Velagapudi Ramakrishna Siddhartha Engineering
Department of Electronics & Communication Engineering
News Letter
Volume9 Issue 2 September - October 2021

Inside the Issue

Vision

To produce globally competitive and socially sensitised engineering graduates and to bring out quality research in the frontier areas of Electronics & Communication Engineering.

Mission

To provide quality and contemporary education in the domain of Electronics & Communication Engineering through periodically updated curriculum, best of breed laboratory facilities, collaborative ventures with the industries and effective teaching learning process.

To pursue research and new technologies in Electronics & Communication Engineering and related disciplines in order to serve the needs of the society, industry, government and scientific community.

Program Educational Objectives (PEOs)

After 3 to 5 years of graduation, electronics & Communication Engineering graduates will

PEO1: Excel in their professional career and higher education in Electronics & Communication Engineering and related fields.

PEO2: Exhibit leadership through technological ability and contemporary knowledge.

PEO 3: Adapt to emerging technologies for sustenance in their relevant areas of interest.

About the Department

Accreditation of B. Tech and MTech programmes by NBA, New Delhi to turn out globally recognized graduates.

40% of the faculty with Ph.D. qualification from premier institutions encompassing IITs, NITs, BITS and government universities to institute strong foundation and impart necessary skills

Establishment of TIFAC CORE in Telematics by DST, New Delhi and industries with outlay of 10 Crores, first of its kind in the state of AP, for producing industry ready students in the focused core areas.

Conduct of research and guidance in the focused areas of Antennas, Image Processing, RF&MW, VLSI & ES, Telematics.

More than 75% of the students are being absorbed by reputed MNCs'.

The Teaching-Learning process adopts different methods such as experiential learning, participative learning and problem-solving methodologies utilizing ICT facilities, LMS and e-resources. All the academic activities are carried out strictly following the academic and activity calendar. Proctor dairy system is in place for counselling and to monitor academic and personal issues of students. Necessary efforts are being made in identifying the learning levels (slow and fast) of the students through various assessments and additional training is imparted to slow learners.

Department encourages academic discussions between faculties and students using black board and faculties shares academic study material using it.

Use of modern teaching aids like LCD projectors, Wi-Fi enabled laptops are usually employed in classrooms and other student learning environments

Department has introduced EPICS (Engineering Projects for Community Services) in the curriculum along with mini and major projects. In EPICS students will go to the society (villages/ hospitals/ towns etc.) to identify the problem and survey the literature for a feasible solution.

Expert video subject lectures delivered by the various eminent resource persons are available in the digital library and it facilitates the faculty and students to utilize E-Tutorials of NPTEL, MOOCs access E-Journals, Video Conference, etc.

Faculty members use department library, digital library and other Open-Source platforms to enhance their teaching skills. The faculty members are encouraged to participate in short term courses, staff development programs and workshops on advanced topics to keep pace with the advanced level of knowledge and skills.

Program Specific Outcomes (PSOs)

After completion of electronics & Communication engineering Program, the students will be able to have ability to:

PSO 1: Demonstrate proficiency in the use of IOT required in real -life applications

PSO 2: Implement functional blocks of hardware/software designs for signal processing and communication applications.

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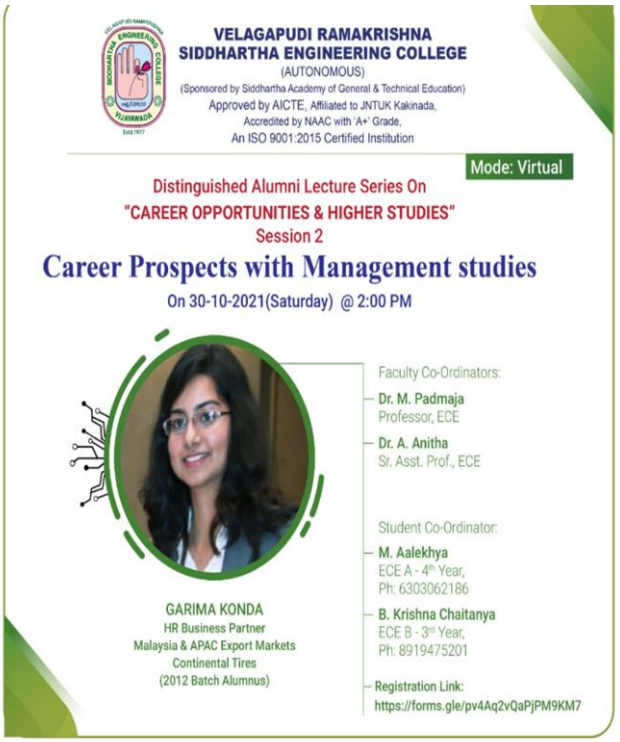
Events organized in the department

Alumni lecture series on – Career Prospects

Dr M Padmaja Professor and Dr A Anitha Sr Asst Professor of ECE organised a distinguished alumni lecture series on Career Opportunities & Higher Studies on 23rd October 2021 to motivate the students to choose a right path after graduation in ECE. The Guest for this session PVSS.JAYARAM Sir is 1997 Batch alumni and currently a Director-Data Centre at Xilinx Hyderabad for the past 8 years. The key note is about 'Career orientation and planning in ECE domain'. The session included Emerging Technologies mapped to ECE domain subjects which depicts how every growing industry is tightly coupled with the very core of ECE subjects and later we deep dive into how to grab these opportunities and make the best out of the those. Winded up his presentation by letting students know how good of a value does the core industry offer and the managerial skills that one has to imbibe along with core skills as they grow higher in their field.

Dr M Padmaja Professor and Dr A Anitha Sr Asst Professor of ECE organised a distinguished alumni lecture series on Career Opportunities & Higher Studies on 30th October 2021 to motivate the students about career with management studies. The Guest for this session was Garima Konda, "HR Business Partner, Malaysia & APAC Export Markets", Continental Tires is 2012 alumni. Ms. Garima Konda addressed regarding business management-what is Business Management and the careers in Business Management. Ms. Garima Konda explained about how a company works and the role of the employees. She addressed about various departments in business management like Marketing, human Resources, sales, supply chain, Information technology, Finance & general management and highlighted other roles in Business Management. Ms. Garima Konda explained the importance of choosing the career what fits you best. She addressed about how to get into a business school after a BTech. In her final remarks, Ms. Garima Konda gave some career advices to the students. At last, there was a good Q&A session. The students interacted with the guest and clarified their doubts regarding business management and the career opportunities.



Engineers' Day Celebrations

The birth anniversary of Sir M Visveswaraya is celebrated as Engineers Day as a respect to the great engineer who helped in building some of the architectural marvels including Krishna Raja Sagar dam in Karnataka. V R Siddhartha Engineering College has also been celebrating Engineers Day as a tribute to Sir M Visveswaraya since many years. The 54th Engineers Day was celebrated in online mode for which Shri G Veera Pandian IAS, Vice Chairman & MD AP Civil Supplies Cooperation, was invited as chief guest. The meeting was started with an inaugural session by paying respect to Sir M Visveswaraya garlanding his photo. Dr AV Ratna Prasad Principal VRSEC presided over the session and handed over the session to Shri G Veera Pandian for his talk. Shri G Veera Pandian is a non-engineer who always think about engineers and has good relation with them. He mentioned that engineering should be seen in a different prospective and also suggested the students to think in sociological point of view. He quoted an example of "GENROBOTICS" supported by TATA and invited students for such initiatives. Sri Vijay Maruti Babu T&P Officer VRSEC, addressed the students about the importance of being an engineer. He also stated that "Knowledge can be converted to wisdom only when one start to apply whatever is studied". Dr B Pandu Raga Rao thanked the management for organising such event and suggested the students to understand the purpose of studying. The event came to an end with vote of thanks by Dr M Padmaja, Professor, Dept of ECE.

Innovation Day……

The institute has been organizing the celebration of Innovation Day on 15th Oct 2021 to mark the birth anniversary of Dr A P J Abdul Kalam with an initiative from Ministry of Education (MoE) Innovations Cell India. In this context several activities like: Slogan Debate Essay writing, Poster presentation were conducted in all the departments of the college. Dr. K Ramanjaneyulu, Professor, ECE, P V P Siddhartha Institute of Technology was the chief guest and judge to the poster presentation competition in the Dept of ECE. Many posters were exhibited by the students among which two won prizes for their novelty.

R. PRANAY (198W1A10448), M. PRANEETHA (198W1A104L8) won first and second prizes respectively.

AICTE Training and Learning (ATAL) Academy sponsored 5 days online Faculty Development Programme (FDP) on "Cyber Security and Digital Forensics

The Department of Electronics & Communication Engineering, V. R. Siddhartha Engineering College, Vijayawada organized AICTE Training and Learning (ATAL) Academy sponsored 5 days online Faculty Development Programme (FDP) on "Cyber Security and Digital Forensics (Advanced)" during 25th-29thOctober, 2021.With increase in usage of the Internet, there has been an exponential increase in cyber-attacks. Cyber criminals use new and clever tricks to bypass security solutions. The aim of this FDP was to promote research in Cyber Security and Digital Forensics which includes topics like data collection tools, data scanning techniques for threat intelligence, data analytics, forensics tools for memory, mobile phones, network, Internet of things (IoT), social engineering, etc. In this ATAL FDP, the domain experts presented the state-of-the-art research and recent developments in Cyber Security Intelligence and Digital Forensics. The topics discussed in this FDP were: Introduction to Cyber Threat Intelligence, Cyber Threat Data Collection Techniques, Information Security Risk Assessment and Management, Intrusion Analysis and Dissemination, Penetration Testing, Malware Analysis, Memory, Network, Application, Hardware and Cloud Forensics Tools and Techniques, Cyber Laws and Ethics, Digital Forensics, Adaptive Cyber Defence and Immunity. The resource persons were Dr. Lalit Kumar Singh, Scientist, NPCL-BARC, Mumbai. Adarsh Kumar, Dept of CSE, UPES, Dehradun. Amrendra Sharan, Dept of CSE, NITTTR Chandigarh, Dr VM. Manikandan, Dept of CSE, SRM University-AP, Dr. Bhupendra Singh, Dept of CSE, IIIT Pune, Mr. Ajinkya Lohakare, Certified Ethical Hacker, Mumbai, Mr. Mukesh Rao, CEO, Tec twins Tech, Jaipur, Mr. Ragul Gupta, EICT, IT Kanpur, Mr\s. Dharatiya Dholariya, Rastriya Raksha University, Gujarat, Dr K. Suthendran, Dept of IT, Kalasalingam University, Tamilnadu, Prof R Mariappan, Dept of ECE, VRSEC, Vijayawada, Dr. Radhika Murugesan, Chenaiminds, Psychiatrist, Chennai. Mr. Prashant Javkar Regional Manufacturing Business Manager at Ford Motor Company, Canton Michigan, USA was the chief guest for the 'Inaugural Ceremony' of ATAL FDPs on 25th Oct 2021, at 10:00 am, and Prof. Anil D.Sahasrabudhe, Chairman, AICTE was the Guest of honour for the session.Being an industry leader, Mr. Prashant Javkar has shared his views on evolving trends, disruptive technologies, changing job scenarios, academia-industry linkage, and translating research into impactful application. Dr.Lalit Kumar, NPCIL-BARC delivered a session on Security Analysis of Safety Critical Applications. He introduced about safety critical systems and discussed the process of security modeling. He discussed about petri nets, history and applications. A case study on Digital Feed Water Control System has been discussed. Behavioral and Structural analysis are discussed. The procedure for p-invariant calculation has been discussed. Dr. Bhupendra Singh, IIIT Pune handled two sessions on Anti-forensic techniques.

Student Achievements

R Pranay, Ch Narendra Kumar, Y Tirumala Teja & R Geetha Manohar *of ¾ Btech won First prize for "CNC Writing Machine" in TECH SRUSHTI - 2K21, A National Level Idea Pitching Contest organized by Assistive Technology Laboratory, Shri Vishnu Engineering College for Women, Bhimmavaram. On 3rd September 2021,* Under the guidance of Dr M Padmaja Professor, Dept of ECE

R Pranay *of ¾ Btech won First prize under Model (project) presentation category for "BLUE CNC Writing Machine" in online student technical paper Presentation / Poster Presentation / Model presentation contest organized by Seshadri Rao Gudlavalleru Engineering College during 5th to 7th October 2021.* Under the guidance of Dr M Padmaja Professor, Dept of ECE

Dr M Padmaja
Professor

One week workshop on python programming

One week workshop on python programming was conducted by the dept of ECE in collaboration with Andhra Pradesh State Skill Development Corporation from 25th to 30th of October 2021. Around 22 students actively participated. Ms. Kavita and Ms. Bhavya were the resource persons from APSSDC. Introduction to Python programming, Installation, operators, Conditional statements, Loops Stings, Accessing, Lists, Packages, Modules, OOPS concepts, File handling, Python Libraries, Pandas Matplotlib in python were few of the topics covered in the workshop.

Publications by the faculty

1. Siva Ramakrishna Pillutla, Lakshmi Boppana Low-latency area-efficient systolic bit-parallel GF(2m) multiplier for a narrow class of trinomials Microelectronics Journal, 1-10-2021, Volume 117, 105275 https://www.sciencedirect.com/science/article/pii/S0026269221002615?dgcid=author

2. Dr B.L.Sirisha.B.Chandra Mohan Review on Spatial Domain Image Steganography Techniques Journal of Discrete Mathematical Science and Cryptography, Volume 24, Issue No 6,2021 ISDN: 2169-0065

3. Dr.M. Durga Prakash Beulah Grace Nelam, Shaik Ahmadsaidulu, Alluri Navaneetha & Asisa Kumar Panigrahy Performance Analysis of Ion-Sensitive Field Effect Transistor with Various Oxide Materials for Biomedical Applications Silicon journal https://doi.org/10.1007/s12633-021-01413-9

4. Dr.M. Durga Prakash B. Vamsi Krsihna, Shaik Ahmadsaidulu, Surapaneni Sai Tarun Teja, D. Jayanthi, Alluri Navaneetha, P. Rahul Reddy Design and Development of Graphene FET Biosensor for the Detection of SARS-CoV-2 Silicon journal https://doi.org/10.1007/s12633-021-01372-1

5. M. Durga Prakash B. Vamsi Krsihna, B. V. V. Satyanarayana, N. Arun Vignesh, Asisa Kumar Panigrahy &Shaik Ahmadsaidulu A Study of an Ultrasensitive Label Free Silicon Nanowire FET Biosensor for Cardiac Troponin I Detection Silicon Journal https://doi.org/10.1007/s12633-021-01352-5

6. Satyanarayana Murthy Nimmagadda A New HBS Model in Millimeter-Wave Beamspace MIMO-NOMA Systems Using Alternative Grey Wolf with Beetle Swarm Optimization Wireless Personal Communications https://doi.org/10.1007/s11277-021-08696-6

Conferences attended by faculty

1. B.Alekhya N.kartheek,N.dedeepya,M.sai jogesh,T.jayasimha reddy attended an IEEE conference "2ND GCAT-2021" and presented a work tilted millimeter wave MIMO antenna from 1st to 3rd October 2021 at Nagarjuna College Of Engineering & Technology BANGALORE

2. Dr.M.Padmaja Rasi Harshini Battula Siri Chandana. S Prasanna Jyothi. K Geethika Nalla attended AICTE Sponsored International Conference on Emerging Trends in Communication and Networking (ETCAN'21) ETCAN'21 organised from 22nd -23rd October 2021 and presented the work titled Smart Attendance Management System Using CNN at Kongunadu College of Engineering and Technology, International Conference, Tiruchirappalli, Tamil Nadu

3. A Ravi Raja Bolla Gopi Krishna Reddy Pitchuka, Yashwanthsaai, Avinash Jagarlamudi, Nimmagadda Leeladhar, Tella Trilok Kumar participated in International Conference on Advancements in Electrical Electronics Communication Computing and Automation (ICAECA) ICAECA-2021 and presented work titled Emotion Recognition Based on Convolutional Neural Network (CNN) organised from 08th to 09th October 2021 at Kumaraguru College of Technology, Coimbatore, Tamilnadu

Conferences' /FDPs'/ Workshops'/Seminars' attended by faculty

1. M.Sunitha attended STTP On Trends and Challenges in Medical Image Analysis Through Deep Learning Algorithms PHASE IV conducted by EIE DEPARTMENT, VRSEC 13th SEP to 18thSEP 2021
2. Dr M Padmaja joined AICTE sponsored STTP On Trends and Challenges in Medical Image Analysis Through Deep Learning Algorithms PHASE IV conducted by EIE DEPARTMENT, VRSEC 13th SEP to 18th SEP 2021
3. Dr A Jhansi Rani partook in STTP On Trends and Challenges in Medical Image Analysis Through Deep Learning Algorithms PHASE IV conducted by EIE DEPARTMENT, VRSEC 13th SEP to 18th SEP 2021
4. Dr M Padmaja attendedTwo Week Summer School on "Artificial Intelligence in Remote Sensing Applications", Sponsored by SAGTE, organized by Dept of CSE in Collaboration with ISRO and DRDO conducted by CSE Dept., VRSEC 27/09/2021 to 08/10/2021
5. Dr A Jhansi Rani attended a Two-Week Summer School on "Artificial Intelligence in Remote Sensing Applications", Sponsored by SAGTE, organized by Dept of CSE in Collaboration with ISRO and DRDO.CSE Dept., VRSEC 27/09/2021 to 08/10/2021
6. V B K L ARUNA attended a STTP On Trends and Challenges in Medical Image Analysis Through Deep Learning Algorithms PHASE IV EIE DEPARTMENT, conducted by VRSEC 13th SEP to 18th SEP 2021
7. V.Saritha joined One day Webinar on "Research Metrics and Software Tools" Research and Development Cell, conducted by LBRCE on 20th Sep 2021.
8. Dr Shaik Fayaz Ahamed attended a FDP on Embedded Systems - An Application Driven Approach conducted by All India Council for Technical Education (AICTE), ATAL Academy, STMicroelectronics and Arm Education during 25th - 27th August 2021
9. Dr Shaik Fayaz Ahamed attended Two Week Summer School on "Artificial Intelligence in Remote Sensing Applications" conducted by Dept of CSE in Collaboration with ISRO and DRDO, V R Siddhartha Engineering College, Vijayawada from 27/09/2021 to 08/10/2021
10. A Ravi Raja attended a FDP on Embedded Systems - An Application Driven Approach conducted by All India Council for Technical Education (AICTE), ATAL Academy, STMicroelectronics and Arm Education during 25th - 27th August 2021
11. A Ravi Raja attended Two Week Summer School on "Artificial Intelligence in Remote Sensing Applications" conducted by Dept of CSE in Collaboration with ISRO and DRDO, V R Siddhartha Engineering College, Vijayawada from 27/09/2021 to 08/10/2021
12. Bindu Priya.M attended 5-day online FDP on "Inculcating Universal Human Values in Technical Education" conducted by All India Council for Technical Education (AICTE) 13th to 17th SEP 2021
13. Dr B.L.Sirisha attended 5-day online FDP on "Inculcating Universal Human Values in Technical Education" conducted by All India Council for Technical Education(AICTE) 13th to 17th SEP 2021
14. N S N Malleswari attended Two Week Summer School on "Artificial Intelligence in Remote Sensing Applications" conducted by Dept of CSE in Collaboration with ISRO and DRDO, V R Siddhartha Engineering College, Vijayawada from 27/09/2021 to 08/10/2021
15. Dr. P. Sarah Suhasini participated in 5-day online FDP on "Inculcating Universal Human Values in Technical Education" conducted by All India Council for Technical Education (AICTE) from 13th to 17th Sep 2021
16. Mr. Mahesh.N attended Two Week Summer School on "Artificial Intelligence in Remote Sensing Applications" conducted by Dept of CSE in Collaboration with ISRO and DRDO, V R Siddhartha Engineering College, Vijayawada from 27/09/2021 to 08/10/2021
17. Mr. Mahesh.N attended Two-days Seminar on Technological Advancements in Healthcare Challenges - Role of Medical Image Processing organised by The Institution of Engineers-Telangana State Centre, Hyderabad & IEEE Hyderabad Section on 17th & 18th Sept 2021

Student Publications

1. Rasi Harshini Battula Siri Chandana. S Prasanna Jyothi. K Geethika Nalla Dr. M. Padmaja Smart Attendance Management System Using CNN AICTE Sponsored International Conference on Emerging Trends in Communication and Networking (ETCAN'21) 22nd -23rd October 2021

2. Ch V N L Mounika V B K L ARUNA: Implementation of ECG Signal Compression by using FFT System Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 8, July 2021

3. Bolla Gopi Krishna Reddy Pitchuka Yashwanthsaai Avinash Jagarlamudi Nimmagadda Leeladhar Tella Trilok Kumar A Ravi Raja Emotion Recognition Based on Convolutional Neural Network (CNN) 2021 International Conference on Advancements in Electrical Electronics Communication Computing and Automation (ICAECA). Kumaraguru College of Technology, Coimbatore – 641049, Tamilnadu, India.

4. M. Nitin Chowdary, V.Sujana, K. Satvika, K. Lakshmi Srinivas Dr P. Sarah Suhasini Smart Attendance System using Machine Learning Algorithms International Conference on Machine Learning and Autonomous Systems , 24th -25th September 2021

Words of motivation……

Dr Khalim Amjad Meerja
Professor

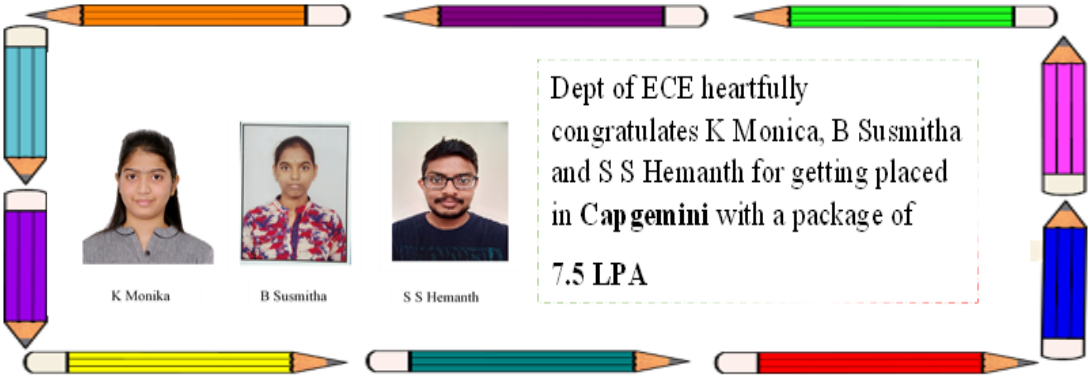
Blending Research in Curriculum and its necessity: We are in a stage of affairs in this worldly setting, where we are constantly looking for newer and better way of doing things to improve the quality of life. New engineering skills are constantly needed to provide innovative solutions to our socioeconomic problems and for this reason we need to build better and efficient techniques to come up with sustainable solutions. For this to happen, we need a workforce that is young, energetic, motivated, and innovative to solve future problems. Since knowledge is constantly evolved through experience and research, students from young age should have the ability to not only acquire the existing knowledge but to have a constructive trait of questioning it in good faith. When they start questioning about the existing state of things, particularly why a thing is supposed to work in a precise way, they would develop a habit of critical thinking. Through this, they would not only develop critical thinking but also will create new knowledge. Such should be the way to acquire knowledge through research. If our students can develop such a habit at the early stage, they will find learning interesting and fun. They can do research while learning engineering concepts by taking up small projects while doing courses. This will lead to a greater facility in building their career and contributing to the society from their early days!

PhD Admissions….

Name of the Faculty	University of registration	Area of Research
Mrs M.Bhagya Lakshmi	NIT Warangal	Antennas

Placement Details…..during September and October 2021

SNO	COMPANY NAME	STUDENTS SELECTED	PAY SCALE (LPA)
1	CAPGEMINI (SA)	3	7.50
2	TCS DIGITAL	3	7.20
3	ACCENTURE	5	6.50
4	COGNIZANT GENC NEXT	5	6.50
5	MODAK ANALYTICS	1	6.00
6	VALUE LABS	4	5.50
7	ARETEANS PEGA	5	5.00
9	ACCENTURE	32	4.50
10	IBM	18	4.50
11	COGNIZANT GENC ELEVATE	19	4.20
12	AASEYA PEGA	4	4.00
13	CAPGEMINI	15	4.00
14	COGNIZANT GEN C	50	4.00
15	INFOSYS PEGA	4	4.00
17	TCS NINJA	29	3.96
18	TCS PEGA	8	3.96
21	QUEST GLOBAL	2	3.25
22	WIPRO	26	4.00
	TOTAL OFFERS	233	



V R Siddhartha engineering College
Department of ECE
News Letter Editorial Board

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ECE

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Core values of the institute

V R Siddhartha Engineering college engages itself in a process of self and community reflection that leads the institution to recognize and heighten awareness of the core values the college is practising and to develop an institutional culture that stands accountable to those values

1. **Commitment**
   - Responding to the changing need of our region and nation
   - Develop a shared decision-making process
2. **Respect**
   - Include stake holders in the decisions
   - Recognise and support employee contributions
3. **Excellence**
   - Anticipate techno-social need and respond accordingly
   - Encourage innovation and interdepartmental collaboration
4. **Accountability**
   - Continuously evaluate and improve the academic and administrative systems
   - Demonstrate responsibility through stakeholder satisfaction
5. **Diversity**
   - Ensure fair and equal access for all
   - Recognise, appreciate and celebrate diversity
6. **Cultural competence**
   - Encourage ideas and participate
7. **Learning environment**
   - Outstanding physical infrastructure, along with a culture of excellence
8. **Community**
   - Value and respect Collegiality, Partnerships, Safe and Healthy Environment and Service
9. **Integrity**
   - Committed to ethical and responsible behaviour

Quality policy

VRSEC strives to impart Knowledge, Skills and Attitude through continuous improvement to meet the ever-changing needs of Industry and the Sustainable Development of Society

PROGRAM OUTCOMES (POs)

PO1	**Engineering knowledge:** An ability to apply knowledge of mathematics, science, fundamentals of engineering to solve electronics and communication engineering problems.
PO2	**Problem analysis**: An ability to identify, formulate and analyse electronics and communication systems reaching substantiated conclusions using the first principles of mathematics and engineering sciences.
PO3	**Design/development of solutions:** An ability to design solutions to electronics and communication systems to meet the specified needs.
PO4	**Conduct investigations of complex problems:** An ability to design and perform experiments of complex electronic circuits and systems, analyse and interpret data to provide valid conclusions.
PO5	**Modern tool usage:** An ability to learn, select and apply appropriate techniques, resources and modern engineering tools for modelling complex engineering systems.
PO6	**The engineer and society:** Knowledge of contemporary issues to assess the societal responsibilities relevant to the professional practice.
PO7	**Environment and sustainability:** An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
PO8	**Ethics:** An understanding of professional and ethical responsibilities and norms of engineering practice.
PO9	**Individual and team work:** An ability to function effectively as an individual, and as a member in diverse teams and in multidisciplinary settings.
PO10	**Communication:** An ability to communicate effectively with engineering community and with society at large.
PO11	**Project management and finance:** An ability to demonstrate knowledge and understanding of engineering and management principles and apply these to manage projects.
PO12	**Life-long learning:** An ability to recognize the need for, and engage in independent and life-long learning in the broadest context of technological change.