

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Within a few years of graduation, the candidate is expected to

**PEO 1.** Demonstrate the ability to analyse, formulate and solve/design engineering/real life problems based on his/her solid foundation in mathematics, science and engineering.

**PEO 2.** Showcase the ability to apply their knowledge and skills for a successful career in diverse domains viz., industry/technical, research and higher education/academia with creativity, commitment and social consciousness.

**PEO 3.** Exhibit professionalism, ethical attitude, communication skill, team work, multidisciplinary approach, professional development through continued education and an ability to relate engineering issues to broader social context

## PROGRAM OUTCOMES (POs)

**Engineering Graduates will be able to:**

**PO 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and mechanical engineering to the solution of complex engineering problems.

**PO 2. 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.

**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 modelling 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

## PROGRAM SPECIFIC OUTCOMES (PSOs)

**Engineering Graduates will be able to:**

**PSO 1.** Apply their Knowledge in the Domain of Engineering Mechanics, Thermal and Fluid Sciences to Solve Engineering Problems utilizing Advanced Technology.

**PSO 2.** Successfully Apply the Principles of Design, Analysis and Implementation of Mechanical Systems/Processes which have been learned as a part of the Curriculum.

**PSO 3.** Develop and Implement New Ideas on Product Design and Development with the help of Modern CAD/CAM Tools, while Ensuring Best Manufacturing Practices.

## NEWSMECHERS Team:

Mr. John Paul C D Assistant Professor (Faculty in charge)	Ajanas Saludheen S3ME A (Editorial)	A V L S P Srikar S3ME A (Editorial)	Anand Antony S3ME A (Design)	Jerin Abraham S3ME B (Editorial)	Rejohn Sebastian S3ME B (Editorial)
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# NEWSMECHERS

DEPARTMENT OF MECHANICAL ENGINEERING  
RAJAGIRI SCHOOL OF ENGINEERING AND TECHNOLOGY

ISSUE 5 | July 2016 – June 2017

## ABOUT THE DEPARTMENT

Established in the year 2012 with an initial intake of 60 students in 2011, the Department of Mechanical Engineering has progressed by leaps and bounds in all respects in a short span of time. Presently the department admits 120 students per year to its undergraduate study programme. The department has attracted highly qualified and experienced personnel from various streams of Mechanical Engineering as its faculty.

## VISION

To evolve into a centre of excellence by imparting professional education in mechanical engineering with a unique academic and research ambience that fosters innovation, creativity and excellence.

## MISSION

- To have state-of-the-art infrastructure facilities.
- To have highly qualified and experienced faculty from academics, research organizations and industry.
- To develop students as socially committed professionals with sound engineering knowledge, creative minds, leadership qualities and practical skills.

## MESSAGE FROM HOD

On behalf of the staff and students of the Mechanical Engineering Department, a very warm welcome to the Fifth edition of NEWSMECHERS. We are very much grateful to the Management and Principal for their continuous encouragement, inspiration, and support extended for the release of this newsletter. A glimpse of various activities, including programmes organised, newly added facilities, students and faculty achievements of the department in the academic year 2016 -17 is brought out in this newsletter. I congratulate all members of the editorial board for their sincere effort to release this newsletter.

## EDITORIAL BOARD

We are extremely happy to release the fifth edition of the Mechanical Engineering Department Newsletter NEWSMECHERS. This will act as a communication channel among the faculty, students and parents in Mechanical Engineering Department. The Newsletter features the faculty interaction with outside world, faculty and student achievements, training programs, events organised by the department, newly joined faculty and glimpses of arts and sports events held in the year 2016-17.



**Dr. Thankachan T. Pullan**  
Associate Professor  
Department of  
Mechanical Engineering



SCAN QR CODE TO  
DOWNLOAD MECHAZINE 2017



2013-17 Batch Graduation Day

## STUDENT ACHIEVEMENTS

Mathew Paul of S5 ME Beta got the first prize in Forensics and Joe Ebby got the first prize in Technocrat at PALMARIUS, National Level Technical Fest organized by Sahrdaya College of Engineering & Technology, 5<sup>th</sup> to 6<sup>th</sup> August 2016.

Christo Joseph, Bisto Baby, FahimSalim and karthik N. Nair of S5 ME participated in Virtual Round of “Hybrid Vehicle Challenge – HVC 2016-17” organised by Imperial Society of Innovative Engineers (ISIE) from 13<sup>th</sup> to 14<sup>th</sup> August 2016.

Athul Ram of S5 ME did a pilot project on compiling an Optical Character Recognition Database, and an actual accuracy of 95.79% was obtained at this stage, removal of bugs found would further increase this to 97.47% on 31st August 2016.

Gautham V. G. of S6 ME Alpha won First Prize in DRONE PRIX Conducted by Electrical department, School of Engineering, CUSAT On 4<sup>th</sup> February 2017.

Athul Ram of S6 ME Registered a incorporated company “VERDATUMA.I. PRIVATE LIMITED” in his name in the month of March

Ashin Cherian Joseph of S6 ME Alpha and Mathew Paul of S6 ME visited Sojo University Japan as part of Sakura Science Student Exchange Programme.

Jais George, Adil Mohamed Aduvanni and AjanasSaludheen of S2 ME Alpha won First Prize in FINE ARTS MARATHON in the Ragam 17 at NIT Calicut on 24th to 26th March 2017.

Jeffin Francis of S4 ME Alpha won Second Prize in Acoustics (Guitar) in the Ragam 17 at NIT Calicut on 24th to 26th March 2017.

Bisto Baby and Joe Ebby of S6 ME won Third prize in Debate (Malayalam) at NIT Calicut on 24th to 26th March 2017.

## NEWLY JOINED FACULTY

Mr. Harikrishnan C, after completing M.Tech from National Institute of Technology, Calicut, joined the department on 1st July 2016.

Dr. Sreekumar V.M, after completing Ph.D in Metallurgical and materials Engineering from IIT Kharagpur, joined the department on 29th November 2016.

## FACULTY PUBLICATIONS

Jithin P.N., AfsyMakkar, RakhiAjayakumar, Kiran Jacob “Prediction of Hydrodynamic and Structural Behavior of V- Fin Depressors” International Journal of Scientific & Engineering Research, Volume 8, Issue 5, May-2017, pp 926-931

HaunaAnsar, Ajith Kumar Arumugham-Achari, Jobin Johnson “Parametric Study on the Effect of a Domestic WindCatcher-Solar Chimney System for Arid Regions” International Research Journal of Advanced Engineering and Science, Volume 2, Issue 2, pp. 316-322, 2017



AUTODESK Training Program for students in August 2016.



Sakura Science Student Exchange Programme



Mechanical Association Inauguration in August 2016.



Exhibition in the campus by Mercedes Benz on road safety. in August 2016



Jochen Feese Head of Accident Research Mercedes Benz Cars interviewed by ME students



Inauguration of ASHRAE student chapter

## NEWS

MoU between Rajagiri School of Engineering & Technology (RSET) & HMT Machine Tools Ltd, Kalamassery (A Government of India Public Sector Under Taking) was signed on 25<sup>th</sup> October 2016

Visit of Delegation from Aalen University, Germany during 5<sup>th</sup> to 9<sup>th</sup> December 2016.

ASHRAE's first student branch in Kerala was inaugurated at Rajagiri School of Engineering and Technology Kakkannad, by Dr. M. P Maiya of Indian Institute of Technology, Madras in January 2017.

International Workshop on “Advances in Solar Thermal Technologies (ASTT2k17)” was held on 22nd February 2017.

Launch program of 4th edition of department technical magazine named “Mechazine 2017” on 5<sup>th</sup> April 2017.

The American Society of Mechanical Engineers (ASME) established A Student Section at Rajagiri School of Engineering & Technology in April 2017.

## EVENTS ORGANISED

A one day workshop on CATIA V6- LEVEL I was organized by Mr. Jithin P.N on 2<sup>nd</sup> July 2016 at CAD/CAM Lab of ME Department.

FACULTY INDUCTION PROGRAMME was conducted for all the new faculties on 4<sup>th</sup>, 5<sup>th</sup>, 8<sup>th</sup> July 2016.

A one day workshop on CATIA V6 - LEVEL II was organized by Mr. Jithin P.N on 12<sup>th</sup> July 2016 at CAD/CAM Lab of ME Department.

A two day workshop on CATIA V6 - LEVEL III was organized by Mr. Jithin P.N on 16<sup>th</sup> and 18<sup>th</sup> July 2016 at CAD/CAM Lab of ME Department.

Training in Autodesk Fusion 360 was organized by Mr. Jithin P for S3 ME students on 27<sup>th</sup> August 2016.

A lecture on SAE Activities was delivered by Dr. E. Rajasekar, Secretary SAEISS, Professor, IRTT, Erode on 27<sup>th</sup> August 2016.

A lecture on Automotive Sensors and their application was delivered by Dr. E. Rajasekar, Secretary SAEISS, Professor, IRTT, Erode on 27<sup>th</sup> August 2016.

A lecture on Automotive Engines- Modern Perspectives through Technology was delivered by Mr. S. Krishnan, Vice President, Ashok Leyland on 27<sup>th</sup> August 2016.

Talk by Mr. Mahesh Subramanian, Vice Principal, Anglo Eastern Maritime Academy on “An insight into internal combustion diesel engine” on 5<sup>th</sup> August 2016.

Mechanical Engineering Department Students Association – Real Mechanica, of RSET in association with Dalvik apps and SkillRex Technology conducted a two day workshop on Robotics (Hexapod with TV remote controlled). There was also a talk by Mr. Sampuran Singh about the workshop for S5 and S7 ME students at Multimedia Hall on 3<sup>rd</sup> and 4<sup>th</sup> September 2016.

As part of Student Enrichment Programme, Mechanical Engineering Department conducted a half day training programme on Autodesk fusion 360 software for students of S5 ME on 3<sup>rd</sup> September 2016.

One day workshop on Robotics (Quadruped) on 15<sup>th</sup> October 2016 for the S3 and S5 ME students.

A one day International workshop was conducted on “Green and Renewable Energy Applications” on 2nd November 2016.

Two day workshop on CFD tool- ANSYS FLUENT by Dr. Ajith Kumar A. and Mr. Jithin P. N. on 21<sup>st</sup> and 22<sup>nd</sup> December 2016.

Two day workshop on CNC Programming by Mr. Vineeth Krishna P., Mr. Mathew Baby, Mr. Jeffin Johnson for Faculty and Technical staff was organized on 4<sup>th</sup> to 5<sup>th</sup> January 2017.

A two-day workshop on Autodesk Fusion 360 software was organized for S6 students on 25<sup>th</sup> and 27<sup>th</sup> January 2017.

Talk on “Career opportunities as CNC Engineer, CAD/ CAM Engineer, Mould and die designers” was held for S8 Mechanical students on 10<sup>th</sup> February 2017.

Talk on “Employability in Mechanical engineering” for S6 and S8 students on 17<sup>th</sup> February 2017.

Talk on 'Opportunities in oil field exploration & production' for S8 ME students on 1<sup>st</sup> March 2017.