A. J. Institute of Engineering & Technology

AJIET

PRATHIBIMB

The Reflection of EC @ AJIET

Volume 3

Issue 1

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Academic Year (July-Sept): 2021-2022

ABOUT THE DEPARTMENT

The Department of Electronics and Communication (E&C) Engineering in AJIET is one of the highly sought after engineering departments with an intake of 60 students. The department can boast of an excellent infrastructure with state of the art laboratories and very dynamic team of experienced Faculty. The course contents and the training are intended to equip the students with the pragmatic skills required in-line with the present scenario in E&C related Industries, so that once the students reach their final year, they become industry ready. The major thrust areas the department is focusing upon in Research and Training are embedded systems, signal processing, VLSI Design, Robotics, Artificial Intelligence and Machine learning to name a few. The department gives more emphasis for practical aspects in various domains of electronics and communication engineering by undertaking mini and major projects, technical talks from eminent personalities of the industries and frequent industrial visits which help in the overall development of budding engineers who shape the future of our country. The Department of Electronics and Communication (E&C) Engineering is also equipped with incubation center linked with EPITAS.

VISION

To be recognized as a centre of excellence in the region by nurturing the young innovative minds into skillful and ethical professionals to cater the global industrial and societal needs.

MISSION

- To establish state-of-the art laboratories to facilitate research and innovation to upgrade the knowledge and skills.
- To provide industry interaction for training programs on latest technology.
- To provide ethical and value based education by promoting activities addressing the societal needs.

HOD-DESK

Welcome to the Department of Electronics and Communication Engineering at A J Institute of Engineering and Technology, Mangalore. We started our journey in the year of 2016. Over the past five years, we have grown our expertise and competence in the core ECE and research. The primary focus of our department is to impart technical knowledge to students, promote their problem solving and innovative skills in the growing technologies. We have a long history in educating young minds, conducting innovative research, and offering professional services to local and overseas communities. Our department has a distinguished record in both teaching and research. Faculty members have excellent academic credentials and are highly regarded. This website provides an overview of the academic programs, research activities of our department, research facilities, profiles of faculty members, and details of student activities. Many of our graduates now occupied good positions in the industry and community. Each year, we also invite various departmental speakers, academicians and practitioners in a variety of forums, in addition to the numerous and unparalleled public events. We also encourage students to organize and participate in various events which sets a challenge to the young minds to provide solutions for the problems of social relevance. With all these inputs one can find our students very hardworking, practical-oriented and highly skilled to work in any environment. We are encouraged to see many industries coming back to our department, which reinforces our belief in the effectiveness of our students and their suitability to the dynamic corporate world.

Dr. Gnane Swarnadh Satapathi
Head of the Department

EVSA

- **Selection of New Office Bearers**

  The Electrovertz Student Association (EVSA) conducted election for the post of new office bearers for the academic year 2021-22. The election took place at Seminar Hall 2 from 2:00PM on 8/10/2021.

The following candidates were elected by election:

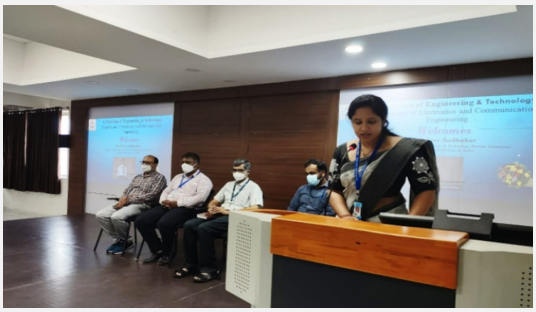
Sl No	Name	Designation	Semester
1	Ms. Thrusha Rao	President	VII
2	Ms. Saniha Shetty	Vice-President	V
3	Mr. Sushant	Secretary	VII
4	Ms. Seema	Joint Secretary	III

- **Ayudha Pooja Celebration**

  The Department celebrated Ayudha Pooja on 14/10/2021 in Basic Electrical lab, AJIET from 9.00am onwards. Ayudha Pooja rituals were carried out by the Archak in the presence of Principal- Dr Shantharama Rai, HOD of ECE- Dr. Gnane Swarnadh satapathi, HOD's of other departments along with Staff and students. The Program was co-ordinated by Prof. Prakash K Shetty, Mr. Manju Kiran B and Mrs. Pratheksha Rai N.

Talk

- The Department in-association with EVSA organized a talk by Dr. Veluri Sudhakar on " **Applications of Engineering in Medical Field**" on 18/10/2021 at Seminar hall-2 along with Dr. Sreeraj, AJIMS. The talk was conducted in the presence of Dr. Shantharama Rai C, along with Dr. Gnane Swarnadh Sathapathy with the faculty and students of ECE.The Program was co-ordinated by Prof. Prakash K Shetty and Mrs. Pratheksha Rai N.



Webinar

- The Department of Electronics and Communication Engineering organized a webinar on 20/07/2021 about "**Career Pathway & Study Abroad Opportunities**" from 12:00 PM-1:00PM. The Resource Person was Mr. Prasad Shetty, AECC Global Bangalore and the webinar was co-ordinated by Mrs. Pratheksha Rai N and Mr. Ganesh U G.
- The Department in association with Embedded and Robotics Club organized a webinar on 22/07/2021 about "**Fundamentals of Oscilloscope**" from 12:00 PM-1:00PM. The Resource Person was Ms. Neethu and was co-ordinated by Mrs. Pratheksha Rai N and Mr. Raghavendra Havaldhar.

Student Accomplishments

- Ms. Tasmiya Z, Ms. Krithi B Shety. Ms. Shreya S, Ms. Moksha has cleared round one in **Yuva Innovators Challenge** for "**Smart Menstrual Cup**" a national level competition organized by Yuva incubated powered by K.I.T.E.S Education.
- Mr. Akshith, Mr. Adeesh, Mr. Adik has cleared round one in **Yuva Innovators Challenge** for "**Vertical Axis Wind Turbine**", a national level competition organized by Yuva incubated powered by K.I.T.E.S Education
- Mr. Hritwik R, Mr. Sushanth, Mr. Saron has cleared round one in **Yuva Innovators Challenge** for "**Social Distance Tracker**",a national level competition organized by Yuva incubated powered by K.I.T.E.S Education.

Faculty Achievements

- Sponsored research project entitled "**Computational models for the static analysis of steel composite plate girder**" selected by Govt. of Karnataka under VGST scheme. Pi: Dr. Sangeeta D M, Co-Pi: **Mr. Mohan A R** Project cost: Rs. 3,00,000/- .
- Dr. Nagesh HR, Mr. **Kiran Kumar VG**, Mr. Ravinarayana B, Mr. Guruprasad MS, Manjunath Kotari, Mrs. Ashmitha Poojari, Dayanand G, Prabhakara K, "**System for hardware acceleration for embedded flash memory based on machine learning**" Indian Patent, Application Number: 202141020170
- Raghu Chandra Garimella, **Dr. Gnane Swarnadh Satapathi**, Mastanamma Yarram, Ramesh Babu Jarapala, Vamshiram Martha, Sathish Pochampalli, Pavani Gandreti, Poojitha Boreddy, Rohith Kumar Gadam, Khwajamoinuddin Mohammad, Pavankumar Martha, Karthik Reddy Manukonda, "**Abhigna Vidyut Samputah – A Smart Electric Extension Box**" Indian Patent, Application Number: 202141034598
- "**Tracking Algorithms with Phased Array Radars in the Presence of ECM**" by **Dr. Gnane Swarnadh Satapathi**, LAP LAMBERT Academic Publishing.
- **Mr. Kiran Kumar** has successfully defended his thesis on " **Design and Implementation of Efficient FPGA Architecture for Cryptographic algorithms**" on 6th August, 2021

Editorial Board

- **Chief Editor:** *Dr. Gnane Swarnadh Satapathi, HOD, Department of E&C*
- **Editor:** *Mrs. Pratheksha Rai N, Assistant Professor, Department of E&C*
- **Student Editor:** *Ms. Pooja SP & Ms. Thrusha K, 4th year, Department of E&C*
- **Student Editor:** *Mr. Yashas Shetty K , 3rd year, Department of E&C*
- **Student Editor:** *Ms. Hitaishini C U & Ms.Geetha D P, 3rd year, Department of E&C*

Program Educational Objectives(PEOs)	
PEO1	Exhibit a desire for lifelong learning through professional and societal activities.
PEO2	Exhibit and apply their technical skills and knowledge in Electronics and Communication Engineering for industry and societal needs
PEO3	Exhibit leadership qualities, professional skills, management skills and ethics needed for successful career.

Program Specific Outcomes (PSOs)	
PSO1	Embedded Systems: Ability to apply the fundamental knowledge of core Electronics and Communication Engineering subjects in the analysis, design, and development of integrated electronic systems.
PSO2	Communication Systems: Ability to apply the fundamental knowledge of signal processing in the analysis, design, and development of communication systems.
PSO3	Simulation: Ability to use modern electronic tools such as MATLAB, Xilinx and Multisim, to design and analyze the complex electronics and communication systems.

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 consid-

erations.

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.