ELECTRONICA Newsletter

VOLUME 6　　　**JUL - DEC 2021**

DEPARTMENT OF
ELECTRONICS AND COMMUNICATION ENGINEERING
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Department of Electronics And Communication Engineering

ELECTRONICA

NEWSLETTER

JUL - DEC 2021

EDITORIAL BOARD

EDITOR-IN-CHIEF
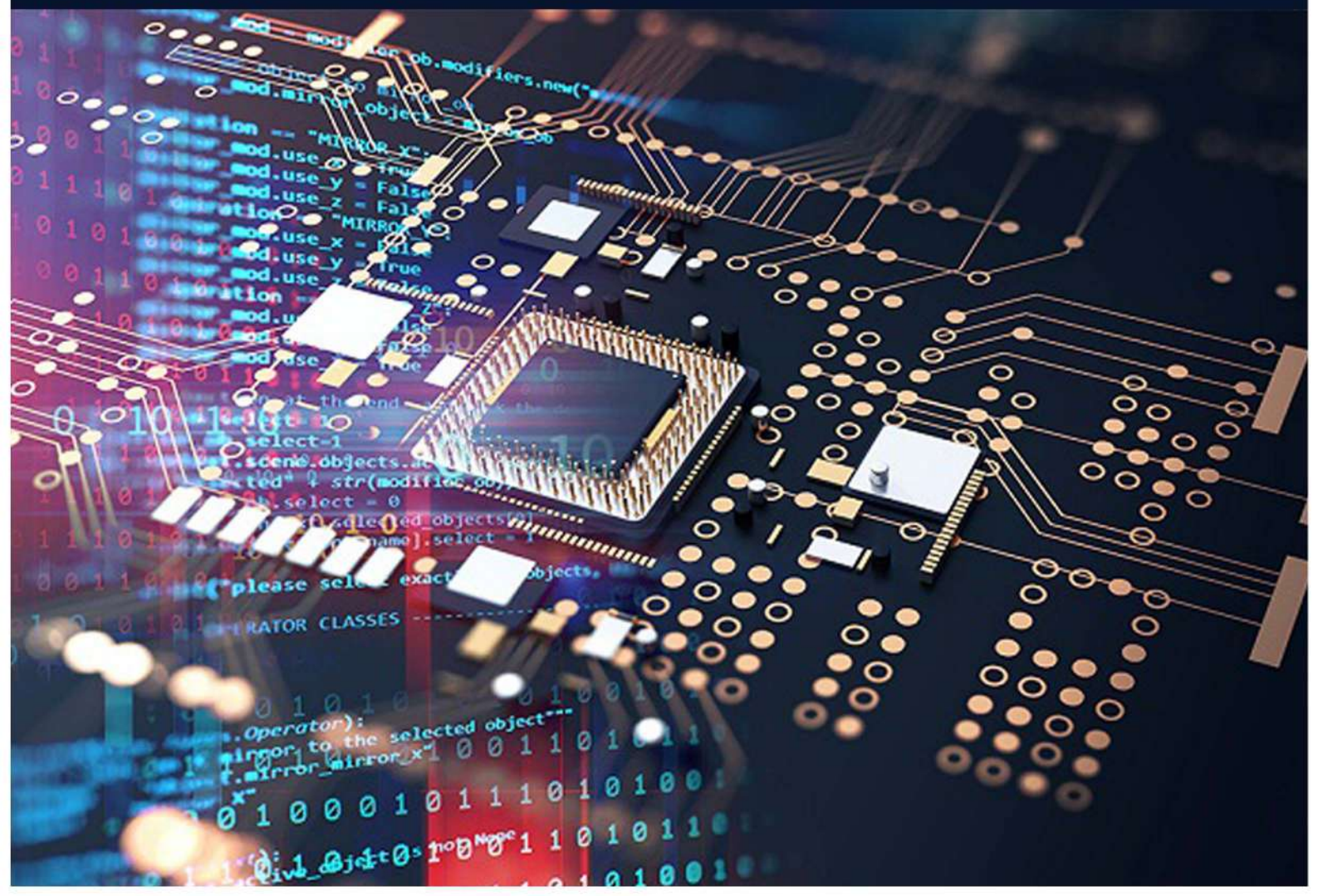Dr. A. Maheswara Rao
Professor & Head of Dept., ECE

FACULTY EDITORS
Dr. A S Viswanadha Sarma, Professor
Mr. Sk. Rasool, Assistant Professor
STUDENT EDITORS
K Madan Mohan (18731A0414)
P Meghana (19731A0431)

INSTITUTE: VISON & MISSION

Vision of the Institute:
To be a premier center of learning in Engineering and Management education that evolves the youth into dynamic professionals with a social commitment

Mission of the Institute:
M1: To provide quality teaching- learning practices in engineering and management education by imparting core instruction and state-of-the-art infrastructure.

M2: To engage the faculty and students in acquiring competency in emerging technologies and research activities through Industry Institute Interaction.

M3: To foster social commitment in learners by incorporating leadership skills and ethical values through value-based education

Program Educational Objectives (PEOs)

PEO-I : Graduates will have the capabilities to analyze, design and develop innovative solutions for the problems in the field of Electronics and Communication Engineering using core competencies.

PEO-II :Graduates will have the ability to engage themselves in research and lifelong learning to achieve professional excellence.

PEO-III : Graduates will have successful career with leadership qualities, ethics and good communication skills in Electronics and Communication Engineering and related fields.

ECE PBRVITS | DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

DEPARTMENT PROFILE

❋ The Department of Electronics and Communication Engineering (ECE) was established in the years 1998–99 with an intake of 60 and currently running with an intake of 240. It is 23 years old now and one of the most well-established departments in our Institution. It is also offering one post graduate programme with the specialization of VLSI Design with an intake of 30 students.

❋ The Department is known for its esteemed faculty members who are renowned for their path- breaking contributions in the field of electronics and communications. It is well equipped with laboratories, audio-visual facilities and software tools such as Multi Sim, Model Sim, Lab View, HFSS, MATLAB, and Xilinx.

❋ We offer our students an excellent educational experience that combines intellectual rigor and cross-disciplinary breadth. The course contents are periodically updated to introduce new scientific and technological developments. Electronic design, communication technologies, hands-on programming, a research focus, and entrepreneurship skills are all part of our signature educational curriculum. The ECE domain is often regarded as a challenging culmination of hardware and software. Our curriculum focuses primarily on the knowledge and skills that emerging engineers need.

DEPARTMENT: VISON & MISSION

Vision:
To produce technically competent and research oriented Electronics and Communication Engineers to meet the Industrial and Social requirements.

Mission:

M1: To impart quality technical education in the field of Electronics and Communication Engineering through state-of-the art facilities and effective teaching learning process.

M2: To enrich the faculty and students with research and consultancy skills through Industry-Interaction and Training in Emerging areas of Electronics and Communication Engineering.

M3: To develop lifelong learning, leadership qualities and ethical values in learners to meet the societal and industrial needs.

PROGRAM OUTCOMES (POs)

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

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.

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.

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.

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

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.

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.

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

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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.

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.

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.

PROGRAM SPECIFIC OUTCOMES (PSOs)

❋ PSO-1: Graduates will be able to design and analyze Image Processing and Communication Systems concepts using appropriate tools.

❋ PSO-2: Graduates will be able to design and develop solutions for real world problems by applying the concepts of VLSI and Embedded Systems.

P.B.R. VISVODAYA INSTITUTE OF TECHNOLOGY & SCIENCE
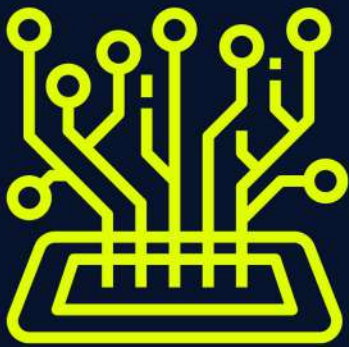
ECE

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

College Website: www.pbrvits.ac.in

FACULTY DETAILS

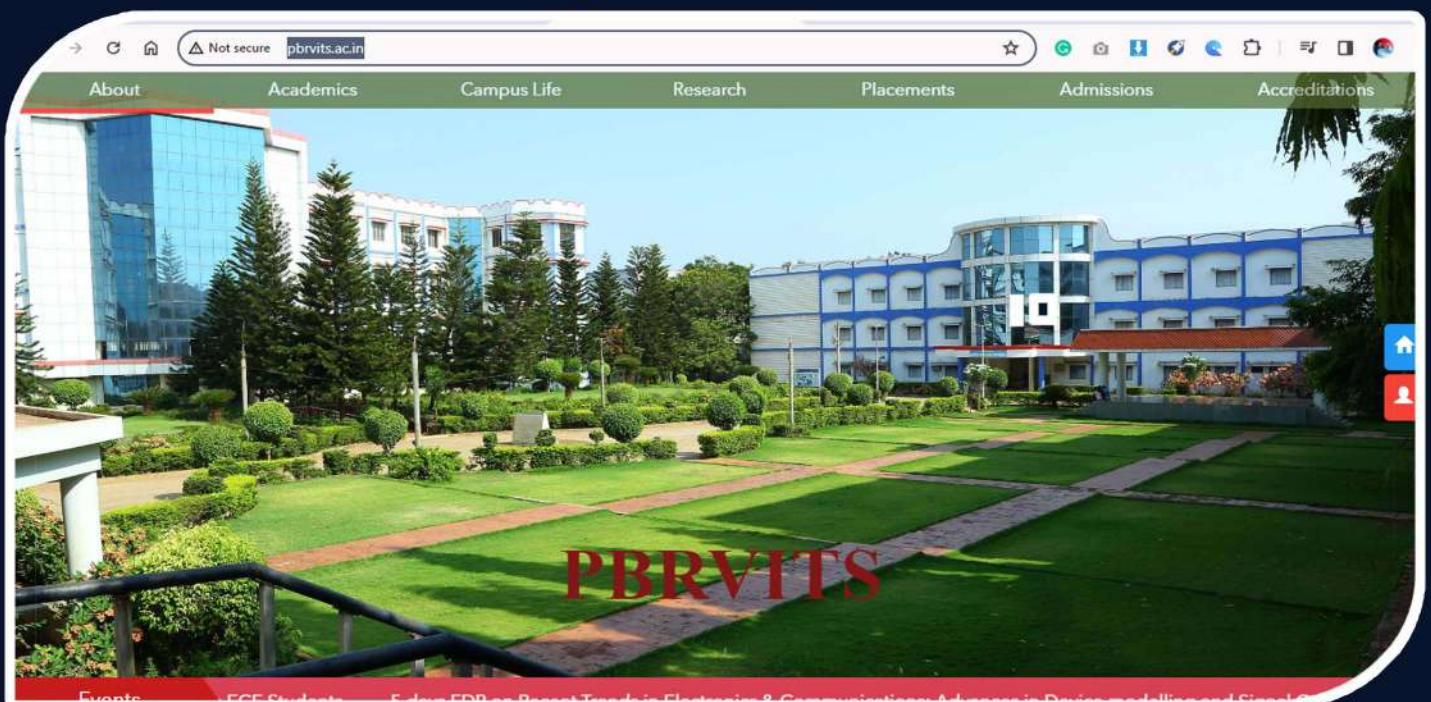| S.No.	Name	Designation	Qualification
1	Dr. DODLA PRATHYUSHA REDDI	Professor	ME/M. Tech and PhD
2	Dr. AVULA MAHESWARA RAO	Professor	ME/M. Tech and PhD
3	Dr. S.V. SUBBA RAO	Professor	ME/M. Tech and PhD
4	Dr. A S VISWANADHA SARMA	Professor	ME/M. Tech and PhD
5	Dr. N. SATHEESH KUMAR	Professor	ME/M. Tech and PhD
6	Dr M R ARUN	Professor	ME/M. Tech and PhD
7	Dr P RAJA PRAKASH RAO	Professor	ME/M. Tech and PhD
8	Dr. V PAKASAM	Professor	ME/M. Tech and PhD
9	Dr. MD HAYATH RAJVEE	Professor	ME/M. Tech and PhD
10	Dr. S M LAKSHMI	Professor	ME/M. Tech and PhD
11	Mrs. RAVI SRAVANTHI	Associate Professor	M.E/M. Tech
12	Mr. DODLA LIKHITH REDDY	Associate Professor	M.E/M. Tech
13	Mr. VEMURU PHANIBHSHAN	Assistant Professor	M.E/M. Tech
14	Mr. ARAVA SUMAN KUMAR REDDY	Assistant Professor	M.E/M. Tech
15	Mr. RAMRAJSINGH PRATHAP SINGH	Assistant Professor	M.E/M. Tech
16	Ms. MODI PAVITHRA	Assistant Professor	M.E/M. Tech
17	Ms. MUSALI SUREKHA	Assistant Professor	M.E/M. Tech
18	Mr. V BHARATH KUMAR	Assistant Professor	M.E/M. Tech
19	Mr. M RAMA MOHAN REDDY	Assistant Professor	M.E/M. Tech
20	Mr. VANTERU NARAYNA REDDY	Assistant Professor	M.E/M. Tech
21	Mr. AKURATHI SRINIVASA RAO	Assistant Professor	M.E/M. Tech
22	Mrs. K KIRANMAYIJYOTHI	Assistant Professor	M.E/M. Tech
23	Mr. L.M.L. NARAYANA REDDY	Assistant Professor	M.E/M. Tech
24	Mr. LALLAM VASU	Assistant Professor	M.E/M. Tech
25	Mr. D YALAMANDA	Assistant Professor	M.E/M. Tech
26	Mr. K ASHOK KUMAR	Assistant Professor	M.E/M. Tech
27	Mr. SK RASOOL	Assistant Professor	M.E/M. Tech
28	Mr. M VENKATA RATHNAM	Assistant Professor	M.E/M. Tech
29	Mrs. M MADHULIKA	Assistant Professor	Q.E/M. Tech
30	Mr. RAYALA RANJIT KUMAR	Assistant Professor	M.E/M. Tech
31	Mr. ALLA VENKA REDDY	Assistant Professor	M.E/M. Tech

32	Mr. M SREEHARI	Assistant Professor	M.E/M. Tech
33	Mr. N CHINA BABU	Assistant Professor	M.E/M. Tech
34	Mr. D UMAMAHESWARA REDDY	Assistant Professor	M.E/M. Tech
35	Ms. JAGANNADAM SUJITHA	Assistant Professor	M.E/M. Tech
36	Mr. GAJULAPALLE SIVANJANEYA REDDY	Assistant Professor	M.E/M. Tech
37	Mr. V PRASANNAJANEYA REDDY	Assistant Professor	M.E/M. Tech
38	Mr. T GOWRI KISHORE	Assistant Professor	M.E/M. Tech
39	Ms. KAMEPALLI UMA	Assistant Professor	M.E/M. Tech
40	Mrs. CH REDDY USHA	Assistant Professor	M.E/M. Tech
41	Mr. R VENKATESWARLU	Assistant Professor	M.E/M. Tech
42	Mr. R SATHEESH	Assistant Professor	M.E/M. Tech
43	Mrs. A NAGAMALLI	Assistant Professor	M.E/M. Tech
44	Mr. K PENCHALAIAH	Assistant Professor	M.E/M. Tech
45	Mrs. SHAIK NAZMA SULTHANA	Assistant Professor	M.E/M. Tech
46	Mrs. SK JABEENA	Assistant Professor	M.E/M. Tech
47	Mr. G MALYADRI	Assistant Professor	M.E/M. Tech
48	Mr. K RAVICHANDRA	Assistant Professor	M.E/M. Tech
49	Mr. CH PAVAN KUMAR	Assistant Professor	M.E/M. Tech
50	Mr. G MANGARAO	Assistant Professor	M.E/M. Tech
51	Mrs. C V KAVYA SUVARCHALA	Assistant Professor	M.E/M. Tech
52	Mr. P VENKATESWARLU	Assistant Professor	M.E/M. Tech

FACULTY PUBLICATIONS

S. No.	Title of paper	Name of the author/s	Name of journal	ISSN number
1	Design of Wideband Elliptical Ring Monopole Antenna Using Characteristic Mode Analysis	Dr. A. Maheswara Rao	(JEES)	671-7263
2	Artificial Neural Network Based SIW Bandpass Filter Design Using Complementary Split Ring Resonators	Mr R Ranjith Kumar	(PIER) C	1937-8718
3	Tumor Detection in Skin Using Electromagnetic Band Gap Structure Antenna	Dr V Prakasam	(IRJET)	2395-0072
4	Performance Analysis and Development of printed circuit Micro strip Patch Antenna with proximity coupled feed at 4.3 GHz (C-band) with linear polarization for Altimeter Application	Dr V Prakasam	(IJCDS)	2210-142X

5	Plant Leaf Detection Using Convolutional Neural Networks	Mr K Penchalaiah	(NAS)	0886-9367
6	Segmentation Based Image Steganography	Mr K Penchalaiah	(AJCR)	2456-804X
7	FPGA based CHOS based bitwise dynamical PRNG using seed generation	Mr. V. Narayana Reddy	(JOICS)	1548-7741
8	Class Oriented Common Object Mapping in Digital Images	Mr K Penchalaiah	(JOICS)	1548-7741
9	A Novel Approach for Under Water Image Enhancement Using CFA And Robust Retinex Model	Mr K Penchalaiah	(JOICS)	1548-7741
10	Audio Feature Development for Real-Time Genre Identification in Music	A. Kurathi Srinivasa Rao	(AES)	2096-3246
11	Audio Feature Development for Real-Time Genre Identification in Music	R. Venkateswarlu	(AES)	2096-3246
12	Multi-robot systems: a review of pattern formation and adaptation	Dr. S. M. Lakshmi Sri	(AES)	2096-3246
13	Multi-robot systems: a review of pattern formation and adaptation	C. V. Kavya Suvarchala	(AES)	2096-3246
14	Reconfigurable Embedded Systems: A New Take on Hardware/Software Separation	Dr. S. V. Subba Rao	(AES)	2096-3246
15	Reconfigurable Embedded Systems: A New Take on Hardware/Software Separation	D. Likhith Reddy	(AES)	2096-3246
16	Scope and Requirements of a Key Management Framework for a Multiple-Groups Wireless Network	Alla Venka Reddy	(IJCNWC)	2250-3501
17	Scope and Requirements of a Key Management Framework for a Multiple-Groups Wireless Network	Koppala Ashok Kumar	(IJCNWC)	2250-3501
18	Reconstructing 3D Images in a New Way with ACO-based TVR DART	Dr. M. R. Arun	(IJCNWC)	2250-3501
19	Reconstructing 3D Images in a New Way with ACO-based TVR DART	L. Vasu	(IJCNWC)	2250-3501
20	The Effects of Crypto-Hardware on Low-end Internet of Things Performance	Dr. Pasala Raja Prakash Rao	(IJCNWC)	2250-3501
21	The Effects of Crypto-Hardware on Low-end Internet of Things Performance	G. Manga Rao	(IJCNWC)	2250-3501
22	HELPR: A Cross-Domain Approach to Improving Spoken-Dialog Systems	M. Rama Mohan Reddy	(IJASEM)	2454-9940
23	HELPR: A Cross-Domain Approach to Improving Spoken-Dialog Systems	M. Sreehari	(IJASEM)	2454-9940
24	The purpose of this study was to develop a novel IoT-enabled health diagnosis and monitoring model for minors and female students using machine learning to create a secure virtual health environment	Dr. A. S. Viswanadha Sarma	(IJASEM)	2454-9940
25	The purpose of this study was to develop a novel IoT-enabled health diagnosis and monitoring model for minors and female students using machine learning to create a secure virtual health environment	R. Sravanthi	(IJASEM)	2454-9940

26	Symmetric Encryption That Can Be Filtered Using Boolean Expressions And Relied Upon Hardware	L. M. L. Narayana Reddy	Applied Laser Technology	1000-372X
27	Symmetric Encryption That Can Be Filtered Using Boolean Expressions And Relied Upon Hardware	V. Prasannanjaneya Reddy	Applied Laser Technology	1000-372X
28	Hexagonal Nano magnets Capable of Reversing Magnetization	L. M. L. Narayana Reddy	Applied Laser Technology	1000-372X
29	Hexagonal Nano magnets Capable of Reversing Magnetization	D Umamaheswara Reddy	Applied Laser Technology	1000-372X
30	Automatic Detection of White Blood Cancer from Bone Marrow Microscopic Images Using Convolutional Neural Networks	Sk. Jabeena	Applied Laser Technology	1000-372X
31	Automatic Detection of White Blood Cancer from Bone Marrow Microscopic Images Using Convolutional Neural Networks	Sk.Nazma Sulthana	Applied Laser Technology	1000-372X
32	A State of the Art Review Of Network and Mobile Communications Technologies	Dr. Dodla Prathyusha Reddy	Applied Laser Technology	1000-372X
33	A State of the Art Review Of Network and Mobile Communications Technologies	J Sujitha	Applied Laser Technology	1000-372X
34	A State of the Art Review Of Network and Mobile Communications Technologies	K Uma	Applied Laser Technology	1000-372X
35	Potential Applications of Bi dispersed Fluid Analysis	Dr. Pasala Raja Prakash Rao	YIDDISH	0364-4308
36	Potential Applications of Bi dispersed Fluid Analysis	Tunga Gowri Kishore	YIDDISH	0364-4308
37	An Internet of Things-Friendly, Plug-and-Play Module for Gathering and Sending Data from Nodes	Dr. Dodla Prathyusha Reddy	YIDDISH	0364-4308
38	An Internet of Things-Friendly, Plug-and-Play Module for Gathering and Sending Data from Nodes	J Sujitha	YIDDISH	0364-4308
39	Fast convolution on graphics hardware for high-performance FIR filtering in real time	G. Malyadri	YIDDISH	0364-4308
40	Fast convolution on graphics hardware for high-performance FIR filtering in real time	P. Venkateswarlu	YIDDISH	0364-4308

ACADEMIC TOPPERS

Heartiest Congratulations to the Toppers the Management, Principal, Faculty & Students ofECE Dept., are happy to congratulate the students for proving their excellence in the University Examinations for the A.Y. 2021-2022, conducted by JNTUA, Ananthapur.

(I B. TECH, II-SEM, 2020 BATCH)

I B. Tech, II-Sem				
S. No	Roll Number	Name	Percentage(%)	Rank
1	20731A0419	GOPIREDDY LAKSHMI DEEPIKA	89.66	I
2	20731A0428	KOMMI PALLAVI	88.11	II
3	20731A0452	UPPALAPATI BHANU	87.77	III

(II B. TECH, II-SEM, 2019 BATCH)

II B. Tech, II-Sem				
S. No	Roll Number	Name	Percentage(%)	Rank
1	19731A0454	K LEELA VENKATA VINODINI	82.66	I
2	19731A0402	BADE MANASA	81.44	II
3	19731A0482	THIYYABINDU ADITYA	80.66	III

(III B. TECH, II-SEM, 2018 BATCH)

III B. Tech, II-Sem				
S. No	Roll Number	Name	Percentage(%)	Rank
1	18731A0403	BONDILI NAGA SAI CHARAN SINGH	88.77	I
2	18731A0401	CHAVA SAI MRUDHULA	87.77	II
3	19735A0419	KUKATI SUMA	87.44	III

(IV B. TECH, II-SEM, 2017 BATCH)

IV B. Tech, II-Sem				
S. No	Roll Number	Name	Percentage(%)	Rank
1	17731A0413	KOLLI BHAVYA	92	I
2	17731A0464	UPPALA HARIKA	91.8	II
3	17731A0495	N .CENCHU CHANDU PRASANTH	90.6	III

CERTIFICATE COURSES

AMAZON WEB SERVICES - CLOUD COMPUTING

A Certificate Course was organized by the department of ECE on "AWS Cloud Computing" on behalf of Technical Skill Trainers, APSSDC, Andhra Pradesh which is held from 15.11.2021 to 20.11.2021. In this program 60 students and 04 faculty members were attended. The experts for this program Mr. Rupesh Kumar and Mr. Rama Krishna from APSSDC, Andhra Pradesh delivered lecture an importance of Cloud Computing, AWS Global Architecture, AMIs and Volumes in AWS, Application deployment in Cloud using EC2, Storage Concepts etc.

AWS (Amazon Web Services) is a comprehensive, evolving cloud computing platform provided by Amazon that includes a mixture of infrastructure-as-a-service (IaaS), platform-as-a- service (PaaS) and packaged-software-as-a-service (SaaS) offerings. AWS services can offer an organization tool such as compute power, database storage and content delivery services. AWS offers many different tools and solutions for enterprises and software developers that can be used data centers in up to 190 countries. Groups such as government agencies, education institutions, non-profits and private organizations can use AWS services.

INTERNET OF THINGS

A Certificate Course was organized by the department of ECE on" IOT" on behalf of Technical Skill Trainers, APSSDC, Andhra Pradesh which is held from 20.12.2021 to 25.12.2021. In this program 60 students and 04 faculty members were attended. Technical Skill Trainers, APSSDC, Andhra Pradesh delivered lecture an importance of IOT.

The Internet of Things (IoT) describes the network of physical objects— "things"—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet. IoT Applications are Smart Cities. A combination of sensors in different capacities throughout the city for various tasks such as managing the traffic, handling waste management, optimizing streetlights, saving water, monitoring energy expenditure, creating smart buildings, and more

WEBINARS

WATER QUALITY AND MANAGEMENT SYSTEM WITH RASPBERRY PI

The webinar was organized by the department of ECE on "Water Quality management with Raspberry Pi" ON behalf of Pantech e-learning, T-Nagar, Chennai which is held on 16.11.2021. In this program 93 students and 03 faculty members were attended. The experts for this webinar Mr. M.R. Senthil Kumar & Mr. Chinnaswamy were delivered lecture on importance of embedded techniques, Raspberry Pi and IOT features etc.
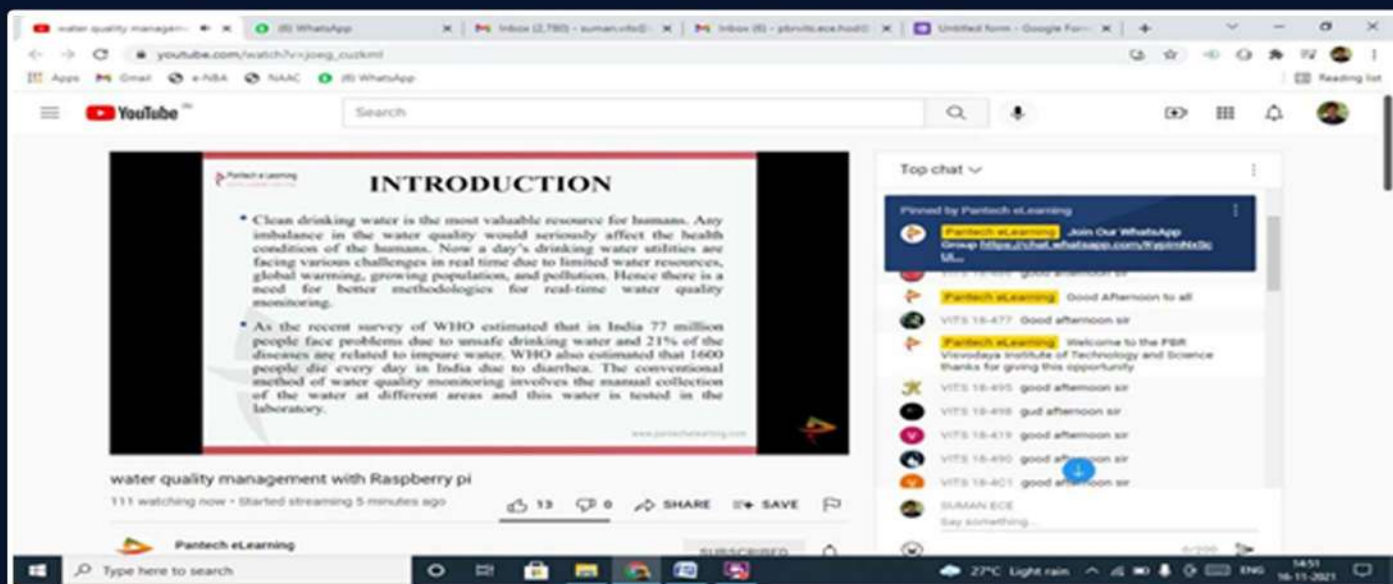
Cleaning drinking water is the most valuable resource for humans. Any imbalance in the water quality would seriously affect the health condition of the humans. Now a day's drinking water utilities are facing various challenges in real time due to limited water resources, global warming, growing population, and pollution. Hence there is a need for better methodologies for real-time water quality monitoring.

INDUSTRIAL VISITS

DR. NARLA TATARAO THERMAL POWER STATION

Department of ECE organized a "Dr. Narla Tatarao Thermal Power Station, Vijayawada" on 18.12.2021 for IV ECE students. Total 40 students along with 2 faculty members are visited. During this visit, all the students were able to visit the thermal power generation unit, power distribution monitoring station, sensor arrangements to measure the power generation unit and power distribution etc.

PLACEMENT SUMMARY

S.NO	Name of the Company	Number of students selected
1	ACCENTURE	9
2	IBM	1
3	CTS	16
4	CAPGEMINI	1
5	DXC TECHNOLOGIES	33
6	INFOSYS	6
7	TECH MAHINDRA	4
8	JASMIN INFOTECH	7
9	WIPRO	9
10	TCS	11
11	PRODAPT	13
12	IBS SOFTWARE	6
13	TUDIP TECHNOLOGIES	2
14	METRIX LAB	5
15	HEXAWARE	11
16	QUALITY KIOSK	4
17	WORKSBOT	28
	TOTAL	**166**

तमसो मा ज्योतिर्गमय

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