



SR
Engineering
College
Innovation . Creativity . Entrepreneurship

MECHNEWS 2018-19

Department of Mechanical Engineering



VISION

Be a leader in promoting entrepreneurial mechanical engineering education, industry-relevant research and community building.

MISSION

- Nurture Innovation, Creativity, Entrepreneurial Mindset, and Mechanical Engineering Knowledge in students by implementing novel educational experiences
- Develop effective instructional infrastructure and faculty resources.
- Promote interdisciplinary learning and expertise in the application of Information Technology.
- Contribute to community development and the growth of Mechanical Engineering through service, consulting and research activities

PROGRAM EDUCATIONAL OBJECTIVES (PEOS):

The Mechanical Engineering graduates from S R Engineering College, Warangal are expected to:

PEO1: Pursue a career in the field of Mechanical Engineering.

PEO2: Continue higher education and/or professional development courses for life-long learning.

PEO3: Support community building and economic development through research activities to improve the quality of life.

PROGRAMME OUTCOMES (POS):

Engineering Graduates will be able to:

PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural science and engineering sciences.

PO3: 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.

PO4: Conduct Investigations if 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.

PO5: 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.

PO6: 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.

PO7. Environment and sustainability: Understand the impact of the professional engineering solutions of Engineering in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. 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.

PO11. 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.

PO12. 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.

PROGRAMS SPECIFIC OUTCOMES (PSO)

PSO1. Graduate of the program will achieve excellence in advanced manufacturing systems with latest technologies

PSO2. Graduate will expertise in innovative courses, societal and industry oriented courses designed by the eminent faculty of the department.

PSO3: Graduate will involve in sponsored projects for motivating research activities

International journals:

1. J. Manoj Kumar & P. Ngabharam, "A Rapid Prototyping of Composite Materials", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) February, 2019. ISSN(P): 2249-6890; ISSN(E): 2249-8001, Vol 9 Issue 1, pp - 113-118.
2. N. Praveena Devi, Ch. Srinivasa Rao and K. Kiran Kumar, "Numerical and Experimental Studies of Nanofluid as a Coolant Flowing Through a Circular Tube", Numerical Heat Transfer and Fluid Flow, Lecture Notes in Mechanical Engineering, ISSN / ISBN: 2195-4356, December, 2018. Vol 57, issue 5, pp 511-518
3. K. Suresh, P. Satish Kumar, M. Shiva Chander, "Impact of Cylindrical Taper Tool Profile on Mechanical and Microstructural Characterization of Friction Stir Welded 5083 Aluminum Alloy", Research Journal of Engineering and Technology - 0976-2973 (Print), 2321-581X (Online), October- December 2018, vol 9, issue 4 pp: 1-4
4. P.Kumar, P.Satish Kumar, M.ShivaChander," Influence of Conical Taper Tool Profile on Mechanical and Microstructural Characterization of Friction Stir Welded 5083 Aluminum Alloy", Research Journal of Engineering and Technology, 0976-2973 (Print), 2321-581X (Online), vol 9, issue 4, pp: 1-8
5. P.Satish Kumar, M.Shivachander," Effect of tool pin g Friction stir welded Aluminium alloys", International Journal of Mechanical Engineering and Technology (IJMET) December, 2018. ISSN Print: 0976-6340 and ISSN Online: 0976-6359, vol 9, issue 12 pp: 647-653.
6. P.Nagabharam, N.Gopikrishna, L.Radhakrishna& J.Manoj Kumar," Fabrication and Testing of Aluminum based Composite Material", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)

December, 2018. ISSN(P):2249-6890; ISSN(E):2249-8001, vol 8, issue 6, pp: 729-738.

7. B.Satish Kumar, G.JanardhanaRaju, G.Rangajanardhana," Performance analysis of different material handling devices in flexible manufacturing system", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) December, 2018. ISSN(P):2249-6890; ISSN(E):2249-8001, vol 8, issue 6, pp: 425-436.
8. D. Ramesh Babu¹, K.V.Narasimha Rao, M.V.Satish Kumar & B.Satish Kumar," Handling of apples during sorting-grading operation and measuring the mechanical properties firmness after controlled atmosphere storage", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) December, 2018. ISSN (P): 2249-6890; ISSN (E): 2249-8001, vol 8, issue 6, pp: 617-634.
9. L.Radhakrishna, N.Gopikrishna, P.Nagabramham, Dheeraj Joshi," Fabrication and Characterization of Aluminum Based Composite Material", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) December, 2018. ISSN(P):2249-6890; ISSN(E):2249-8001, vol 8, issue 6, pp: 165-170.
10. BhumpellySaiprasad, PullaSammaiah, NallabelliManogna," Study the Effect of Fiber Particles in Silicone Rubber to Improve the Mechanical Properties" Research Journal of Engineering and Technology ISSN 0976-2973 (Print) 2321-581X (Online), vol 9, issue 4, pp: 1-7
11. NallabelliManogna, PullaSammaiah, BhumpellySaiprasad, "Increasing Percentage of Fiber Particles to Silicone Rubber without Changing Chemical Properties", Research Journal of Engineering and Technology October-

December 2018, ISSN 0976-2973 (Print) 2321-581X (Online), vol 9, issue 4, pp: 281-287.

12.K. Nagaraju, A. Devaraju, B. Manichandra," Mechanical Characterization of Al 6061 Surface Composite with Nano particles (TiC) Fabricated by Friction Stir Processing", Research Journal of Engineering and Technology October-December 2018 ISSN 0976-2973 (Print) 2321-581X (Online), vol 9, issue 4, pp:288-292

13.AruriDevaraju& Banda Srinivas," Investigation of Velocity ratios on Mechanical and Microstructural Characterization of Friction Stir Welded Dissimilar 2024 and 7075 Aluminium Alloy", Materials Today: Proceedings - Elsevier 2018, pp: 19250-19254.

International conference:

1. B.Satish Kumar," Fuzzy Controlled DC Grid based Wind Power generation in a Microgrid", 1st International Conference on Recent Trends in Engineering, Materials, Management and Sciences - SBIT, Khammam.

Conferences/Seminars/workshops/FDPs Conducted:

A One day workshop on " Scope in Automotive sector" was conducted by SAE Collegiate club and Mechanical Engineering Dept. on July 17th 2018 at Mechanical seminar hall, Block II, SREC.

Conferences/Seminars/workshops/FDPs Attended:

SREC EKASILA TEAM had participated in Efficycle competition which was held on October 8th-12th, 2018, with a team of 8 students and 1 Faculty Advisor.

A two day workshop “International Go-Kart Championship:2018-19GO KART – Designing and Rules” organized by LPU, held from 15th-16th Dec,2018 at LOYOLA ICAM College of Engineering and Technology, Chennai

DEPARTMENTAL ACTIVITIES

SREC- SAEINDIA COLLEGIATE CLUB

ONE DAY WORKSHOP ON "SCOPE IN AUTOMOTIVE SECTOR"

A One day workshop on " Scope in Automotive sector" was conducted by SAE Collegiate club and Mechanical Engineering Dept. on July 17th 2018 at Mechanical seminar hall, Block II, SREC.



Mr. Mayank Aurora, Chief Marketing officer of Elite Techno group had gave a lecture on scope in Automotive sector. He had given brief about the importance of activities in B.Tech course. He suggested all the students to concentrate on practical work. Students involving in hands on work gains more knowledge.



Students listening to the speaker



Mr. Mayank Aurora interacting with the students of ME department.

SAENIS EFFICYCLE COMPETITION-2018

SREC EKASILA TEAM had participated in Efficycle competition which was held on October 8th-12th, 2018, with a team of 8 students and 1 Faculty Advisor.



SREC SAEINDIA ACTIVITY

INTERNATIONAL GO-KART CHAMPIONSHIP-2018-19

Students of IIIrd year, Mechanical Engineering Department had registered for International Go-Kart championship- which is organizing by LPU SAE COLLEGIATE CLUB, Lovely Professional University. Final Event will be conducted in the month of March 15th-18th,2019.

LPU had conducted workshop on Go-kart Designing & Rules to follow. Total of 9 students had registered for workshop. This workshop has conducted at Loyola ICAM college of Engineering and Technology, Chennai. Date of workshop organized 15th-16th Dec,2018.

Students registered Go-Kart event and named team as **Rudra Kakatiyas**.



Team Rudra Kakatiya with Technical Experts of Industry & Faculty Advisor

SREC SAE Faculty Advisor Mr. Dheeraj Joshi & 9 students had registered for workshop. Started journey on 14th December,2018 to Chennai. We booked tickets to Chennai of Tamil Nadu Express. Team reached Chennai on 15th Dec,2018 morning at 7:30, and started journey towards Loyola ICAM college of Engineering and Technology, Nungumbakkam.

WORKSHOP- DAY 1

Team had done their registration at the desk at 10:00 AM. Around 30-40 students had participated from other college.

Program was started by Member of LPU Mr. Kunal, a talk on Rules of Designing Go-kart. He explained the rules of steering, braking & safety precautions need to be taken.

He explained the various steering mechanism, braking and the mistakes most of the students do in designing and while fabricating Go-kart. He also suggested Automobile text book of Author Gillespie &

Kirpal singh volume 1. Calculation of braking, pressure applied, Acceleration with and without load to be done by students.

Lunch break from 12:45 to 1:30 PM. After lunch speaker from Ashok Leyland had delivery of lecture on Chassis designing. Do's & Don't while designing the Go-Kart was explained by him. He explained the force need to considered to analyze the frame, Alignment etc.

DAY- 2



On 16th Dec, 2018, Expert from Ashok Leyland & a part of Technical committee member of Go-Kart event had delivered the topic on Material selection and factors for design. Also explained the importance of steering. After his talk team went for lunch at 1:00 to 2:00 PM.

Afternoon session was taken by Kunal. He explained the rules and Business plan to the students. Students need to work on the innovative part of vehicle. They need to compare the specification, cost analysis & the estimated cost of their vehicle. After doing survey they need to present the PPT at the business plan/ Proposal-Go-kart event. Workshop was completed at 5:30 PM.

Students returned to the room and had rest. We started to Warangal in the next day i.e on 17th Dec, 2018.

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