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WELCOME TO OUR

Newsletter

Department of Mechanical Engineering

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CODE URCE

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COLLEGE OF ENGINEERING AND TECHNOLOGY
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About the Department

The Department of Mechanical engineering is established at USHARAMA College of Engineering & Technology in the year 2010 with the approval of AICTE and intake is of 60 seats. It offers Undergraduate degree program in Mechanical Engineering. The department is adjudged as one of the pioneering departments at URCE with well qualified and experienced faculty.

The specializations of the faculty are well balanced to cater the academic needs of students effectively. To impart more practical exposure to the students the laboratories are housed spaciously and are equipped with more than adequate machinery, tools and software's to satisfy the needs of students. Qualified and well trained technical staff assists the students during lab work.

INSTITUTE VISION

To emerge as a centre of excellence in technical education by imparting quality teaching learning practices and research for the transformation of society.

INSTITUTE MISSION

- **Provide an ideal and the best class infrastructure to foster exploration in engineering and research.**
- **Build dedicated faculty with student centric teaching incorporating experiential, innovative skills.**
- **Encourage lifelong learning, entrepreneurial thinking and ethical responsibility in students to address societal challenges.**

DEPARTMENT VISION

To impart quality education in the field of Mechanical Engineering to meet the industrial standards and technological needs of the society.

DEPARTMENT MISSION

- **To provide quality education for career building and skill enhancement and to become globally competitive.**
- **To groom the students with leadership qualities, problem solving approach, along with team work and effective communication.**
- **To promote higher education, entrepreneurship skills, research cum innovation with a focus on industrial and societal needs and to mould the students with professional ethics and moral values.**

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: To train the graduates in building a successful professional career in Mechanical Engineering.

PEO 2: To encourage the graduate engineers to achieve their goals through higher education and Research & Development activities.

PEO 3: To support the graduates to become moral & ethically responsible citizens in the development of the nation.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Apply Engineering fundamental knowledge, complex mathematics, science and provide solutions to mechanical Engineering system.

PSO2: Design and develop products innovatively with modern tools and to optimize manufacturing processes.

Programme Outcomes (POs)

PO - 1: <u>Engineering knowledge:</u> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO - 2: <u>Problem analysis:</u> 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 modeling 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 team work: 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.

FACULTY NEWS

PAPER PUBLICATIONS(National/International Journals/ Conferences)

SCI/SCIE/ESCI indexed journals:

Nill

Scoups Journals

G.JayaRaju

"Fabrication and Modal analysis of composite leaf spring International Journal of Disaster Recovery and Business Continuity, June 2021, Volume 12, Issue 01, Page 1133-1145.

Conferences

B.Kiran Babu,

"Friction stir processing of ZE41 Mg alloy: Optimizing the process parameters" IOP Conf. Series: Materials Science and Engineering, Sept 2021, Volume 1185, Issue 01, Page 1-6.

RESOURCE PERSONS IN STTPS/FDPS

Dr. S. Madhusudan

"Failure and damage mechanics of high performance materials (Phase-I)" Dept. of ME., Anil Neerukonda Institute of Technology & Sciences, Visakhapatnam, Andhra Pradesh. 12th - 17th July 2021.

Dr. S. Madhusudan

"Failure and damage mechanics of high performance materials (Phase-II)" Dept. of ME., Anil Neerukonda Institute of Technology & Sciences, Visakhapatnam, Andhra Pradesh. 23rd -28th Aug 2021.

Dr. R. Bhargavi

"Recent Advances in Composite Materials for Engineering Applications" Dept. of ME., Tirumala Engineering College Narasaraopet, Guntur District, Andhra Pradesh, 16th – 20th Aug 2021.

Dr. S. Madhusudan

"Failure and damage mechanics of high performance materials (Phase-III)" Dept. of ME., Anil Neerukonda Institute of Technology & Sciences, Visakhapatnam, Andhra Pradesh. 20th -25th Sept 2021.

Dr. S. Madhusudan

"International Research Workshop in Biomechanical Microsystems 2021" Kaunas University of Technology, Lithuania. 22nd Oct 2021.

FACULTY DEVELOPMENT PROGRAM / SHORT TERM TRAINING PROGRAM ORGANIZED

Six days FDP(Online) on "Thermal Energy Systems- Design, Computationati onal Techniques Applications" on 23rd - 28th Aug, 2021.

Key note speakers are:

1. Dr. R. Subba Rao, Associate Professor, NITTR, Kolkata.
2. Dr. L.V.S. Prasad, Professor, Andhra University, Visakhapatnam.
3. Dr. K. Rambabu, Professor, LBRCE, Mylavaram.
4. Dr. K. Srinivasa Reddy, Professor, CMR college of Engg. Hyderabad
5. Dr. N. Hari Babu, Professor, Aditya Institute of Technology and Management, Tekkali

FACULTY DEVELOPMENT PROGRAMS ATTENDED

1. CH. Venkata Krishna, N. Siva Krishna, N. Ranjith Kumar A one week online FDP on "Finite Element Analysis Methods in Engg. using ANSYS" organized by the Department of Mechanical Engineering, Lakireddy Bali Reddy College of Engineering, Mylavaram, Krishna (Dt.), Andhra Pradesh, India organized from 07/06/2021 to 11/06/2021.
2. N. Ranjith Kumar A one week online FDP on "Innovation, Incubation, Startups and Challenges in India" organized by the Department of Mechanical Engineering, SRM Ins. of Science and Technology, Chennai, India organized from 28/06/2021 to 02/07/2021.
3. N. Ranjith Kumar, 3 day workshop on "Technological Advancements in Naval, Defence& Space Applications: An Integrated Industry 5.0 Approach." organized by the Department of Mechanical Engineering, N S Raju Institute of Technology, Visakhapatnam, India organized from 08/07/2021 to 10/07/2021
4. N. Siva Krishna 5-days online FDP on "Vibrations and Condition Monitoring" organized by the Department of Mechanical Engineering, Vasavi College of Engg. Pedana, India organized from 20/09/2021 to 24/09/2021.
5. K. Srinivasa Rao, N. Siva Krishna, D. Sujatha A one week online FDP on "Advancements in Automotive Industries" organized by the Department of Mechanical Engineering, Satyabama Instituteof Science and Technology, India organized from 18/10/2021 to 25/10/2021.
6. B. Kiran Babu, N. Siva Krishna, A 2 weeks online FDP on "Advanced Vibrations- Various Engg. Applications with hands on sessions (Phase-II)" organized by the Department of Mechanical Engineering, JNTUK, Kakinada, India organized from 27/09/2021 to 20/10/2021.
7. Dr V Ajay Kumar, J Ashok Kumar,. 5-day Online FDP on the theme "Inculcating Universal Human Values in Technical Education (UHV-I)" organized by All India Council for Technical Education (AICTE) from 08/11/2021 to 12/11/2021.

CERTIFICATIONS COURSES THROUGH NPTEL

1. M. Kiran Durga Kumar, completed a certification course titled," Inspection and Quality Control in Manufacturing" offered through Swayam - NPTEL during Feb - March 2021
2. G Jaya Raju, completed a certification course titled," Engineering Metrology" offered through Swayam - NPTEL during July- Oct 2021.
3. Dr. Rebba Bhargavi, completed a certification course titled," Fundamentals of Manufacturing Processes" offered through Swayam - NPTEL during July – Oct 2021
4. K Vidya, completed a certification course titled Manufacturing of Composites" offered through Swayam - NPTEL during Aug-Oct 2021
5. Dr KVV Naga Raju, completed a certification course titled," Data Mining" offered through Swayam - NPTEL during Feb- April 2021.

STUDENT ACTIVITIES

INDUSTRIAL VISTS/WORKSHOPS/SKILL DEVELOPMENT PROGRAMS

INDUSTRIAL VISIT

Nill

WORKSHOPS/SEMINARS

The department of Mechanical Engineering organized -----

A Seminar on " Solar Energy- An Overview" by Dr. L.V.S. Prasad, Professor, Andhra University, Visakhapatnam., for ME students on 26/02/2021 to 27/02/2021.

A webniar on " A webinar on "Smart Materials in Mechanical Engineering" " by Dr. K. Srinivasa Reddy, Professor, CMR college of Engg. Hyderabad AP. for ME students on 20/11/2021.

PARTICIPATIONS IN PROFESSIONAL EVENTS

1. T Pavan Kalyan, T Ratnakar, M Sasi Kumar has participated in Webinar (Industry 4.0 Expectations From Next Generations Engineers) at Presidency University on 20-08-2021.
2. B Vinay Kumar, G Vamsi Krishna, N Sai Mani Kowshik, B Pavan Kalyan has participated in Webinar (Industry 4.0 Expectations From Next Generations Engineers) at Presidency University on 20-08-2021.
3. T Naga Maha Akhilesh, T Pavan Kalyan, T Ratnakar has participated in Webinar (Solar Thermal Technologies) at Mohamed Sathak Engineering College on 27-09-2021.
4. M Sasi Kumar, B Vinay Kumar, D Rambabu, K Srikanth has participated in Webinar (Solar Thermal Technologies) at Mohamed Sathak Engineering College on 27-09-2021.

5. M Naga Malleswara Rao, Y Sriharsha, B Vijay Jeevan Kumar, N Sai Mani Kowshik has participated in Webinar (Future Scope of Electrical Vehicles) at Karpagam Institute of Technology, Coimbatore, Tamilnadu. on 23-10-2021.
6. B Pavan Kalyan, M Sasi Kumar, B Vinay Kumar, K Ratnakar has participated in Webinar (Future Scope of Electrical Vehicles) at Karpagam Institute of Technology, Coimbatore, Tamilnadu. on 23-10-2021.

స్నేహితుల సహాయం

ఒక పాఠశాలలో **రామ్** మరియు **సురేష్** అనే ఇద్దరు మంచి స్నేహితులు ఉండేవారు. వారు ఎప్పుడూ కలిసి పాఠశాలకు వెళ్లి, కలిసి చదువుకునేవారు. రామ్‌కు గణితం చాలా బాగా వచ్చేది, కానీ సైన్స్ అర్థం కావడం కష్టంగా ఉండేది. మరోవైపు సురేష్‌కు సైన్స్ బాగా వచ్చేది, కానీ గణితం కష్టంగా అనిపించేది.

ఒక రోజు వారు ఒకరికొకరు సహాయం చేసుకోవాలని నిర్ణయించుకున్నారు. రామ్ ప్రతిరోజూ సురేష్‌కు గణితం సమస్యలు ఎలా పరిష్కరించాలో చెప్పేవాడు. అదే విధంగా సురేష్ రామ్‌కు సైన్స్ పాఠాలను సులభంగా అర్థమయ్యేలా వివరించేవాడు.

ఇలా వారు కలిసి చదువుకుంటూ ఒకరికొకరు ప్రోత్సాహం ఇచ్చేవారు. ఎప్పుడైనా ఎవరికైనా నిరాశ వచ్చినప్పుడు, మరొకరు ధైర్యం చెప్పేవారు. వారి స్నేహం వల్ల చదువు కూడా సులభంగా అనిపించేది.

పరీక్షలు వచ్చినప్పుడు ఇద్దరూ కష్టపడి చదివారు. ఫలితాలు వచ్చిన రోజు ఇద్దరికీ మంచి మార్కులు వచ్చాయి. గురువులు కూడా వారి కృషిని మరియు స్నేహాన్ని ప్రశంసించారు.

ఆ రోజు వారు ఒక విషయం అర్థం చేసుకున్నారు — కలిసి ప్రయత్నిస్తే ఏ కష్టం అయినా సులభమవుతుంది.

S Suresh (III Year)

పుస్తకాల ప్రేమ

ఒక గ్రామంలో **సీత** అనే చిన్న అమ్మాయి ఉండేది. ఆమెకు చిన్నప్పటి నుంచే **పుస్తకాలు చదవడం** చాలా ఇష్టం. ఇతర పిల్లలు ఎక్కువ సమయం ఆటల్లో గడిపేవారు, కానీ సీత మాత్రం ప్రతిరోజూ కొంత సమయం పుస్తకాలకు కేటాయించేది.

పాఠశాల లైబ్రరీలో ఉన్న ప్రతి పుస్తకాన్ని చదవాలని ఆమెకు ఆసక్తి ఉండేది. కథల పుస్తకాలు, విజ్ఞాన పుస్తకాలు, చరిత్ర పుస్తకాలు — ఏది దొరికినా చదివేది. ప్రతి పుస్తకం ఆమెకు ఒక కొత్త ప్రపంచాన్ని చూపేది.

మొదట్లో కొందరు స్నేహితులు ఆమెను చూసి “ఎందుకు ఇంత చదువుతావు?” అని అడిగేవారు. కానీ సీత నవ్వుతూ “పుస్తకాలు మనకు చాలా విషయాలు నేర్పుతాయి” అని చెప్పేది.

కాలం గడిచేకొద్దీ సీతకు చాలా విషయాలపై మంచి జ్ఞానం వచ్చింది. తరగతిలో గురువు అడిగిన ప్రశ్నలకు ఆమె సులభంగా సమాధానాలు చెప్పేది. ఆమె తెలివిని చూసి అందరూ ఆశ్చర్యపోయారు. పరీక్షల సమయంలో కూడా సీతకు పెద్దగా భయం ఉండేది కాదు, ఎందుకంటే ఆమెకు విషయాలు బాగా అర్థమయ్యేవి. చివరకు ఆమె తన తరగతిలోనే **మొదటి ర్యాంక్** సాధించింది.

గురువులు ఆమెను చూసి చాలా సంతోషపడ్డారు. సీత తన విజయానికి కారణం ఏమిటంటే — **పుస్తకాలపై ప్రేమ** అని చెప్పింది. ఆమె ఉదాహరణ చూసి ఇతర విద్యార్థులు కూడా పుస్తకాలు చదవడం ప్రారంభించారు.

K Praveen Tejas (III Year)