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SIDDHARTHA INSTITUTE OF TECHNOLOGY, KANURU, VIJAYAWADA
NBA & NAAC Accredited, ISO: 9001-2015 Certified Institution, AICTE Approved &
Permanent Affiliation to JNTUK, Kakinada
(Sponsored by Siddhartha Academy of General & Technical Education, Vijayawada)
DEPARTMENT OF FRESHMAN ENGINEERING
MONTHLY REPORT December, 2025

FACULTY ACTIVITIES

a) Publications in refereed Journals:

SCI Indexed:

- i. Dr.M.Prameela published a paper entitled “Generation of entropy on blood conveying silver nanoparticles embedded in curved surfaces” in Proceedings of the Institution of Mechanical Engineers Part E Journal of Process Mechanical Engineering volume 239(6), pp. 3325-3336, DOI:10.1177/09544089231224523, ISSN / eISSN: 0210-7287 / 2445-2262

Scopus Indexed : Nil

Scopus - Conference Proceedings: Nil

b) Patents: Nil

c) Projects:

Projects Applied :

1. Dr Sk.Rehena applied for a research project titled,“Technology-Enhanced Learning Tools for Improving English Proficiency among Engineering Undergraduates of Andhra Pradesh and Telangana ” under ICSSR Research Projects on “Major Research Projects- Indian Languages, Linguistics, and Translation Studies -Technology-Language Interface” on 13th December, 2025. Submission Reference Number:ICSSR-RMM-2025-155. The total budget of the project is 30,00,000/-. Duration of the project is 2 years.
2. Dr.Silpa. Mandava has applied for a research project titled, "Advancing Sustainable Solvent Systems: “Thermodynamic and Thermoacoustic Studies of Green Solvent-Based binary and Ternary Mixtures”,under ANRF Prime Minister Early Career Research Grant Project on 2nd December 2025.Submission Reference Number: [ANRF/ECRG/2025/002180/PMS](#). The total budget of the project is **60,14,280/-** Duration of the project is 3 years.
3. Dr. Usha Rani and Dr. Pavani Peddi have jointly submitted a research project proposal titled “Sustainable Bio-Derived MXene Composites for Advanced

Treatment of Pharmaceuticals, PFAS, and Endocrine-Disrupting Chemicals in Wastewater.” The proposal was submitted to (ANRF).

Submission Reference Number: **ANRF/STI/2025/000087/CoESTI**.

The total budget of the project is 15,60,000/-. Duration of the project 3-5 years.

4. Dr. P. Lakshmi Lavanya applied for a research project titled ‘A Periodic Progressive Instructional Model for Enhancing Speaking Skills among Technical Students (PPIMESS) in A.P.’ under ICSSR Research Projects on “Minor Research Projects- Education and skilling” on 19-12-2025. Reference Number:ICSSR-RMM-2025-6935.The total budget of the project is 10,00,000/-, Duration of the project- 1 years

d) Books:

e) Book chapter:

- i. Dr. P.Lakshmi lavanya published a book chapter titled “Empowering Rural Engineering Students: Strategies for Enhancing Speaking Skills” in the book Critical Pedagogy in ELT: Empowering Learners published by Authors Press Journal. ISBN: 978-93-6095-825-1, pp. 29–41, 2025.

f) Participation in FDP/ Training/ Workshops/ Conferences/ Seminars/ Webinar etc.

Faculty Development programme:

- i. Dr. G. Sreedevi, Dr. Silpa. Mandava, M.Nagaprasad, Dr.G.Raghavendra Ganesh attended Faculty development program on QT-05: Quantum Computation from Dec 8th – Dec 31st, 2025 jointly organized by EICT academy of MNIT Jaipur and APSICHE. NIRF ranking : 62
- ii. Resource persons:

Dr Harish Sahu, Scientist – F, DRDO,
Prof. Arnab Kumar Ray, Dhirubhai Ambani University, Gandhinagar
Prof. Yash Vasavada, Dhirubhai Ambani University, Gandhinagar
Dr. Mostafizur Rahaman, IBM Quantum Research Scientist, Bengaluru
Dr. Jayakumar Vaithiyashankar, CEO Anuthantra Pvt Ltd, Bengaluru

Training Programmes :

Dr. Usha Rani has successfully completed the NEP 2020 Orientation & Sensitization Programme under the Malaviya Mission Teacher Training Programme (MM-TTP) of the

University Grants Commission (UGC). The programme was organized by UGC–MMTTC, Maulana Azad National Urdu University, Hyderabad, and conducted from 3rd to 12th December, 2025.

Resource person : Dr. Dipti Jayasukhbhai , Professor Oza ,Faculty of Education & Psychology Maharaj Sayajirao

STTPS:

- i. Dr. M. Prameela has completed UGC Sponsored One Month ‘Faculty Induction Programme’ Organized by UGC- Malaviya Mission Teacher Training Centre (MMTTC), (Formerly UGC-HRDC) in association with Maulana Azad National Urdu University, Hyderabad from 6th November to 3rd December, 2025 .

Resource Persons: Prof. Ravi Akula, Dean, Faculty of Commerce, Mahatma Gandhi University, Nalgonda.

Professor Nasrin, Dept of Education, Aligarh Muslim University;

Dr.P. Ramesh, Principal Scientist, NAARM, Hyderabad;

Dr. KS Vijaya Shekhar, Head, Statistical Cell, IIIT, Hyderabad;

- ii. G.Kiran Kumar, A.Chandra Sekhara Babu has participated and obtained A+ Grade in the Refresher Course on “ Mathematics for AI/ML and Data Science” Organized by Malaviya Mission Teacher Training Centre IIT(ISM) Dhanbad, Jarkhand from 1st December to 12th December 2025

Resource Persons: Professor Pratibhamoy Das, Department of Mathematics, IIT, Patna

Professor B. Rushi Kumar, Department. of Mathematics ,VIT, Vellore

Professor Natesan Srinivasan, Department of Mathematics, IIT Guwahati

Dr.Padmanabhan, RNSIT, Bangalore

Professor S. P. Tiwari, Department of Mathematics & Computing, IIT(ISM) Dhanbad

Seminars attended:

Others:

- i. A.Chandra Sekhara Babu has participated in the Two-Day National seminar on “ Expedition to the Matrix World (iMATH-2025)” organized by the Department of Mathematics, Seshadripuram Institute of Technology, Mysore, held on 24-25 December, 2025.

Resource Persons:

Dr. Balaji S, Assistant Professor, Dept. of Mathematics, VIT, Vellore

Sri. N. Karunakar, Assistant Professor, Dept. of Mathematics, BEC, Bapatla.

- ii. Dr. Silpa. Mandava and Dr. Sreedevi. Gogula has participated in Five-Day National seminar on “Quantum Computing: Applications in Electronics and Communication - QuACE-2K25” organized by the Department of Electronics and Communication Engineering, held from 15th to 19th December at Dhanekula Institute of Engineering and Technology sponsored by ANRF.

Resource Persons: Dr. Muralidhar Patruni, Visakhapatnam, Andhra Pradesh, India

Workshop Attended:

- i. Dr. P. Padmaja, Dr. V. Sitamahalakshmi, G. Kiran Kumar & Dr. M. Pameela has participated in the two day National Workshop on “Bridging Maths & Code- A Python Approach organized by Department of Mathematics, Siddhartha Academy of Higher Education, Vijayawada from 27th -28 th November, 2025

Resource Person: Dr. J. Siva Ram Prasad, Asst Prof, Department of Mathematics, Siddhartha Academy of Higher Education.

- ii. .Dr. N. Usha Rani, Dr. S. Lakshmi Tulasi, and Dr. P. Pavani participated in the International Workshop organized by the Departments of Physics and Chemistry, School of Advanced Sciences, VIT-AP University, Amaravati, Andhra Pradesh – 522237, India, held during December 16–20, 2025.

Resource Persons:

Prof. Neetu Singh Center for Biomedical Engineering (CBME), IIT-Delhi, India

Prof. S Kanagaraj Department of Mechanical Engineering, Indian Institute of Technology, Guwahati,- Guwahati

Prof. Peter B Crowley School of Biological and Chemical Sciences, Cellular & Molecular Medicine, University of Galway, Ireland

Papers presented in conferences /seminars :

- i. Dr. S. Lakshmi Tulasi presented a research paper entitled “Plant-Based Green Nano Synthesis: A Sustainable Approach in Chemistry” at the 2nd International Conference on Sustainable Energy and Environmental Technologies – 2025 (ICSEET-2025), held from December 11–13, 2025. The conference was organized by the Department of Chemistry, School of Applied Sciences, in association with the REVA Research Conclave, REVA University (NIRF Rank 150), Bengaluru, India.

- ii. Dr. P.Pavani presented a research paper entitled “Green Synthesis of Phosphorus-Containing Hydroxyapatite Nanoparticles Using Papaya Skin Extract, an Agro-Food Industrial Byproduct as a Novel Nano-Fertilizer for Eggplant” at the 2nd International Conference on Sustainable Energy and Environmental Technologies – 2025 (ICSEET-2025), held from December 11–13, 2025. The conference was organized by the Department of Chemistry, School of Applied Sciences, in association with the REVA Research Conclave, REVA University (NIRF Rank 150), Bengaluru, India
- iii. N.Usha Rani presented a research paper entitled “Innovative Green Chemistry Approaches for Sustainable Industrial Development” at the 2nd International Conference on Sustainable Energy and Environmental Technologies – 2025 (ICSEET-2025), held from December 11–13, 2025. The conference was organized by the Department of Chemistry, School of Applied Sciences, in association with the REVA Research Conclave, REVA University (NIRF Rank 150), Bengaluru, India
- iv. Dr. T. Preethi Rangamani presented paper entitled Development of Potassium-Rich Material from Banana Peel Waste: Design, Fabrication, and IOT-Based Evaluation In Tomato Cultivation at 1st International Conference on Advances in Materials, Design and Manufacturing (ICAMDM 2025), SRM University AP, December, 12-14, 2025. NIRF: 101-150.

OTHERS:

- i. K. KIRAN KUMAR presented the paper titled on “Physics-Informed Fourier Neural Operators for Heat Transfer Modeling: Leveraging Partial Differential Equations for Enhanced Predictive Accuracy” at the IEEE Sponsored 2025 International Conference on NexGen Networks and Cybernetics (IC2NC) held at Nandha Engineering College, Erode, India during December 1-3, 2025.
- ii. Dr.Sk. Rehana Presented a paper on “A Comparative Discourse Analysis of Gandhian Philosophy and Ayn Rand’s Objectivism: Ethics, Individualism, and Social Responsibility in Literary Texts” in the National Conference On Contemporary Studies In Literature, Language & Culture Organized By Department Of English, Parvathaneni Brahmayya Siddhartha College Of Arts And Science On 15/12/2025 & 16/12/2025.
- iii. Vyakaranam Seethamahalakshmi presented a paper titled, “Exponentiated Inverse Half Logistic Distribution: Two SteP Estimation” in 3rd International Conference on ‘Algorithms In Advanced Artificial Intelligence’ (ICAAAI-2025) organized by Department of Computer Science and Engineering, SRKR Engineering College (A), Bhimavaram, Andhra Pradesh from 11th to 13h December, 2025.

Webinars Attended: Nil

Guest lectures attended: Nil

f) Organized FDP/ Career Development/ Training/ Workshops/ Conferences/ Seminars/ Webinar etc.

Seminars Organized: Nil

Certification program organized:

Freshman Engineering Department in collaboration with IQAC organized a certification course on “Programming for Problem Solving using C” for I.B.Tech students of CE, EEE, ME, ECE branches from 8-11-25 to 10-11-25 and from 13-12-25 to 15-12-25.

Resource persons/Trainers : From Bytes Organisation.

Guest Lectures organized :

1. As a part of Wings Edition - 3 Talk series - 6, a guest lecture on the role of AI, NanoTechnology and Robotics in Healthcare was organised to all B. Tech students on 16-12-25 to understand how Artificial Intelligence, Nanotechnology and Robotics improve healthcare by enabling accurate diagnosis, targeted treatments, minimally invasive surgeries, faster recovery, and better patient care.

Resource Person: Dr. Murali Krishna. Cherukuri, Head Biophysics Department, NIH, Bethesda, MD, USA

Workshop Organized:

h) Certification programs (NPTEL / Coursera / edX etc.):

Student Activities:

Academic and Research Achievements

- i. Under the guidance of Dr.G.Sreedevi, CSM branch students G. Divya(25501A4222), Sk,Afreen (25501A4253), B.Kavyasri (25501A4209),R.Kalyan(25501A4250), K.Keerthi varshini(25501A4228), V.Keerthi(25501A4261) participated in online international Qiskit Fall Fest 2025 association with IBM at the Catholic University of America at CUA, Quantum,. The participation was officially acknowledged under the authority of Katie Pizzolato, Vice President, Quantum Algorithms & Scientific Partnerships, IBM Quantum Catholic University of America from 27-10-25 to 29-10-2025.

- ii. Under the guidance of Dr. P. Lakshmi Lavanya, The following students presented papers at the National Conference on Contemporary Studies in Literature, Language, and Culture, held on 15th December 2025, in the National Conference on Contemporary Studies in Literature, Language & Culture Organized By Department Of English, Parvathaneni Brahmayya Siddhartha College Of Arts And Science On 15/12/2025 & 16/12/2025.
- **V. Niteesh Reddy, CSE-IV**, presented a research paper titled “*Beyond Equations: Giving Voice to Rural Engineering Talent Using TBLT*” and was awarded the **Second Best Paper Award**.
 - **T. Iha Sri, CSE-IV**, presented a research paper titled “*The Pivotal Role of Essential Life Skills in Health Care*”.
 - **R. Sai Joshitha, CSE-IV**, presented a research paper titled “*From Supersession to Self-Affirmation: A Study of Custody*”
- iii. Under the guidance of Dr. Sk. Rehena, The following students presented papers at the National Conference on Contemporary Studies in Literature, Language, and Culture, **held on** 15th December 2025, in the National Conference on Contemporary Studies in Literature, Language & Culture Organized By Department Of English, Parvathaneni Brahmayya Siddhartha College Of Arts And Science On 15/12/2025 & 16/12/2025.
- **N. Naga Devi** (Regd. No. **25501A05H1**), **CSE-III**, presented a research paper titled “*English Language Learning for Engineering Students’ Employability in the Indian Context*” and received the **Third Best Paper Award**.
 - **Ch. Aashritha** (Regd. No. **25501A0503**), **I CSE-I**, presented a research paper titled “*Innovative Practices to Improve English Language Proficiency of Engineering Students*” at the **National Conference on Contemporary Studies in Literature, Language, and Culture**, held on **15th December 2025**.
 - **Abdul Azeem** (Regd. No. **25501A0505**), **I CSE-I**, presented a research paper titled “*Role of ICT in Improving English Language Competence of Engineering Students*”
 - **Fredy Paul** (Regd. No. **25501A0564**), **I CSE-I**, presented a research paper titled “*Application of Cognitive Learning Strategies in English Language Development of Engineering Undergraduates*”

Other information:

Dr A. Purnachandra Rao reviewed a research paper titled, “Enhancing Spoken English Learning with IoT-Enabled POA Model: Deep Learning-Driven Sensor Fusion and High-Accuracy Pronunciation Correction” for the journal, “Internet of Things and Cyber-Physical Systems” (SCOPUS) on 10th December, 2025.

Dr A. Purnachandra Rao reviewed a research paper titled, “The Impact of Artificial Intelligence on English Writing Proficiency: A Meta-Analytic Review” for the journal, “Social Sciences & Humanities Open” (SCOPUS) on 23rd December, 2025.

Dr. M. Srilakshmi

(HOD - FE)