circuit analysis.	
CO2 :	Understand about various kinds of filters and their frequency response.	
CO3 :	Measure the self and mutual inductances of coils and can understand the concept of mutual induction.	
CO4 :	Acquire the knowledge about series and parallel resonant circuits and their frequency response.	
CO5 :	Perform the simulation studies of electrical circuits	

Subject Name: Electrical Machines-I Lab		Subject code: 62232
CO1 :	Swinburne's test and speed control of dc shunt motor experiments are performed characteristics are obtained.	
CO2 :	Magnetization characteristics and load characteristics of dc shunt generator are performed and characteristics are analyzed.	

CO3 :	Load test on series and compound generators are performed and characteristics are analyzed.
CO4 :	Determine the efficiency of two identical shunt machines by Hopkinson's test.
CO5 :	Brake test on dc shunt and compound motors are performed and characteristics are analyzed

Subject Name: Analog Electronics Lab		Subject code: 64234
CO 1 :	Design and analyze different rectifier circuits	
CO 2 :	Design and different FET biasing Circuits	
CO 3 :	Design biasing circuits for BJTs	
CO 4 :	Design and analyze different small signal BJT, JFET amplifiers at low frequencies.	
CO 5 :	Design and analyze different multi stage BJT and JFET amplifiers	

Subject Name: Reasoning And Data Interpretation Lab		Subject code: 68231
CO 1 :	Understand the concepts of Statement-Argument, Assumption and Course of Action and use reasoning as a tool to match statements with arguments etc.	
CO 2 :	Look at data and find links and patterns, link data with conclusions and study data logically.	
CO 3 :	Study problem situations and use reasoning as a tool to find solutions.	
CO 4 :	Nurture the ability to use reasoning as a skill in real time problems solving.	
CO 5 :	Analyze and infer the data with respect to trend and case based	

SECOND YEAR B.TECH – 2ND SEMESTER COURSE OUTCOMES

Subject Name: Electric Circuits-II		Subject code: 62251
CO 1 :	Understand the concept of network topology and solve complex circuits using network topology.	
CO 2 :	Apply knowledge of mathematics, science, and engineering to the analysis and design of three phase balanced and unbalanced electrical circuits.	
CO 3 :	Analyze the transient response of A.C & D.C electric circuits by applying the suitable laws.	
CO 4 :	Understand the concept and applications of Two port network parameters and able to solve the related problems.	
CO 5 :	Acquire sufficient knowledge about the reactive filters and Fourier series for different Periodic waveforms.	

Subject Name: Measurements And Instrumentation (M&I)		Subject code: 62252
CO1 :	Understand different types of errors in measurements.	
CO2 :	Learn how the different measuring instruments works.	
CO3 :	Learn how to use potentiometer and its application.	
CO4 :	Acquire sufficient knowledge and its applications on AC & DC bridges.	
CO5 :	Able to select appropriate Transducer and CRO for particular type of measurement.	
CO1 :	Understand different types of errors in measurements.	

Subject Name: Digital Design		Subject code: 62253
CO 1 :	Understand code conversion and logic gates	
CO 2 :	Design and implement Combinational digital circuits	
CO 3 :	Acquire the knowledge on Flip-flops, Sequential logic circuits and its applications	
CO 4 :	Understand the process of Analog to Digital conversion and Digital to Analog conversion.	
CO 5 :	To understand fundamentals of basic memories and able to implement PLDs to the given logical problem.	

Subject Name: Power Systems – I		Subject code: 62254
CO 1 :	Understand the operation of various power stations like Thermal, Hydro and Nuclear.	
CO 2 :	Understand the importance of voltage and Power Factor Control.	
CO 3:	Analyze the various economical aspects of power generation and different Tariff methods.	
CO 4 :	Know the basic concepts and types of Substations.	
CO 5 :	Acquire sufficient knowledge about A.C. and D.C. distribution systems.	

Subject Name: Electrical Machines-Ii		Subject code: 62255
CO1 :	Identify different parts of a Induction motors & specify their functions	
CO2 :	Understand characteristics of induction motors and different testing methods.	
CO3 :	Analyze construction, operation characteristics and regulation of Synchronous generator.	
CO4 :	Study the parallel operation of Synchronous generators and principle, operation of synchronous motor.	
CO5 :	Know the principle of operation and applications of single-phase motors and special motors.	

Subject Name: Circuit Design And Fabrication Lab	Subject code: 62281
CO 1 :	Use simulation software.
CO 2 :	Design and simulate different circuits.
CO 3 :	Fabricate and test the designed circuits.
CO 5 :	Understand the motor control circuits
CO 1 :	Work with Digital Electronics and Digital Circuits Design.

Subject Name: Electrical Measurements Lab	Subject code: 62282
CO 1 :	Able to calibrate single phase energy meter.
CO 2 :	Able to measure three phase balanced reactive power.
CO 3 :	Able to measure R, L and C parameters.
CO 4 :	Able to measure dielectric strength of insulating oil and iron losses of a specimen.
CO 5 :	Able to calibrate ammeter voltmeter by using DC Crompton potentiometer.

Subject Name: Electrical Machines-II Lab	Subject code: 62283
CO1 :	Conduct tests on transformer like OC & SC test, Sumpners test.
CO2 :	Find regulation of alternator using different methods
CO3 :	Find the performance of 3 phase induction motor by conducting direct test and to develop circle diagram.
CO4 :	Develop equivalent circuit of induction motor by conducting no load and blocked rotor test.
CO5 :	Determine the core losses of a single-phase transformer

Subject Name: Verbal Ability Lab	Subject code:68281
CO1 :	Empowered in English language skills and meet the demands of the global work environment.
CO2 :	Understand how to use enriched vocabulary.
CO3 :	Proficient in answering reasoning-based questions.
CO4 :	Develop the ability to write grammatically correct sentences.
CO5 :	Enhance their professional writing skills through business letters

Subject Name: Gender Sensitization	Subject code:68282
CO 1:	Students will have developed a better understanding of important issues related to gender in contemporary India.
CO 2:	Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film
CO 3:	Students will attain a finer grasp of how gender discrimination works in our society and how to counter it.
CO 4:	Students will acquire insight into the gendered division of labour and its relation to politics and economics.
CO 5:	Men and women students and professionals will be better equipped to work and live together as equals
CO 6:	Students will develop a sense of appreciation of women in all walks of life
CO 7:	Through providing accounts of studies and movements as well as the new laws that provide protection and relief to women, the textbook will empower students to understand and respond to gender violence.

THIRD YEAR B.TECH – 1ST SEMESTER COURSE OUTCOMES

Subject Name: Managerial Economics And Financial Analysis	Subject code: 68301
CO 1 :	Familiarize with the fundamentals of Economics such as Demand function, Law of demand, Elasticity of demand and Demand Forecasting methods etc.
CO 2 :	Evaluate Economies of Scale and the Break-Even Point of the business activity
CO 3 :	Understand the different Market Structures and Macro Economic concepts.
CO 4 :	Able to understand the accounting system and preparation of Final Accounts.
CO 5 :	Analyze Accounting Statements like Income Statement and Balance Sheet to understand financial performance of the business.

Subject Name: Power Systems-II	Subject code: 62301
CO 1 :	Calculate the resistance, inductance and capacitance of short, medium and long transmission lines.
CO 2 :	Understand the performance of short, medium and long transmission lines
CO 3 :	Learn the different phenomenon's occurring in transmission lines and working of underground cables.
CO 4 :	Acquire the knowledge of overhead insulators.
CO 5 :	Understand the concepts of travelling waves for open ended and closed end transmission lines

Subject Name: Power Electronics	Subject code: 62302
CO 1 :	Learn various power semiconductor devices and their characteristics
CO 2 :	Understand the performance of half and full phase-controlled rectifiers
CO 3 :	Understand the operation of three phase converters and switched mode regulators
CO 4 :	Learn the operation of inverters with PWM techniques
CO 5 :	Learn the operation of AC voltage controller and Cyclo Converter

Subject Name: Control Systems	Subject code: 62303
CO 1 :	Classify different types of control systems along with mathematical modelling.
CO 2 :	Analyse the time response of second order system and stability analysis.
CO 3 :	Understand the performance of second order system in frequency domain.
CO 4 :	Acquire knowledge of various compensation techniques and Controllers (Proportional, Integral, and Derivative).
CO 5 :	Derive the state models and check the controllability, observability of the systems.

Subject Name: Microprocessors And Microcontrollers	Subject code: 64304
CO 1 :	Understand the architecture and organization of 8086.
CO 2 :	Explore the internal architecture of 8051 and to create ready to run programs using 8051 assemblers.
CO 3 :	Understand basic embedded C programming and working of timers/counters to develop microcontroller-based systems.
CO 4 :	Describe the serial communication feature of 8051 and how to write interrupt handler programs.
CO 5 :	Interface real-world devices such as LCDs, Keyboards, ADC and DAC with 8051

Subject Name: Microcontrollers Lab	Subject code: 64333
CO 1 :	Implement the Assembly Language Programs to perform various operations in 8051 Micro-Controller
CO 2 :	Implement time delay between the events by programming the timers/interrupts in 8051 Micro-Controller
CO 3 :	Transmit the message serially at different baud rates using UART operation in 8051 Micro-Controller
CO 4 :	Interface various I/O Devices like DC Motor, LCD & LED to 8051 Micro-Controller
CO 5 :	Interface various I/O Devices like Keyboard, LCD, 7-Segment Display and DC Motor, Stepper Motor and Servo Motor to development boards

Subject Name: Control Systems And Simulation Lab	Subject code: 62331
CO 1 :	Study & analyze the performance of second order system
CO 2 :	Understand the characteristics of AC servomotors, DC servomotors and synchro's.
CO 3 :	Analyze the performance of second order system in time and frequency domains using MATLAB (Root-Locus, Bode Plot, Nyquist Plot and State Space Analysis).
CO 4 :	Obtain the transfer function of DC Motor and for LAG LEAD Networks.
CO 5 :	Analyse the performance of second order system with and without Controllers (Proportional, Integral, and Derivative).

Subject Name: Advanced English Communication & Soft Skills Lab	Subject code: 68331
CO 1 :	Evolve as effective communicators.
CO 2 :	Emerge as decision makers, time managers and good negotiators.
CO 3 :	Gain proficiency in resume writing and requisite interview skills
CO 4 :	Collate ideas and information and organize them relevantly and coherently.
CO 5 :	Be empowered to use soft skills in the global context.

Subject Name: Effective Technical Communication Lab		Subject code: 68332
CO 1 :	Attain proficiency in features of technical communication	
CO 2 :	Develop expertise in reading skills	
CO 3 :	Use English language appropriately to write effective reports, e-mails, notes, and summaries.	
CO 4 :	Become proficient in Analytical and Critical Thinking Skills	
CO 5 :	Be empowered to use English language effectively in Technical Communication	

Subject Name: Universal Human Values		Subject code: 68302
CO1 :	Understand the significance of values, distinguish between values and skills.	
CO2 :	Apply the concept of happiness and prosperity to set the goals in life.	
CO3 :	Evaluate the current scenario in the society, in a right manner.	
CO4 :	Distinguish between the needs of the self and body through principles of co-existence.	
CO5 :	Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships.	

Subject Name: Artificial Intelligence		Subject code: 65304
CO 1 :	Identify the scope for agent-based solutions in engineering domain.	
CO 2 :	Demonstrate advanced search strategies and their applications.	
CO 3 :	Learning knowledge representation techniques for AI problems.	
CO 4 :	Establish a logical relationship and reasoning approaches.	
CO 5 :	Understanding approaches to Solve real world problems through Expert Systems.	

THIRD YEAR B.TECH – 2ND SEMESTER COURSE OUTCOMES

Subject Name: Electronic Circuits AndIc Applications		Subject code: 64357
CO 1 :	Analyze power amplifiers	
CO 2 :	Analyze and design different applications using Op-Amp	
CO 3 :	Analyze and design multivibrators using 741 IC and 555 timer IC	
CO 4 :	Design 555 timers IC, filters and PLL	
CO 5 :	Classify and comprehend the working principle of data converters and logic families	

Subject Name: Switchgear And Protection		Subject code: 64357
CO 1 :	Understand Basic principles and operation of various protection schemes & Relays.	
CO 2 :	Study the construction and concept of arc interruption in a circuit breaker .	
CO 3 :	Acquire the knowledge of Generator and Transformer protection schemes	
CO 4 :	Study about relay settings for the zonal Protection schemes of Feeders & Bus bars.	
CO 5 :	Acquire the knowledge about the basic grounding practices and protection against lightening over voltages	

Subject Name: Power Semiconductor Drives		Subject code: 62351
CO 1 :	Gain the knowledge of single and three phase controllers with DC motors	
CO 2 :	Understand the principle of DC drive in four quadrants operation.	
CO 3 :	Study & control the DC motor characteristics using choppers	
CO 4 :	Control the Induction motors using Stator voltage, stator frequency and AC voltage controllers	
CO 5 :	Identify suitable converters and their control methods for IM & Synchronous motor drive applications.	

Subject Name: Computer Methods In Power Systems		Subject code: 62352
CO1 :	Understand the procedure to find the admittance and impedance matrix from the given practical power system network.	
CO2 :	To analyze the given practical power system network using G-S and N-R iterative techniques.	
CO3 :	To derive the elements of Jacobian matrix and compare different load flow methods.	
CO4 :	To derive the per unit values and symmetrical Components of the power systems network.	
CO5 :	to analyze the steady state and transient stability of given power system network.	

Subject Name: HVDC Transmission		Subject code: 62353
CO1 :	Understand the basic concepts & operations of HVDC transmission .	
CO2 :	Analyze the characteristics & different control techniques for various HVDC converters.	
CO3 :	Apply the knowledge of the reactive power control and the power flow analysis of AC/DC systems.	
CO4 :	Analyze the various faults occurred in converter station and its protection.	
CO5 :	Study the different types of harmonics and filters that are employed in HVDC	

Subject Name: IOT and its Applications		Subject code: 62354
CO 1 :	Interpret the impact and challenges posed by IoT networks leading to new architectural models	
CO 2 :	compare and contrast the deployment of smart objects and the technologies to connect them to network	
CO 3 :	appraise the role of IoT protocols for efficient network communication	
CO 4 :	elaborate the need for data analytics and security in IoT	

CO 5 :	illustrate different sensor technologies for sensing real world entities	
Subject Name: Signal Analysis And Transform Techniques		**Subject code: 62355**
CO1 :	Characterize and analyze the properties of continuous-time and discrete-time signals and systems.	
CO2 :	Apply the knowledge of linear algebra topics like vector space, basis, dimension, inner product, norm and orthogonal basis to signals.	
CO3 :	Represent continuous signals and systems in the frequency domain using Fourier series and Fourier Transform.	
CO4 :	Apply the Laplace Transform and Z- Transform for analyzing continuous-time and discrete-time signals and systems.	
CO 5 :	Understand the concept of sampling and reconstruction of analog signals.	
Subject Name: Power Electronics And Simulation Lab		**Subject code: 64358**
CO1 :	Study & analyze the performance of Step-up chopper and parallel inverter.	
CO2 :	Draw & understand the characteristics SCR, MOSFET, IGBT and gives types of gate firing circuits for SCR	
CO4 :	Analyze the performance of single phase and three phase converters.	
CO5 :	Obtain the characteristics of single-phase AC voltage controller and series inverter	
Subject Name: Power Systems Lab		**Subject code: 62381**
CO1 :	Understand the working of Electromechanical relays and analyze the performance with respect to Numerical Relays.	
CO2 :	Study and analyze the long transmission lines. They will also be able to study the behaviour of the dynamic power system and also know the electrical parameter variation.	
CO3 :	Visualize different power system concepts like Ferranti effect, VAR compensation, etc.	
CO4 :	Perform fault studies, classify various faults, and understand the severity of faults.	
CO5 :	Understand the importance of Power factor, different methods of improving power factor and the concepts of voltage control	
Subject Name: Team Projects Lab		**Subject code: 62382**
CO1 :	Apply the skills learned to make a project.	
CO2 :	Able to analyze and design an innovative project.	
Subject Name: Quantitative Ability Lab		**Subject code: 62383**
CO1:	Solve the problems using Number Systems, Percentages and Profit & Loss	
CO2:	Solve the problems using Interest, Speed Time, and Distance	
CO3:	Solve the problems using Ratio and Proportion, Progressions, and Inequality	
CO4:	Solve the problems using Menstruation, Geometric, Clocks & Calendars questions	
CO 5:	Practice general problems in Placement, CAT and GRE etc. tests	
Subject Name: Essence of Indian Knowledge Tradition		**Subject code: 68381**
CO1 :	To gain a general idea of the vast Vedic literature and their content and to grasp the relevant concepts of the Vedas and appreciate its relevance in the modern world.	
CO2 :	Understand, connect up and explain basics of Indian Traditional Knowledge in Modern Scientific Perspective.	
CO3 :	Understand Yoga psychology as both a positive and a normative science and its contribution for a holistic health.	
CO4 :	Understand the views of our great philosophers to correlate their efforts to achieve unity in diversity	
Subject Name: Cyber Security (Mandatory Course)		**Subject code: 67358**
CO1:	Analyze various cyber-attacks.	
CO2:	Ability to understand the cyber laws and cyber forensics and its types.	
CO3:	Identifying cybercrime in mobiles and wireless devices and considerable measures to Organizations.	
CO4:	Analyze cybercrime and define security and privacy implications for an organization	
CO5:	Define privacy policies and their specifications; understand real time cybercrime examples and also how to protect them in Internet community from cyber-attacks.	

Fourth Year B.Tech – 1st Semester Course Outcomes

Subject Name: Renewable Energy Sources		**Subject code: 62401**
CO 1 :	Realize solar energy principles, Instruments, and their application.	
CO 2 :	Understanding of solar energy collection and storage technologies.	
CO 3 :	Apply the knowledge in wind and biomass energy usage in real life.	
CO 4 :	Understand the concepts of Ocean and Geothermal energy.	
CO 5 :	Knowledge in direct energy conversion concepts like MHD, Fuel cell technologies and their applications.	
Subject Name: Power System Operation And Control		
CO 1 :	Schedule the thermals plants for optimum generation.	
CO 2 :	Modeling of turbines and excitations systems	
CO 3:	Understand the load frequency control of two area system and steady state representation.	
CO 4 :	Analyze the compensators for reactive power control.	
CO 5 :	Understand the necessity of computerised control of power system	

Subject Name: Electrical Machine Design	Subject code: 62403
CO 1 :	Select proper materials for different machines design.
CO 2 :	Design magnetic circuit and thermal circuit
CO 3 :	Design DC machines as per requirement.
CO 4 :	Design of transformer and three phase induction machine as per requirement.
CO 5 :	Design of turbo alternator as per requirement.

Subject Name: Hybrid and Electric Vehicle Technology	
CO 1 :	Understand the concepts and drive train configurations of electric drive vehicles
CO 2 :	Study the concepts of Electric Vehicles Modelling
CO 3 :	Acquire the knowledge of EV Batteries
CO 4 :	Understand the design and control principles of HEVs
CO 5 :	Study the challenges of EVs and tis applications

Subject Name: Principles of VLSI Design (Professional Elective-II)	Subject code: 64411
CO 1 :	Familiarize with the basics of MOSFET and different IC fabrication technologies
CO 2 :	Understand the basic combinational and sequential circuits at a transistor level
CO 3 :	Develop layouts for NMOS, CMOS logic circuits and understand the design flow
CO 4 :	Analyze and design various CMOS combinational and sequential circuits
CO 5 :	Understand the memory design and need for testing and design for testability

Subject Name: Electrical Distribution Systems	Subject code: 62405
CO 1 :	Know different types of distributions systems and able to calculate different factors.
CO 2 :	Discuss design considerations of feeders and location of the substations.
CO 3 :	Learn voltage drop and power –loss calculations.
CO 4 :	Understand the protective devices and their installation with coordination.
CO 5 :	Acquire in depth knowledge of power factor and voltage control in distribution systems using series capacitors, AVB, AVB.

Subject Name: Digital Control Systems	Subject code: 62406
CO 1 :	Understand digital to analog and analog to digital conversion techniques, sample and hold operations.
CO 2 :	Understand the concept of state space analysis, importance state transition matrix controllability and Observability methods.
CO 3 :	Understand Z- transforms, Inverse Z- Transforms, Z- transform techniques to solve difference equations. CO 4 : Understand mapping between S-plane and Z- plane, stability analysis of closed loop systems in Z-plane. Various stability tests.
CO 5 :	Design of discrete time control system based on frequency response method, lead, lag, lead-lag compensators, design of state feedback controllers.
CO 1 :	Understand digital to analog and analog to digital conversion techniques, sample and hold operations.

Subject Name: Smart Grid Technologies	Subject code: 62407
CO 1 :	Understand the features of small grid in the context of Indian grid.
CO 2 :	Understand the role of automation in transmission and distribution.
CO 3 :	Apply evolutionary algorithms for smart grid.
CO 4 :	Understand operation and maintenance of PMUs, and WAMs.
CO 5 :	Understand voltage and load frequency control mechanism in micro-grid system.

Subject Name: Computer Aided Design Lab	Subject code: 62431
CO 1 :	Understand to simulate ac-dc converters and analyze the operation of the converters for various loads.
CO 2 :	Design the load components and simulate dc-dc converters dc-ac converters
CO 3 :	Form Zbus and YBus matrix for a given power system
CO 4 :	Perform various load flow analysis for given power system
CO 5 :	Analyze the behavior of power system under different fault Condition

Subject Name: Power Semiconductor Drives Lab	Subject code: 62432
CO 1 :	Learn about characteristics and applications of DC drives
CO 2 :	Learn about characteristics and applications of AC drives
CO 3 :	Identify the difference between Converter and Invertwer fed drives
CO 4 :	Know the importance of basic inverter and multilevel inverter based drives
CO 5 :	Learn the signal generation Using Dspace

Subject Name: Industry Oriented Mini Project	Subject code: 62433
CO1:	Identify the real world Electrical engineering problems.
CO2:	Analyze the practical solutions to the problem.
CO3:	Apply modern engineering tools for solution
CO4:	Develop hardware kits.
CO5:	Write technical reports following professional ethics.

Subject Name: Technical Seminar-I	Subject code: 62434
CO1:	Identify and analyze the real time Electrical Engineering problems.
CO2:	Acquire awareness on latest technology and current trends in the field of Electrical Engineering.
CO3:	Participate in discussions for enhancement of knowledge.
CO4:	Apply communication skills.
CO5:	Document and present technical reports following professional ethics.

FOURTH YEAR B.TECH – 2ND SEMESTER COURSE OUTCOMES

Subject Name: High Voltage Engineering	Subject code: 62451
CO 1 :	Acquire sufficient knowledge on basic concepts of HVE and it applications
CO 2 :	Study about various breakdown mechanisms in solids, gases and liquids dielectrics.
CO 3 :	Study different generation and measuring methods for HV and Currents.
CO 4 :	Understand the concept of overvoltage coordination and insulation coordination.
CO 5 :	Familiarize HV testing of transformers, circuit breakers and cables.

Subject Name: Energy Audit And Management	Subject code: 62452
CO 1 :	Various types of energy source available and present energy scenario in India as well as in the world.
CO 2 :	Analyze the General aspects of energy management and audit reports.
CO 3 :	Introduction to energy planning and management aspects.
CO 4 :	Various lighting systems and energy measuring instruments used.
CO 5 :	Analysis of economic factors those are included in the savings and organization in the demand side management.

Subject Name: Power Quality and Facts	Subject code: 62453
CO 1 :	Know the severity of power quality problems in distribution system.
CO 2 :	Understand the concept of voltage sag transformation from up-stream (higher voltages) to down- stream (lower voltage).
CO 3 :	Concept of improving the power quality to sensitive load by various mitigating custom power devices.
CO 4 :	Understand the control circuits of Shunt Controllers SVC & STATCOM for various functions viz. Transient stability Enhancement, voltage instability prevention and power oscillation damping.
CO 5 :	Understand the Power and control circuits of Series Controllers GCSC, TSSC and TCSC.

Subject Name: AI Techniques for Electrical Engineering	Subject code: 62454
CO1 :	Understand basic concepts of learning algorithms of Artificial Neural Networks.
CO2 :	Understand feedback Neural Networks and Radial basis Neural Networks.
CO3 :	Understand fuzzyness involved in various systems and fuzzy set theory
CO4 :	Develop genetic algorithm for applications in electrical engineering
CO5:	Understand AI techniques applications in electrical engineering

Subject Name: Discrete Time Signal Processing	Subject code: 64457
CO 1 :	Understand the various operations on discrete time signals & systems
CO 2 :	Apply DFT on discrete time signals
CO 3 :	Apply FFT on discrete time signals
CO 4 :	Analyze and design IIR digital filters
CO 5 :	Analyze and design FIR digital filter

Subject Name: Utilization Of Electrical Energy	Subject code: 62455
CO 1 :	Understand the operating principles and characteristics of traction motors .
CO 2 :	Identify most appropriate heating or welding techniques for suitable applications.
CO 3 :	Study the basic principles of illumination, its measurement and design Illumination systems for various applications.
CO 4 :	Figure-out a suitable scheme of speed control for the traction systems.
CO 5 :	Understand the importance and aspects related to electrical safety

Subject Name: Technical Seminar-II	Subject code: 62481
CO1:	Identify and analyze the real time Electrical Engineering problems.
CO2:	Acquire awareness on latest technology and current trends in the field of Electrical Engineering.
CO3:	Participate in discussions for enhancement of knowledge.
CO4:	Apply communication skills.
CO5:	Document and present technical reports following professional ethics.

Subject Name: Project Work	Subject code: 62482
CO 1 :	Identify the real world Electrical engineering problems.
CO 2 :	Analyze the practical solutions to the problem.
CO 3 :	Apply modern engineering tools for solution.
CO 4 :	Develop hardware kits.
CO 5 :	Write technical reports following professional ethics.

		TEQIP Projects			
S.No.	**Title o f t h e R&D Project or Research Grant**	**Sanctioning Agency, and Date of Sanction**	**Namesofthe Principal a n d Co Investigators**	**Sanctioned Amount Rs. In lakhs**	**Status of the Project (completed/on-going)**
1	Introducing pulsatile flow though BLDC motor control for Ventricular assist devices	JNTU-TEQIP III Collaborative Research Proposal, 2019	Dr. S. Venkateshwarlu	2,50,000/-	Completed
2	Multi-agent system for Energy Management of Renewable and Alternative Energy in Domestic Cooking	JNTU-TEQIP III Collaborative Research Proposal, 2019	Dr. M. Lakshmi Swarupa	2,15,000/-	Completed
	Total (Rs)			4,65,000/-	

|			**NewGen EDC Projects**			
S. No	**Projects Undertaken during the year 2020-21**	**Mentor**	**Sanctioned Amount (Rs)**	**Student Name**		**Status**
				Name of the student	**Roll No**	
1	Smart Room Lighting System	Mr. K. S. V. Phani Kumar	1,63,000	Rayala Sai Koushik	18B81A0294	Completed
				Shaik Mohammed Nadeem	18B81A0277	
				Kandagatla Karthik	18B81A0274	
				MasanamYathish Kumar	18B81A02C0	
2	Smart Cap for Visually Challenged	Mrs. K. Deepika	90,000	ResuSrisai Kumar	18B81A0251	Completed
				ItharajuVenkataramana	18B81A0258	
				Banuru Jhansi	18B81A0220	
				Kommula Rahul	18B81A0237	
3	Non-Contact Temperature Monitoring	Mr. G. Janardhan	63,000	A.V. Shree Anurag	18B81A02A0	Completed
				Nupur Kumari	18B81A0285	
				T. Naga Nitej	18B81A0279	
				Arindam Kar	18B81A0207	
4	Electrical Billing & Appliance health monitor	Dr. G. Sree Lakshmi Mr. P. Vinodh Kumar	79,000	A. Harshini	18B81A0271	Completed
				P. Balaji Yadav	18B81A0265	
5	Smart Chest Measurement Unit for Police Recruitment	Mrs. K.Deepika	33,150	K. Shiva Kumar	18B81A0295	Completed
		Mr. K.S.V.Phani Kumar		K. Pavan Sai	18B81A0286	Completed
6	Automatic protection and drying of clothes from Rain	Mr. P. Vinodh Kumar	93,500	Rajasekhar Reddy	16B81A0262	Completed
				Sai Gautham	16B81A0278	
				Sai Kumar	16B81A0279	
				Pranav	16B81A0299	
				Rajasekhar Reddy	16B81A0262	
7	Smart Trolley	Dr.M.LakshmiSwarupa	57,625	Ms.T.Vaishnavi	18B81A0238	Completed
				Mr.RishiShrethram	18B81A0255	
Total			**5,79,275**			

FACULTY OF THE DEPARTMENT

Sitting (Left to Right) : Dr. Ch. Lokeshwara Reddy, Dr. G. Sree Lakshmi, Dr. Raghava Cherabuddi, Dr. K. Ramamohan Reddy, Dr. K. Rama Sastry, Dr. S. Venkateshwarlu, Dr. M. Lakshmi Swarupa, Dr. K. Shashidhar Reddy.

Standing First Line (Left to Right) : Ms. M. Tejasvi, Mrs. V.Ch.S.N. Lavanya, Mrs. M. Rajitha, Mrs. Ch. Shravani, Mrs. R. Naveena Bhargavi, Mrs. K. Deepika, Mrs. G. Divya, Mrs. V. Vimala Devi.

Standing Second Line (Left to Right) : Dr. A.S.S. Murugan, Dr. R. Vijay, Mr. D. Sreenadh Reddy, Dr. D. Obulesu, Mr. B. Kalyana Chakravarthy, Mr. R. Harshavardhan, Dr. Vishwanatha Siddhartha, Mr. Rajib Kumar Kar, Dr. K.S.V. Phani Kumar, Mr. P. Rajesh Kumar, Mr. G. Janardhan, Mr. G. Manohar, Mr. P. Vinodh Kumar.
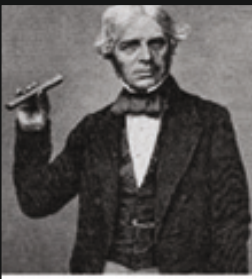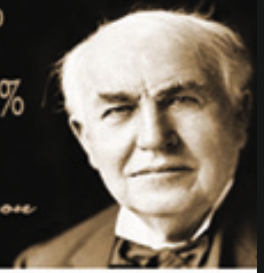
"The five essential entrepreneurial skills for success are concentration, discrimination, organization, innovation and communication."
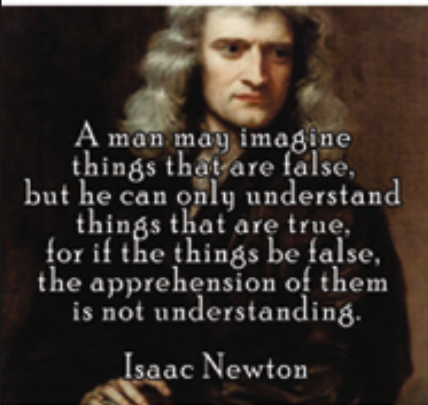
Michael Faraday

Genius is one % inspiration and ninety-nine % perspiration.
-- Thomas Edison
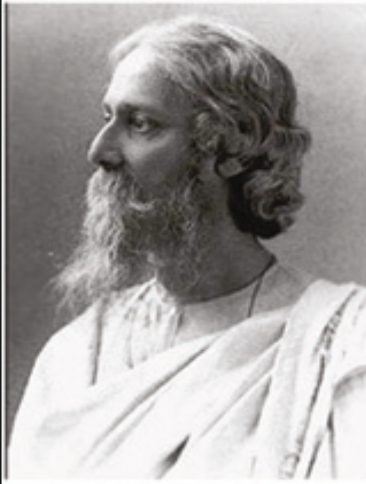
The highest education is that which does not merely give us information but makes our life in harmony with all existence.

(Rabindranath Tagore)

A man may imagine things that are false, but he can only understand things that are true, for if the things be false, the apprehension of them is not understanding.

Isaac Newton

(1879-1955). One of the greatest scientists, philosophers, received Nobel Prize for his 'Theory of Relativity'.

Albert Einstein

We owe a lot to Indians who taught us how to count, without which no worthwhile scientific discovery could have been made.

TAKE UP ONE IDEA. MAKE THAT ONE IDEA YOUR LIFE. THINK OF IT. DREAM OF IT. LIVE ON THAT IDEA. LET THE BRAIN. MUSCLES. NERVES. EVERY PART OF YOUR BODY. BE FULL OF THAT IDEA. AND JUST LEAVE EVERY OTHER IDEA ALONE. THIS IS THE WAY TO SUCCESS.
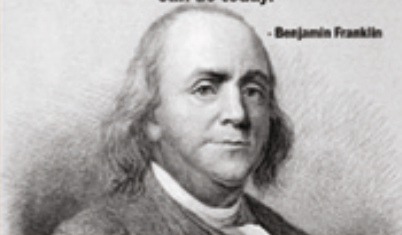
SWAMI VIVEKANANDA

"The scientists of today think deeply instead of clearly. One must be sane to think clearly, but one can think deeply and be quite insane."

Nikola Tesla

"Never leave that till tomorrow which you can do today."
- Benjamin Franklin

Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model.

A. P. J. Abdul Kalam

Contact us:

Professor & Head,

Department of Electrical and Electronics Engineering,

CVR College of Engineering,

Vastunagar, Mangalpalli (V), Ibrahimpatan (M), Rangareddy District - 501510.
Website: http://cvr.ac.in, E-Mail: hod.eee@cvr.ac.in
Ph.No. 08414-661601 / 661674 / 661675