

MATURI VENKATA SUBBA RAO [MVSr] ENGINEERING COLLEGE

(Sponsored by Matrusri Education Society, Estd.1980)

An ISO 9001:2015 Certified Institution.

Affiliated to Osmania University & Approved by AICTE.

Nadergul Village, Balapur Mandal, Hyderabad - 501 510

Website : www.mvsrec.edu.in



ANNUAL REPORT

**DEPARTMENT OF MECHANICAL
ENGINEERING**

[Accredited by NBA]

Academic Year : 2018-2019



Maturi Venkata Subba Rao Engineering College (MVSR)
Department of Mechanical Engineering
Annual Report (Academic Year 2018-2019)

Principal: Dr. G. Kanaka Durga

Head of the Department: Dr. J. Kandasamy

About the Department

The Department of Mechanical Engineering is started in 1981, the year of establishment of college. Currently the department offers one UG programme B.E (Mechanical Engineering) with an intake of 120 and one PG programme M.E (CAD/CAM) with 18 intake.

NBA: The B.E (Mechanical Engineering) program of the department has been provisionally accredited by the National Board Accreditation for three years with effect from 9th June 2018

Vision:

To impart education of highest standards that will prepare students for productive careers as competent professionals in Mechanical Engineering, and for higher studies and research.

Mission:

The department strives to provide the engineering foundation as well as professional, innovative and leadership skills to the students through the following activities:

M1. Lay sound foundation in the areas of mechanics, design, thermal sciences and production processes, as well as allied engineering areas.

M2. Enrich the undergraduate experience through experimental learning, and fostering a personalized and supportive environment that makes learning joyful and stimulating

M3. Encourage design and development of mechanical engineering components and systems to meet specific needs.

M4. Provide opportunities to develop good communication skills, and to encourage creativity and entrepreneurial skills

M5. Create awareness, in professional responsibility, ethics, global impact of engineering solutions, and of the need for life-long learning.

M6. Provide research and intellectual resources to address contemporary and complex problems of industry and to advance research and applications.

Program Educational Objectives of B.E. (Mechanical Engineering)

Mechanical Engineering is a broad discipline that incorporates skills and expertise in the areas which are essential to most sectors of industry.

Bachelors programme in Mechanical Engineering in the college is aimed at preparing graduates who will

PEO1: Establish themselves as successful professionals while working independently or in multidisciplinary teams demonstrating professional, ethical and societal responsibilities

PEO2: Have high levels of technical competency and problem solving skills to generate innovative solutions to engineering problems.

PEO3: Continuously enhance their skills through training, independent inquiry, professional practices and / or pursuit of higher education or research.

PEO4: Advance in their careers through increased technical and managerial responsibility as well as attainment of leadership positions.

Program Educational Objectives of M.E. (CAD/CAM)

The postgraduate program M.E.(CAD/CAM) offered by the department, is aimed at preparing postgraduates who will

PEO1: Establish themselves as successful professionals while working independently or in multidisciplinary teams demonstrating professional, ethical and societal responsibilities

PEO2: Have high levels of technical competency in computer-aided design and manufacturing to generate innovative solutions to complex engineering problems

PEO3: Conduct research and development in mechanical and allied disciplines to meet challenges in the advancement of technology.

PEO4: Advance in their careers through attainment of leadership positions, while continuously enhancing their skills through professional practices, pursuing doctoral programs and research.

Program Outcomes

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 sciences, 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 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.

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 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 the 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.

PSO's

Research Potential: Usage of advanced software packages commonly used in industry for modeling, assembly and to carry out multiphysics analysis.

Competent areas: Design and build components and systems related to mechanical and allied disciplines using various manufacturing methods.

Faculty Strength:

Professors – 04

Associate Professors –05

Assistant Professors - 19

Supporting Staff- 27

Student Strength:

BE II Mech 1 - 71

BE II Mech 2 - 71

BE III Mech 1 - 62

BE III Mech 2 - 67

BE IV Mech 1 - 71

BE IV Mech 2 – 69

1. Departmental Activities:

1. **MATLAB in Engineering Applications**

Department of Mechanical Engineering organised a 5 Day training programme on **“MATLAB in Engineering Applications”** from 25–29th June 2018.

Coordinators: Dr. P. V. Durga Prasad, Assoc. Prof.
Mr. K .Karthik Rajashekar, Asst. Prof.
Ms. Nukaraju Haritha, Asst. Prof.



2. **Haritha Haram at MVSREC**

Haritha Haram is a large-scale tree-plantation program implemented by the Government of Telangana to increase the aggregate of tree cover in the state from 24% to 33%. It is conducted on 8th August 2018.



3. AKSHAY GANESHA

To promote Eco-friendly environment the Department of Mechanical Engineering along with Electrical and Electronic Engineering conducted Akshay Ganesha on 12th September 2018.



4. AKSHAY URJA 2018

The Department of Mechanical Engineering along with Electrical and Electronics Engineering Department conducted “Akshay Urja 2018” on 28th September 2018

Coordinators: Mr. G. Srinivas Sharma, Assoc.Prof.

Mr. M. Ravi Kumar, Asst. Prof.

Mr. N. Yogi Manas Reddy, Asst. Prof.





AKSHAY URJA CYCLE RALLY (Date: 29th September 2018)



పర్యావరణ పరిరక్షణకు కృషి చేయాలి



ర్యాలీని ప్రారంభిస్తున్న ఎంపీఎస్ఆర్ చైర్మన్ శ్రీ నివాసరావు, ర్యాలీలో పాల్గొన్న విద్యార్థులు

ఖైరతాబాద్: పర్యావరణ పరిరక్షణకు ప్రతి ఒక్కరూ కృషి చేయాలని ప్రముఖ ఇంజనీరింగ్ కాలేజీ ఎంపీఎస్ఆర్ చైర్మన్ శ్రీ నివాసరావు పిలుపునిచ్చారు. 'పునరుత్పాదక శక్తి వనరుల'పై అవగాహన కల్పించడానికి శనివారం ఉదయం నెక్లెజ్ రోడ్డు సైకిల్ ర్యాలీని ఆయన

ప్రారంభించారు. ఈ సందర్భంగా ఆయన మాట్లాడుతూ పచ్చ పర్యావర్తానికి పునరుత్పాదక శక్తి వనరుల వినియోగాన్ని పెంచాల్సి ఉందన్నారు. ఈ సైకిల్ ర్యాలీలో పెద్ద ఎత్తున విద్యార్థులు పాల్గొన్నారు. విద్యార్థులతోపాటు ఆ కాలేజీ సిబ్బంది కూడా పాల్గొన్నారు.



5. Recent Trends in Mechanical & Industrial Engineering (RTMIE-2018)

A Five day Faculty Development Programme on "**Recent Trends in Mechanical & Industrial Engineering**" (RTMIE-2018) conducted by the department during 10-15th December 2018

Coordinators: Mr. K. V. R. K Subrahmanyam, Assoc Prof.
Mr. S. V. Narasimha Rao, Assoc Prof.





6. Alumni Reunion 2018

MVSR engineering college organized Annual Alumni meet-2018 on 15th December 2018. During the morning session, the respective departments have organized Alumni meet and in the afternoon a central Alumni meet was organized. Distinguished Alumni shared their thoughts and extended their support towards their Alma matter.





7. One Week National Workshop on “Vibrations in Mechanical Systems” (VMS 2019)

Departments of Mechanical Engineering and Automobile Engineering in association with The Institution of Engineers India have jointly organized a One Week National Workshop on "Vibrations in Mechanical Systems" from 4 - 9th January 2019.

Coordinators: Dr. M. Madhavi, Professor.

Co-Coordinator: Mr. T. Murali Mohan Raju, Asst Prof, AED.
Mr. A. Syam Prasad, Asst Prof.



Industrial visit to SV Turbo Engineering Works Pvt., Ltd., Patancheru, Hyderabad



8. “Weld ED” – Welding Theory and Practice with Hands-On

A 30-Hours workshop cum skill development programme “Weld ED” – Welding Theory and Practice with Hands-On is conducted by the department from 19th January 2019. The programme is scheduled for three weeks every day after college hours. i.e., 4.15 pm to 6.15 pm. The total number of students enrolled for the workshop is 42.

Coordinators: Dr. J. Kandasamy, Professor.
Mr. G. Prakasham, Asst Prof.





One Day Industrial Visit to Rupa Industries, Jeddimetla





9. Unnat Bharat Abhiyan:

Under Unnat Bharat Abhiyan (UBA) Scheme, Department of Mechanical Engineering along with Department of Business Management visited Kongara Kalan, Ibrahimpatnam Mandal, R. R District, Telangana on 1st February 2019.

A team of 4 Faculty members, Dr. M. Madhavi, Professor, Mr. S. V. Narasimha Rao, Associate Professor, Mr. B. Suresh Kumar Reddy, Mr. R. Ravi Kumar, Assistant Professors, visited municipal office at Adibatla and collected the basic data of the Kongara Kalan village.

On 2nd February 2019, UBA Team of Mechanical Engineering accompanied by Business Management comprising of 40 students duly guided by 03 staff members conducted door to door house hold survey in 200 houses at the Kongara Kalan village and filled the forms provided by UBA.

On 2nd March 2019, as a continuation to the first survey on 02.02.2019 the data collection work was done by the team with 20 students accompanied by 4 staff members in 94 houses. The process is still under progress.





10. A One-Day Industrial Visit by the Faculty Members of Department of Mechanical Engineering to TATA ADVANCED SYSTEMS LIMITED, Adibatla, Ranga Reddy District, Hyderabad

Faculty members of the Department of Mechanical Engineering of MVSR Engineering College visited TATA ADVANCED SYSTEMS LIMITED (TASL) on 23rd February 2019.

The Team visited the four constituent units of TASL viz., TATA Advanced Systems Limited, Tata Sikorsky Aerospace Limited, Tata Lockheed Martin Aero structures Ltd. The team discussed with the TASL officials about Student Internships, Student Final Year Projects for UG and PG Students, Placement opportunities, and consultancy for MVSREC.



11. CSWA: Certified SOLIDWORKS Associate Examination:

The Department of Mechanical Engineering in association with Logical solution limited, Hyderabad conducted CSWA: Certified SOLIDWORKS Associate Examination on 14th March 2019 in CAD laboratory. A total of 55 Students of BE III and IV year registered. Out of 55, 30 students were selected for the final round of examination. 6 students were certified as Associate in Mechanical design from Dassault systems.

Coordinator: Mr. Suri Srinivas, Asst Prof.

Technical Staff: Mr. M. Venkat Ramana, Lab. Asst

Mr. M.Vasavi Krishna, Lab. Asst



List of students certified:

S. NO	Name	Roll No	Year
1	Aluka Dheeraj Reddy	2451-15-736-032	4 th year-M1
2	G. V. Niharika	2451-15-736-058	4 th year-M1
3	M Uday Kumar	2451-15-736-003	4 th year-M1
4	Abhishek. K	2451-15-736-053	4 th year-M1
5	N. Bhuvana Chandra	2451-16-736-045	VI Sem- M1
6	B. Satya Teja Sai Varun	2451-16-736-110	VI Sem- M2

12. Road Safety Awareness programme

An awareness programme on Road Safety is organized by the Department of Mechanical Engineering in association with Tata Advanced Systems Limited, (TASL) Adibatla and Rachakonda Police Commissionerate, Hyderabad on 13th March 2019. Quiz on Road safety was conducted for students and prizes were distributed.

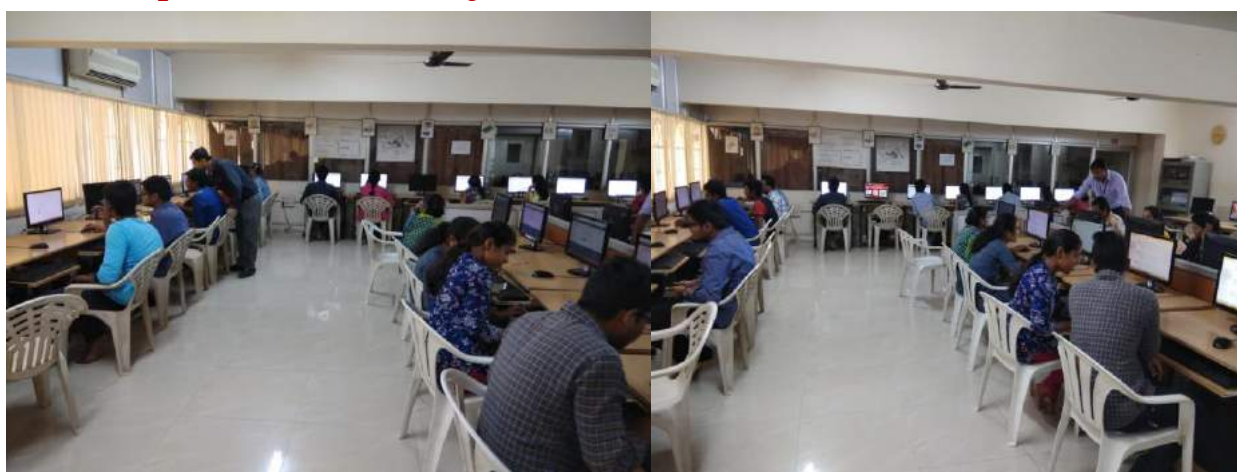


13. One day workshop on Disaster Management

A One day workshop on Disaster Management with Hands on Experience is organized by Mechanical Engineering Students Association (MESA), Department of Mechanical Engineering for Third year students as Project component for the course work Disaster Management (Open Elective) in association with Business Management Department. The experts came from Disaster Management Wing of Sri Satya Sai Seva Organization. Around 55 students actively participated.



14. NPTEL Spoken Tutorial Project



The Department of Mechanical Engineering conducted NPTEL Spoken Tutorial Project for students on Open FOAM, LaTeX and Scilab on 25-26th March 2019.

Course Name	No. of Students Attended	Minimum score	Maximum Score	Above 50
Scilab	15	15.6%	52.2%	1
LaTeX	56	13.3%	57.8%	3
OpenFOAM	38	12.5%	51.3%	1

Coordinator: Mr.V.Nikil Murty, Asst Prof.

Technical Staff: Mr.M.Venkata Ramana, Lab Asst.
Mr.M.Vasavi Krishna, Lab Asst.

15. PROJECT EXPO 2019

Project Expo an annual flagship Event for promotion of research, innovation and startups was organized by EDC and R&D & Consultancy Cell on 29th March 2019 at MVSR Engineering college campus. Some of the major projects, mini projects and PG projects were showcased. The process of selecting projects for Project Showcase was initiated two weeks before the event. Selected participants have prepared posters and exhibits for explaining the projects.

Distinguished experts, from various organizations were invited as examiners for the expo. Examiners have spent time with the students and evaluated the projects critically based on Definition Scope, Novelty, Implementation, Societal /Futuristic Utility etc. Apart from the examiners several students and faculty have enthusiastically gone through the projects exhibited.

Coordinator: Dr. M. Madhavi, Professor.

Department Coordinator: Mr. N. Yogi Manash Reddy, Asst. Prof.



2. Departmental Associations:

The Department is associated with SAE, IEI, IIW, ISTE, FIAAP, and Renewable Energy Club.

3. Faculty Achievements:

1. Mr.G.Srinivas Sharma, Assoc Prof, is awarded the **Best paper** for the research paper titled **“Exergetic optimisation of Biomass Integrated Gasifier/Gas Turbine Technology for power generation using Genetic Algorithm”** at International conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-2018) held on 6-7th December 2018 at **National Institute of Technology, Rourkela.**



4. NPTEL Certification Courses:

1. Mr. M. Ravikumar and Mr. S. Ramanathan, Assistant Professors received certificates for AICTE approved 12 week course **“IC Engines and Gas Turbines”** conducted by **IIT Guwahati** during Jan-Apr 2019.
2. Mr. S. V. Narasimha Rao, Associate Professor, received a certificate for AICTE approved 8 week course **“Automation Control”** conducted by **IIT Roorkee** during Jan-Mar 2019.
3. Dr. J. Kandasamy, Professor & Head, received a certificate for AICTE approved 8 week course **“Analysis and Modelling of Welding”** conducted by **IIT Madras** during Aug-Sep 2018.
4. Mr. K. Karthik Rajashekar, Assistant Professor received a certificate for AICTE approved 8 week course **“Manufacturing of Composites”** conducted by **IIT Kanpur** during Aug-Sep 2018.

5. Session chairs, Plenary Sessions by the Faculty outside college

1. Dr. S. Gajanana, Professor of the department chaired a session at International conference on **“Emerging Trends in Engineering (ICETE)”** conducted by University College of Engineering, Osmania University, Hyderabad on 22-23rd March-2019.
2. Dr. J. Kandasamy Professor and Head, delivered a keynote lecture entitled **“Application of Taguchi Method - A powerful tool for Design of Experiments”** on the occasion of 3rd National Conference on **“Advances in Engineering, Technology and Sciences, (NCAETS - 19)”** on 4th April 2019 at Sphoorthy Engineering College, Hyderabad.

6. Guest Lectures Organised by Department:

Academic Year	Target Audience	Date of Lecture	Details of the Resource Person with Designation	Place of Work	Topic of the Lecture
2018-2019	3/4 & 4/4 Mech-I & II	22-02-2019	Mr. N Mallikarjun Naik, Scientist 'D'	Structural Dynamics and Acoustic Testing Division, Research Centre Imarat (RCI), DRDO, Hyderabad	Structural Vibration and its Control
	3/4 & 4/4 Mech-I & II	03-08-2018	Mr. P. Thrishul, Manager	KEANES & Maintenance, MIDHANI Ltd., Hyderabad.	Manufacturing of Super Alloys

7. Academic and other important activities & events in the department

S.No.	Event Name	Date
1.	One week short term training programme on MATLAB in Engineering applications.	25-06-2018 to 29-06-2018
2.	Guest lecture: "Manufacturing of Super Alloys" for B.E 3/4 and 4/4 Mechanical Engineering students by Mr. P. Thrishul, Manager, KEANES & Maintenance, MIDHANI Ltd., Hyderabad.	03-08-2018
3.	Mechanical Engineering Students Association events (MESA) activities.	18-08-2018
4.	Akshay Urja -2018.	28-09-2018
5.	Trikut V4, a team of 12 members participated in SAE Efficycle at LPU, Punjab, secured AIR14 amongst 64 participated teams.	09-10, Oct 2018
6.	Faculty Development Programme on "Recent Trends in Mechanical and Industrial Engineering (RTMIE -2018)"	10 – 15 Dec 2018
7.	Alumni meet – 2018	15-12-2018
8.	The Departments of Mechanical Engineering and Automobile Engineering organised a One-Week National Workshop on "Vibrations in Mechanical Systems (VMS 2019)".	04-01-2019 to 09-01-2019
9.	A 30 hours workshop on "Weld ED" welding theory and practice with hands on experience is organized after college hours in association with Indian Institute of Welding (IIW), Hyderabad Branch.	19-01-2019 to 09-02-2019
10.	Guest lecture: Mr. N. Mallikarjun Naik, Sc D, RCI on "Structural Vibrations and its Control" for B.E. VI Sem. (Sec.1) students.	22-02-2019
11.	Industrial visit to Tata Advanced Systems Limited (TASL), Adibatla.	23-02-2019
12.	Mechanical Engineering Students Association events (MESA)	02-03-2019
13.	Awareness on Road Safety by Rachakonda Police in association with Tata Advanced Systems Limited (TASL), Adibatla.	13-03-2019
14.	One day workshop on Disaster Management with hands on experience in association with Disaster Management Wing of Sri Satya Sai Seva Organisation, Telangana State.	16-03-2019
15.	Team Initia 3.0 comprising of 25 students fabricated Gokart and participated in Bharat Formula Karting (BFKCT) and secured Rs.10, 000/- for best Engineering Design.	26-02-2019 to 06-03-2019
16.	Team Ratchet consisting of 25 students fabricated and All-Terrain Vehicle and participated in SAE BAJA – 2019 at IIT, Ropar and the team secured AIR 10 among the 83 participating teams.	04-03-2019 to 14-03-2019
17.	Six students qualified Certified Solid Works Associate examination (CSWA).	14-03-2019
18.	A Team of 42 students attended the 13th national Student convention at Bannari Amman Institute of Technology, Satyamangalam, Erode, Tamilnadu	23-03-2019 to 24-03-2019

8. Paper publications by the faculty in Journals and Conferences

S.No	Name of the Faculty	Title of the paper	Name of the Journal	Vol. / Issue	ISSN No.
1	Dr. J. Kandasamy	Finite Element Simulation and Experimental Investigations on Flow behavior of Aluminum Alloys in Equal Channel Angular Pressing	Proceedings of the 9th International Conference of Materials Processing and Characterization, ICMPC-2019, GRIET, Hyderabad	March, 2019	Pg.No.99
		Comparative Analysis of Temperature Variation in Friction Stir Welding	Elsevier	Volume 5, Issue 9, Part 3, 2018	Pages 18798-18804
		Investigations on the Surface Hardness and Roughness of Roller Investigations on the Surface Hardness and Roughness of Burnished Surfaces	International Journal of Modern Engineering and Research Technology	Volume 5, Special Issue, June 2018 Pg. 339 - 346	ISSN: 2348-8565
		Formability Analysis on the Gas Formed Aluminum coated Magnesium alloys in Conical Dies	Proceedings of the International Conference on Emerging Trends in Engineering, ICETE - 2019,	March 2019	Pg.No.113
		Computational Analysis of Superplastic Forming of Magnesium alloys coated with Aluminum in Conical Dies	Proceedings of the National Conference on Emerging Trends in Mechanical Engineering, ETME - 2019	Jan 2019	Pg. No.274 - 278.
		Gas blow Forming of AZ31 Magnesium Alloy in Box Shaped Dies	Technical Research Organization India	Vol -4, Issue-8, 2018	ISSN:2393-8374
2	Dr. S. Gajanana	Casting and metallurgical analysis of Al -6061	Manufacturing Technology Today	Vol.2, No.17	ISSN:0972-7396
3	Dr. M. Madhavi	Dynamic Performance Analysis of a Four Ton Automobile Chassis	International conference on Applied Mechanical Engineering and Research	2019	Proceedings
		Experimental Investigations on static and dynamic parameters of steel and composite propeller shafts with an Integrated Metallic Joints	Proceedings of ICAMM-2016, Materials Today, Science Direct, Special Issue	2018	Proceedings, 26925-26933
		Experimental Investigations of Nano Filled Hybrid composites	RTMESEA-2018	20-21 st Dec 2018	-

4	Dr. P.V. Durga Prasad	Numerical Analysis of a Radiator Performance Using Aluminium Oxide Nano fluid	International Journal of Technology and Engineering	Vol. 8, Issue XII, Dec 2018	ISSN: 2249-7455
5	S. V. Narasimha Rao	Experimental Investigations on Micro Hardness of Equal channel Angular Pressed Aluminum Alloys at Different Die Angles	Journal of Advance Research in Dynamical & Control Systems	Vol. 10, 05-Special Issue,2018	ISSN:1943-023X
6	G. Srinivasa Sharma	Exergetic optimization of biomass integrated gasifier/gas turbine technology for power generation using genetic algorithm	International conference on Bioprocess for suitable Environment and Energy 2018	6-7 th Dec 2018	
7	B. Ravi Kumar	Experimental investigation and simulation of hot rolling of AL 6061	Manufacturing Technology Today	Vol. 17, No. 18, 2018	ISSN:0972-7396
8	B. Ravi Kumar	Development of regression model for spinning force using parabolic mandrel	Manufacturing Technology Today	Vol. 17, No. 18, 2018	ISSN:0972-7396
		A Review on simulation of multi pass spinning process	Manufacturing Technology Today	Vol. 17, No. 18, 2018	ISSN:0972-7396
9	R. Haranath	Numerical Analysis of a Radiator Performance Using Aluminium Oxide Nano fluid	International Journal of Technology and Engineering	Vol. 8, Issue XII, Dec 2018	ISSN: 2249-7455
10	Suri Srinivas	Experimental studies of superplastic forming using hemispherical dies and examine the process parameters AA5083 alloy	International Journal of Engineering Science and Research	2018	ISBN: 2277-2685
11	B. Suresh Kumar Reddy	International conference on “Emerging Trends in Engineering”. Presented a paper titled “Investigation of Back Rake angle on Machining of Al6061 and Development Regression Model for resultant force”.	UCE, OU, Hyd.	2019	-
		Casting and metallurgical analysis of Al -6061	Manufacturing Technology Today	Vol.2, No.17	ISSN:0972-7396

12	A. Syam Prasad	Experimental Investigations on static and dynamic parameters of steel and composite propeller shafts with an Integrated Metallic Joints	ICAMM Materials Today	2018	Proceeding 5(2018), 26925-26933
13	N. Yogi Manash Reddy	Experimental Investigation of Solar Concentrating Still	International Journal of Emerging Technologies and Innovative Research	2019	ISSN:2349-5162
14	K. Karthik Rajashekar	Dynamic Performance Analysis of a Four Ton Automobile Chassis	International conference on Applied Mechanical Engineering and Research	2019	Proceedings
15	V. Nikhil Murthy	Experimental Investigations of Nano Filled Hybrid composites	RTMESEA-2018	20-21 st Dec 2018	-
16	C. Sumalatha	Experimental Investigation on improvement of tribological and mechanical properties of Al-Si cast alloys	An International conference on Tribology	13-15 th Dec 2018	Page. No. 23
17	N. Haritha	Experimental Investigation on improvement of mechanical properties of Al-Si cast alloys	National Seminar on Recent Trends in Material Research for science and Engineering Applications (RTMRSEA)	13-15 th Dec2018	Page. No. 23

9. Workshops/Faculty Development Programmes attended by the faculty

S.No.	Name of the Faculty	Conference/ seminar / workshop etc	Venue	Date
1	G. Prakasham	One week National Workshop on "Vibrations in Mechanical Systems, (VMS - 2019)	MED, MVSREC, Hyd.	04-01-2019 to 09-01-2019
2	G. Srinivas Sharma			
3	S.V. Narasimha Rao			
4	B. Ravi Kumar			
5	R. Haranath			
6	V. Suman Raju			
7	N. Yogi Manash Reddy			
8	C. Sumalatha			
9	A. Syam Prasad			
10	K. Karthik Rajashekar			
11	M. Bhargava Chandra			
12	V. Nikil Murthy			
13	K. Karthik Rajashekar	GiAN Course on "Advances in Additive & Digital Manufacturing"	UCE, OU, Hyderabad	25-03-2019 to 29-03-2019
14	N. Veman Reddy	2-Day National Seminar on "Recent Trends	S&H Dept.,	20-12-2018 to 21-12-2018
15	V. Nikil Murthy			

		in Material Research for Science and Engineering Applications”	MVSREC, Hyd.	
		A Three day workshop on “Innovation, Intellectual Property Rights and Startups”	EDC & IIC, MVSREC, Hyd.	10-10-2018 to 12-10-2018
16	C. Sumalatha	2-Day National Seminar on “Recent Trends in Material Research for Science and Engineering Applications”	S&H Dept., MVSREC, Hyd.	20-12-2018 to 21-12-2018
		Two day workshop on “Tribology”	BITS Pilani, Hyderabad	15-11-2018 to 16-11-2018
17	Dr. S. Gajanana	One week Faculty Development programme on “Recent Trends in Mechanical and Industrial Engineering”	Department of Mechanical Engineering, MVSREC, Hyd.	10-12-2018 to 15-12-2018
18	D. Siva Kumar			
19	B. Kshetra Mohan			
20	G. Srinivas Sharma			
21	Dr. P.V. Durga Prasad			
22	S. Srinivas			
23	M. Naveen Babu			
24	A. Syam Prasad			
25	G. Prakasham			
26	B. Suresh Kumar Reddy			
27	V. Nikil Murthy			
28	C. Sumalatha			
29	S. Ramanathan			
30	M. Ravi Kumar			
31	N. Yogi Manash Reddy			
32	B. Ravi Kumar			
33	S. Shiva Kumar			
34	M. Bhargava Chandra			
35	R. Haranath			
36	R. Ravi Kumar			
37	N. Haritha			
38	A. Syam Prasad	AICTE sponsored Short Term Course “Applied Impact Mechanics”	Dept. of Applied Mechanics, IIT Madras	31-10-2018 to 05-11-2018
39	R. Ravi Kumar	AICTE sponsored Short Term Course “Advances in Experimental and Computational Fluid Mechanics	Dept. of Mechanical Engineering, IIT, Madras	29-10-2018 to 03-11-2018
40	M. Bhargava Chandra			
41	S. Shiva Kumar			
42	N. Yogi Manash Reddy	AICTE –ISTE sponsored Refresher Programme “Engineering Drawing- An Effective Teaching Methodology”	Malla Reddy Engg. College	02-07-2018 to 07-07-2018

43	V. Nikhil Murthy	Faculty Development Programme on “Development and Applications of Nano Composite Materials”	Institute of Aeronautical Engg. Dundigal, Hyderabad.	09-07-2018 to 14-07-2018
44	S.V. Narasimha Rao	AICTE-ISTE approved Induction / Refresher Programme “Refrigeration & Automobile Air-conditioning”	AED, MVSREC, Hyd.	23-07-2018 to 28-07-2018
45	M. Ravi Kumar			
46	S. Ramanathan			
47	R. Haranath			
48	V. Suman Raju			
49	M. Bhargav Chandra	Advances in Computational Fluid Dynamics: Methods and Applications using MATLAB & Ansys Fluent	NIT Warangal	06-05-2019 to 11-05-2019
50	S. Shiva Kumar			
51	R. Ravi Kumar			
52	V. Suman Raju			
53	Dr. P. V. Durga Prasad	Hands on experience on Fabrication of Nanocomposite Materials for Engineering Applications (FNMEA-2019)	NIT Warangal	06-05-2019 to 10-05-2019
54	R. Haranath			

10. List of Faculty Pursuing PhD.

S.No.	Faculty Name	Designation	University	Year of Registration	Topic
1.	Mr. V. Nikhil Murthy	Asst. Prof.	VTU, Belagavi	2019	Development on Nano particle filled composite, Experimental investigations on improved Mechanical and Thermal properties
2.	Mr. K. Karthik Rajashekar	Asst. Prof.	BITS Pilani, Hyd. Campus	2019	Static and Dynamic Stress Response of Additively Manufactured Prosthetic Sockets
3.	Mr. S. Ramanathan	Asst. Prof.	OU	2018	Heat Transfer Enhancement
4.	Mr. N. Veman Reddy	Asst. Prof.	JNTUH	2016	Multipass welding using GTAW on SS316LN for estimation of residual stress and distortion in nuclear applications.
5.	Mr. M. Bhargava Chandra	Asst. Prof.	JNTUH	2016	Enhancement of heat transfer rate in heat exchangers using Nano fluids.
6.	Mr. R. Ravi Kumar	Asst. Prof.	OU	2016	Tar decomposition from biomass gasification equipment by using char as catalyst.
7.	Mr. V. Suman Raju	Asst. Prof.	OU	2016	Thermal analysis and optimization of cogeneration system with steam turbine by utilizing heat sources.
8.	Mr. B. Suresh Kumar Reddy	Asst. Prof.	OU	2016	Studies on Aluminium alloy (6061 series) analysis on mechanical properties, machinability modelling and optimization of process parameters.
9.	Mr. M. Ravi Kumar	Asst. Prof.	JNTUK	2015	Performance investigation and optimization of refrigeration system using blends of environment friendly alternative refrigerant with nano particles.
10.	Mrs. C. Sumalatha	Asst. Prof.	JNTUK	2015	Tribological properties under fatigue loading for Al Si cast alloys.

11.	Mr. A. Syam Prasad	Asst. Prof.	JNTUK	2015	Prediction of ageing of visco-elastic materials.
12.	Mr. G. Prakasham	Asst. Prof.	OU	2013	Effective simulation of welded joint by using FEA.
13.	Mr. K.V.R.K. Subrahmanyam	Assoc. Prof.	JNTUH	2012	Optimization of processing parameters for light weight castable alloy shapes using semi-solid forging route.
14.	Mr. S.V. Narasimha Rao	Asst. Prof.	JNTUH	2012	Experimental investigations and characterization of semi-solid processed Aluminium alloys.
15.	Mr. B. Ravi Kumar	Asst. Prof.	JNTUH	2012	Some studies on metal spinning modeling analysis and optimization.
16.	Mr. S. Srinivas	Asst. Prof.	JNTUH	2012	Gas pressure super plastic forming of light alloys.
17.	Mr. G. Srinivas Sharma	Assoc. Prof.	OU	2001	Experimental investigations of BIG/GT for power generation.

11. R & D, Consultancy.

1. Dr. M. Madhavi, Professor received R & D grant from Institute of Engineers India, for the project titled **“Automated Machine for Bio Degradable Natural Fiber Extraction and Conditioning”**.
2. Dr. J. Kandasamy, Professor received grant from Institute of Engineers India (Ref No – R.4/2/UG/2018-2019/RDUG2018029) for the UG project titled **“Design and Fabrication of Low Cost Die Setup Assembly for Superplastic Forming of Light Alloys”**



3. Dr. M. Madhavi, Professor received consultancy project from M/S Yenplast Pvt. Ltd for the project titled **“Design and Analysis of Composite Tank”**.

12. Alumni Achievements

Mr. Kala Venkata Nagaraju, Computer Scientist, US ARMY Engineering Research and Development Center, USA, 1986 Graduate, Department of Mechanical Engineering, 1986 Graduate, Maturi Venkata Subba Rao (MVSR) Engineering College for being bestowed with " Scientist of the year - 2019".



Student Activities

1. Students of B.E II, III, and IV Year have taken internships from organizations like BHEL, NTPC, NFC, DRDO, ASL, Stallion tyres, South Central Railways, SABOO, Hyundai, RCI, ECIL, TSGENCO, and BDL.

2. Student Achievements :

- Mr. M. V. Krishna, Final year student of the Department secured **3rd** Rank in **TSPGECET-2019** conducted by Osmania University.
- Mr. N. Abhishek, Final year student of the Department secured **5th** Rank in **TSPGECET- 2019** conducted by Osmania University.

GATE RANK HOLDERS

S. No.	Name	GATE AIR
1	C Anish	4085
2	P Avinash	12449
3	CVLSS Prashanth	14026
4	S Neeraj Kumar	14026
5	O Manswin	15803
6	M V Krishna	17777
7	M Sai Krishna	18768
8	M Omkar Reddy	19128
9	Syed Faizan Ahmed	19324
10	Shaik Gulzar Ahmed	20383
11	M Ramalinga Reddy	24286
12	A L Leonard	24505
13	N Srikanth	27805
14	B Sridhar	28764

3. Models Fabricated by Students as a part of Outcome Based Learning

Course: Kinematics of Machines

Year & Section : IV Semester Mech-1

Instructors: Dr. M. Madhavi, Professor

Mr. B. Kshetra Mohan, Associate Professor

Mr. K. Karthik Rajashekar, Assistant Professor

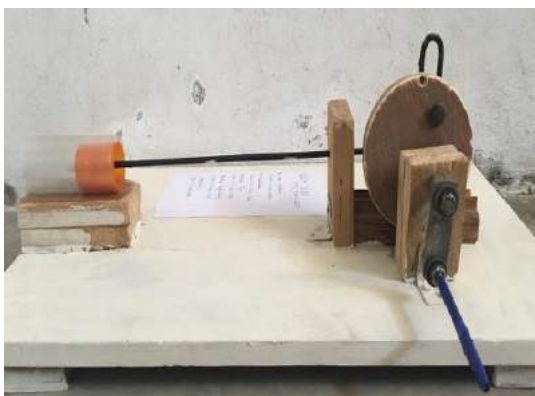
Working Model Presentation:



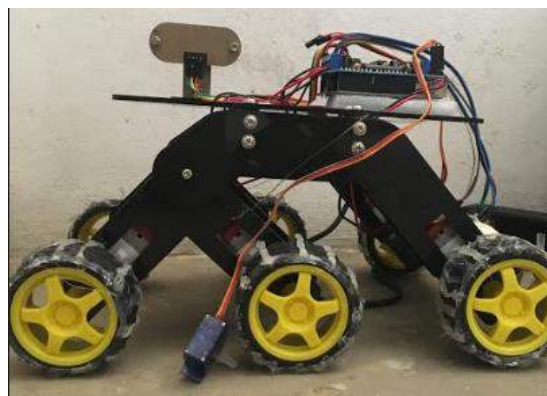
Planetary Gear Train



Box Transport Mechanism



Scotch Yoke Mechanism



Rocker-Bogie Mechanism

Year & Section: IV Semester Mech-2

Instructors: Dr. J. Kandasamy, Professor

Ms. N. Haritha, Assistant Professor

Working Model Presentation:



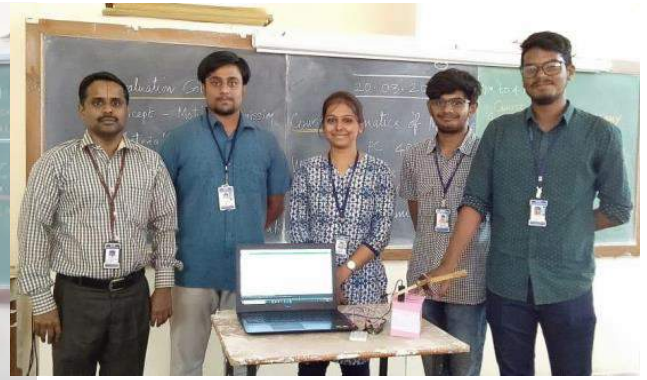
Stair Climbing Trolley



Parallel Ruler Mechanism



Hydraulic Saw



Two Degrees of Freedom Robot Arm

4. Mechanical Engineers Students Associations (MESA)

MESA is a body controlled and run by the students of Mechanical Engineering under the guidance of the faculty. Various events are conducted every year to prepare them for future environment.

MESA divides its functions into five wings,

- 1) Personality development wing
- 2) Arts and cultural wing
- 3) Sports wing
- 4) Social Networking and publicity wing
- 5) Event organization wing



MESA activities 2018-2019:

In this academic year 2018-19, MESA conducted several activities, contests, programs, etc with very active participation from students of the Department.

Prominent among these were a One-Day workshop on Disaster Management, Awareness on Road Safety, and several contests in technical events like Machining contest, Assembly contest, CAD contest, Technical Presentation contest and extracurricular events like Just A Minute (JAM), Rangoli, Painting, Dumb Charades, Singing, Dancing, etc.

The events were ably designed and guided by faculty members of the department and Applied Sciences and Humanities Department of our college. The faculty members helped in conducting the events in a professional manner and also acted as judges for all these events, thereby helping in smooth conduct of these programs. The technical staff of the department also rendered necessary help in the conduct of these events.

The activities were split up and conducted so as to enable participation of students in both the semesters.

In the first semester, the Machining contest and Assembly contest were conducted.

In the second semester, the awareness programs on (i) Disaster Management and (ii) Road Safety were conducted.

The other contests like CAD contest, Rangoli, Singing, Dance, Just A Minute, Painting, Dumb Charades, etc were also conducted in the second semester.

At the end of the semester, MESA Convention was celebrated with several cultural activities by the students. Prizes and certificates were also distributed to all the winners and participants of the MESA contests conducted during the academic year.

MESA Faculty Coordinators

1. Mr. S. Ramanathan, Assistant Professor
2. Mr. N. Yogi Manash Reddy, Assistant Professor
3. Ms. N. Haritha, Assistant Professor

5. Athlema

Athlema, MVSREC is an intercollegiate sports meet conducted by M.V.S.R Engineering College on 15-16th March 2019.

The following events are conducted

- 1) Basketball
- 2) Cricket
- 3) Football
- 4) Throw ball
- 5) Caroms
- 6) Chess
- 7) Table Tennis



MVSREC ENGINEERING COLLEGE
(Sponsored by Matrusri Education Society, Estd. 1980)
Affiliated to Osmania University & Recognized by AICTE
Nadergul(P.O), Hyderabad - 501510, web: www.mvsrec.edu.in

ORGANISED BY DEPARTMENT OF PHYSICAL EDUCATION

EVENTS

OUTDOOR:
CRICKET (M)
FOOTBALL (M)
VOLLEY BALL (M)
TENNISOIT (W)
THROWBALL (W)
KABADDI (M&W)
BASKETBALL (M&W)

INDOOR:
CHESS (M&W)
CARROMS (M&W)
BADMINTON (M&W)
TABLE TENNIS (M&W)

ATHLEMA 2K19

MARCH 15th & 16th 2K19

PRINCIPAL
Dr. G.KANAKA DURGA

VICE - PRINCIPAL
PROF. S.G.S MURTHY

CONTACT

CONVENER
Dr. SRINIVASA NALLELLA
(Physical Director)

SPORTS COMMITTEE CHAIRMAN
G. SRINIVAS SHARMA

STUDENT COORDINATORS:
G. SAI RAGHAVENDRA - 9640060368
B.S MAYANK - 9989106575
N. MOUNICA - 9640822909
V. KAVYA - 7032444552

6. Industrial Visit:

As a part of curriculum students of VI-Semester (M1 & M2) students have visited **L & T Metro Rail Uppal Depot**, Hyderabad on 7th September 2018.



Industrial Visit to Cement Corporation of India Ltd:

A one day Industrial visit is arranged for the students of the Open Elective course Material Handling (OE 602 ME) offered by Department of Mechanical Engineering. 61 students along with 2 faculty members Mr V Nikhil Murthy Assistant Professor, MED and Mr. K. Ravi Sekhar, Assistant Professor CED on 23rd March 2019 visited Cement Corporation of India Limited, Tandur Cement Factory, Tandur. Mr. Khaderi, Adjunct Faculty also accompanied the team. It was a real time industrial experience for the students to directly correlate their theory sessions of the course.



Industrial Visit to Kamdhenu Mattresses and Furniture Pvt Ltd:

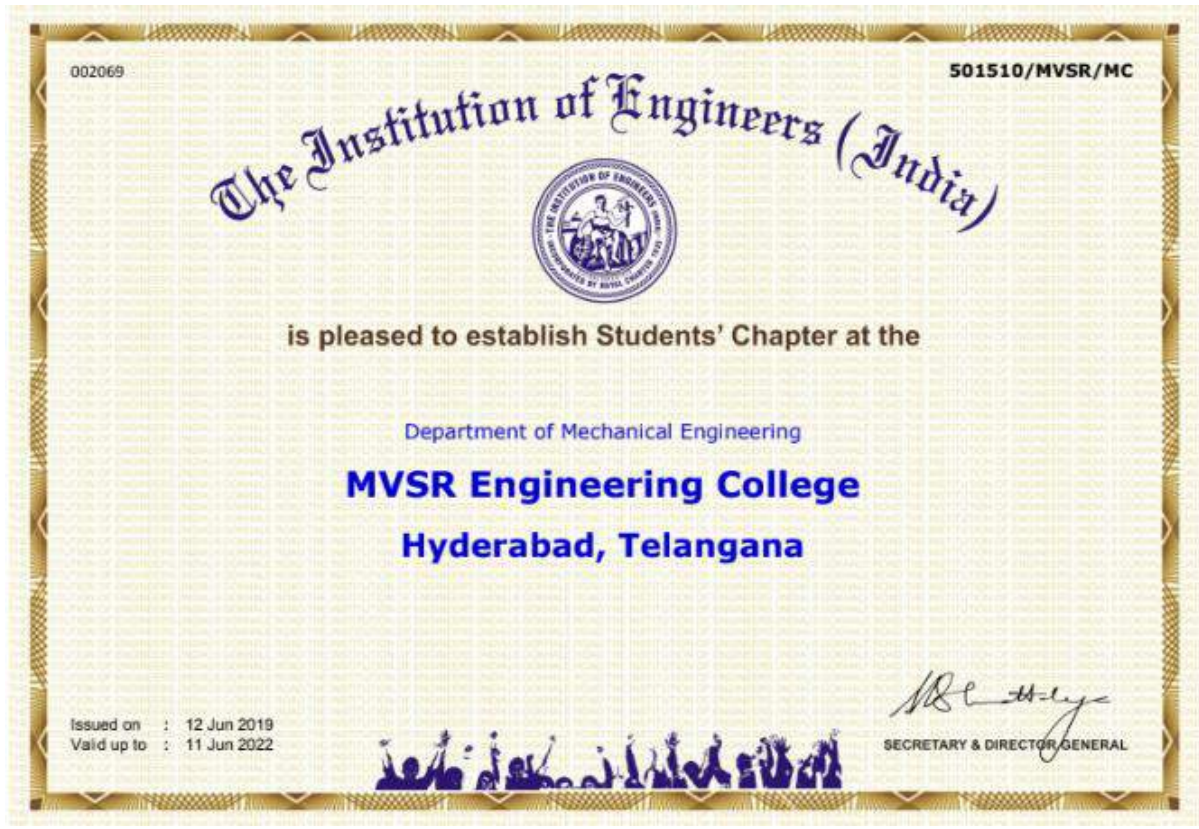
As a part of curriculum students of VI-Semester (M1 & M2) students have visited **Kamdhenu Mattresses and Furniture Pvt Ltd**, Hyderabad on 13th April 2019.



7. The Institution of Engineers (India) Students chapter

The Department of Mechanical Engineering, MVSR Engineering College along with The Institution of Engineers (India) established Students Chapter on 12th June 2019.

Faculty Coordinator: Mr. A. Syam Prasad, Assistant Professor.



Student National Level Competitions SAE BAJA 2019

TEAM RATCHET

The BAJA SAE Series is an event for the undergraduate engineering students, organized globally by the Society of Automotive Engineers. The BAJA SAE tasks the students to design, fabricate and validate a single seater four - wheeled off road vehicle to take part in series of events spread over a course of 4 days that test the vehicle for the sound engineering practices that have gone into it, the agility of the vehicle in terms of gradeability, speed, acceleration and manoeuvrability characteristics and finally its ability to endure that back breaking durability test.

This year Baja SAEINDIA is being organized at two different locations which are Pithampur, M.P and IIT Ropar, Punjab.120 teams for m-BAJA will be participating in Pithampur, Indore, M.P while 60 teams will be competing at IIT Ropar, Punjab.

Around 388 teams have registered for the event, **Team Ratchet** was placed in **10th position at IIT Ropar.**



TEAM RATCHET

TEAM RATCHET'S FIERA

WATERI VENKATA SUBBA RAO ENGINEERING COLLEGE HYDERABAD

Position	Event
10	Overall Rank
2	Sled Pull
4	Maneuverability
5	Sales Presentation
9	Design Evaluation
11	Endurance



Coordinators:

Mr. G. Srinivasa Sharma, Associate Professor
Mr. M. Ravi Kumar, Assistant Professor

GOKART 2019

TEAM INITIA 3.0

Electric Vehicles (EV) are a clean alternative to traditional vehicles, Since electric cars have zero tailpipe emissions, we can look forward to cleaner air when there are more electric cars on the road. So now automotive industry rapidly moving towards electric vehicles. In connection to this BFKCT comes up with E-BFKCT to bring out the students talent and enrich their knowledge in the emerging passionate filed of Automotive Engineering. BFKCT will provide a platform to the budding engineers to enhance their knowledge and technical skills into reality which is the need of the hour. The objective of the competition is to design and fabricate a E-Go-Kart. The challenge takes place, which consists of Static, Dynamic and Endurance Test.

The vehicle participated in Bharat Formula Karting (BFKCT 2019) held in Coimbatore, Tamilnadu from Feb 28th to Mar 2nd 2019 and stood in 35th position (overall) and **1st in Engineering Design**.



Coordinator: Mr. R. Harnath, Asst Prof.

Technical Staff: Mr. M. Venkata Ramana, Lab Assistant

SAE EFFI-CYCLE

Team TRIKUT 4.0

“EFFI-CYCLE” derived from Efficient-Cycle, the objective is to provide opportunity to the students to conceive, design and fabricate a three wheel configuration vehicle powered by human-electric hybrid power and capable of seating two passengers catering to the day to day mobility needs. The vehicle must be aerodynamic, engineered for performance & safety and ergonomically designed. The objective is to promote innovation and generate consciousness amongst the young engineers towards environment friendly mobility solution.

Technologies used:

- ANSYS
- CATIA
- Arc welding

Applications:

- It is an eco-friendly kart
- It is mostly used in high polluted areas for transportation

Courses used:

- Vehicle Dynamics.
- Electrical Circuits & Machines



Results:

SAE NIS Efficycle held at Lovely Professional University Punjab from 9th-13th October 2018.

The vehicle secured 14th position out of 69 Teams at SAE EFFICYCLE, and **2nd in Telangana region.**

Coordinator:

Mr. G. Srinivas Sharma, Assoc. Prof
Mr. M. Ravi Kumar, Asst. Prof

SAE India 13th National Student Convention.



Team of 42 students attended the 13th national Student convention at Bannari Amman Institute of Technology, Satyamangalam, Erode, Tamilnadu on 23rd and 24th March 2019. They participated in several events and won 10 first prizes, 10 second prizes and 2 third prizes and stood No. 1 with total 22 awards in the Southern Section, SAE INDIA.

