

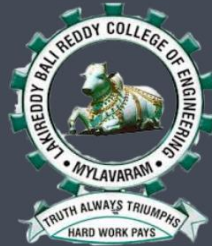


Edition I, Volume I, 2017-18

Mechanical Engineering E-Magazine (LBRCE)



(TIER-I)



MECH PULSE

(JUL-SEP 2017)

DEPARTMENT OF MECHANICAL ENGINEERING
LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(Autonomous)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME) under Tier - I
Approved by AICTE and Permanently Affiliated to JNTUK, Kakinada

Mechanical Engineering E-Magazine (LBRCE)



MESSAGE FROM HEAD OF THE DEPARTMENT

I am very happy to inform you that the department of mechanical engineering is bringing **MECH PULSE an e-magazine** its 1st edition and 1st volume. The department of mechanical engineering is Accredited by **National Board of Accreditation (NBA) under Tier-I** and is started in the year 1998 with an intake of 60 students. At present the department is offering B.Tech Mechanical Engineering with an intake of 180 students and M.Tech – Thermal Engineering with an intake of 18 students. The department has thirteen state of art laboratories worth of 2.8 crores, with advanced computing facilities, software and research equipment. Advanced **Research Laboratories** in the area of **Cognitive Science, Material Testing, Tribology and Thermal Engineering** are available. Sophisticated **ANSYS Skill Development Centre** with 110 users of ANSYS 18.1 and **Dassault 3D Experience centre** (in association with APSSDC) is available. The department has 36 faculty members with 9 Doctoral degrees. Nine faculties are actively pursuing for their Ph.D in various universities and nine research scholars are working for their doctoral under the department faculty. The department faculty constantly upgrade their knowledge in the area of their domain by attending various Faculty Development Programs, workshops, seminars etc. The faculty are actively engaged in their research work and are active in publishing papers in journals and conferences.

VISION OF THE DEPARTMENT

- To impart knowledge in Mechanical Engineering with global perspectives for the graduates to serve the society and industry.

MISSION OF THE DEPARTMENT

- To enable the graduates technically sound with the state- of- the –art curriculum and innovative teaching methods
- To provide training programs that bridge the gap between academia and industry
- To create a conducive environment and facilities to improve overall personality development of the graduates
- To make the graduates aware of role and responsibilities of an engineer in society.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO1: To build a professional career and pursue higher studies with sound knowledge in Mathematics, Science and Mechanical Engineering.

PEO2: To inculcate strong ethical values and leadership qualities for graduates to become successful in multidisciplinary activities.

PEO3: To develop inquisitiveness towards good communication and lifelong learning.



PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

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

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.

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.

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.

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.

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.

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.

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

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

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.



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.

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):

PSO1: To apply the principles of thermal sciences to design and develop various thermal systems.

PSO2: To apply the principles of manufacturing technology, scientific management towards improvement of quality and optimization of engineering systems in the design, analysis and manufacturability of products.

PSO3: To apply the basic principles of mechanical engineering design for evaluation of performance of various systems relating to transmission of motion and power, conservation of energy and other process equipment.

ONGOING RESEARCH PROJECTS

S.No.	Name of the Faculty	Title of the Project	Funding Agency	Amount Sanctioned	Sanctioned Year
1.	Dr.K.Appa Rao	MODROBS for Thermal Engineering Laboratory	AICTE	12,50,000	2016
2.	Dr.K.Appa Rao	Experimental Investigation on Homogeneous Charge Compression Ignition Engine	UGC	1,55,000	2018

PUBLICATIONS BY FACULTY

Journal Publications

1. Dr. K. Appa Rao, B. Rajasekhar, “Experimental Investigation ,on Diesel Engineusing Linseed Oil And Sunflower +Coconut Oil Methyl Esters”, IJRSET, ISSN:2394-739X, Volume 4, Issue 7, Pages: 7-14, July 2017(International)



2. Dr. P. Vijaya Kumar, B. Sree Chaitanya, “Heat Transfer Analysis by Simulation on corrugated Plate Heat Exchanger” IJRSET, ISSN: 2394-739X, Volume 4, Issue 7, Pages: 29-36, July 2017.
3. Dr.P.Vijaykumar, D.Kameswararao, “CFD Analysis of Mixer Ejector”, IJSART, ISSN [ONLINE]: 2395-1052 , Volume 3 ,Issue 7, Pages: 709-712,July 2017.
4. Dr.P.Ravindra Kumar, Tumma.Lakshman Kumar, “Performance And Emission Characterstics of Ci Engine Fuelled With Mango Seed And Jatropha Biodiesels”, IJSART , ISSN [ONLINE]: 2395-1052,Volume 3, Issue 7 Pages: 779-783,July 2017.
5. Dr. K. Dilip Kumar, M. Ravikiran, “ Performance Enhancement of Vapour Compression Refrigeration System by Using Solar Thermoelectric Sub-Cooler”, Journal of Refrigeration, Air Conditioning, Heating and Ventilation, ISSN: 2394-1952 (Online),Volume 4, Issue 2, Pages:27-37, July -2017.
6. Dr. K. Dilip Kumar, SK.Nayeem, “Performance Analysis of Vortex Tube Refrigerator”, IJRSET, , ISSN:2394-739X, Volume 4, Issue 7, Pages: 19-28, July 2017.
7. V.Dhana Raju, K.Yamini, P.S.Kishore, “Experimental Investigation on Diesel Engine Using Dmc As A Fuel Additive In Tamarind Seed oil Methyl Ester”, IRJET, p-ISSN: 2395-0072, Volume: 04 Issue: 07, Pages:1373-79, July -2017.
8. V.Dhana Raju, G.V.VN. Sivanjaneyulu, “Experimental Studies on Diesel Engine Fulled With Cashew Nut Shell Oil As An Alternate Fuel”, IJESRT, ISSN: 2277-9655, Pages: 433-443, 6(7):July, 2017.
9. Mr.K.Lakshmi Prasad, A.V.V.R Prasad Y, J.N.V.M.Vamsikrishna, “Exprimental Investigation of The Copper oscilating Heat Pipe Using Nanofluid”, IJSART, ISSN [ONLINE]: 2395-1052, Volume 3, Issue 7, Pages:713-716, July 2017.
10. K.Lakshmi prasad, S.Ashok, “Characteristic Comparison of the Start-Up Performance of Various Working Fluids in a Heat pipe at Different Lengths AT Different Angles”, IJSART, ISSN [ONLINE]: 2395-1052 ,Volume 3 Issue 7, Pages: 844-848,July 2017.
11. Dr.K.Dilip Kumar ,V.V.S.Varaprasad, “Performance Analysis Of VCR system By Applying Magnetic Field To Liquid Line Using R134a Refrigerant”, IJSART , ISSN [ONLINE]: 2395-1052, Volume 3, Issue 8, August 2017.



12. Dr.P.Ravindra Kumar, C. Dr.P.Vijay Kumar, S.Venkateswara Rao , “Performance of Air Power Engine Powered with Compressed Air and Engine Exhaust Gas” , IJIRT , ISSN: 2349-6002 , Volume 4, Issue 3, page:20-28,August 2017.

EVENTS ORGANIZED BY DEPARTMENT

1. The Dept. of Mechanical Engineering, Certification program on “**Finite Element Analysis Using ANSYS**” during 24th-28th July by Prashanth Patil attended by IV year students. Mr. A.Nageswara Rao coordinated the event.
2. The Dept. of Mechanical Engineering organized a FDP program on “**Computational Fluid Dynamics Using ANSYS**” during 7th to 11th Aug, 2017 by Mr.Ganesh Chakravarthi & Harika Vunikili attended by 67 faculty members from various colleges. Mr. A.Nageswara Rao coordinated the event.

GUESTS LECTURES

1. The Dept. of Mechanical Engineering, organized a Guest Lecture program on “**MEMS, Machining & Manufacturing**” during 06th Sept 2017 by Prof. Pradeep Dixit attended by III year students. Dr.Murahari Kolli coordinated the event.
2. The Dept. of Mechanical Engineering, organized a Guest Lecture program on “**Soft Skills in Selection Process**” during 08th Sept, 2017 by K.Sri Venkata Ramana attended by IV year students. Mr.Ch.Siva Sanakara Babu coordinated the event.
3. The Dept. of Mechanical Engineering, in association with ISHRAE conducted a Guest Lecture program on “**Chilled water systems and Evaluation of compressor**” during 8th Sept, 2017 Mr.R.V.S.S Prasad & Mr.A.Pulla Rao attended by II,III & IV year students. Mr A.Naresh Kumar coordinated the event.

FDP's/STTP's/STC's/WORKSHOP's ATTENDED BY FACULTY

1. Mr. K.Somasekhar, Dept.of Mechanical Engineering attended a five days STTP on “**Transport Process**” hosted by IISc, Bangalore during 24th -28th July, 2017.
2. Mr. A.Nageswara Rao, Dept.of Mechanical Engineering attended a six days FDP on “**3D Printing Technology in Engineering Education**” hosted by NITW during 10th - 15th July, 2017.



3. Mr. K.N.D.Malleswara Rao Dept.of Mechanical Engineering attended a two days workshop on “**Finite Element Analysis of Structures Feast Software**” hosted by PVPSIT, during 3rd - 4th Aug,2017.
4. Mr. K.N.D.Malleswara Rao Dept.of Mechanical Engineering attended a two days workshop on “**Modeling& Analysis of Composite Materials Using Ansys**” hosted by MIC College of Tech, Kanchikacherla, during 28th -29th Aug,2017.
5. Mr. J.Subba Reddy, Dept .of Mechanical Engineering attended a one day workshop on “**Electrical Discharge Machining**” hosted by P V P SIT, during 23rd Sept, 2017.
6. Mr. Peddireddi Tharun Sai, Dept .of Mechanical Engineering attended a three day workshop on “**Improving the Teaching Skill in Engineering Drawing**” hosted by JNTU Kakinada, during 23rd to 25th Sept, 2017.
7. Mr. J.V.Somi Reddy, Dept .of Mechanical Engineering attended a three day workshop on “**Improving the Teaching Skill in Engineering Drawing**” hosted by JNTU Kakinada, during 23rd to 25th Sept, 2017.

BEST FACULTY AWARDS

- The following are the list of faculty got best faculty award for the academic year 2016-17.

S.No.	Name of the faculty	Designation
1.	Dr.K.Appa Rao	Professor & Principal
2.	Dr.S.Pichi Reddy	Professor & HoD
3.	Dr.P.V.Chadra Sekar Rao	Professor & CoE

STUDENT ACTIVITIES

- a) **Students participated in Technical Symposia**



S.No	Name of the Symposium	Name of the Event	No.of students participated	University Level / State level / National Level	Date & Duration
1	Lakshya2k17	Srujana- PPT	10	National Level	15 th Sept,2017
2	Lakshya2k17	Pragna-Poster	4	National Level	15 th Sept,2017
3	Lakshya2k17	Nipuna-Project	10	National Level	15 th Sept,2017
4	Lakshya2k17	Medha-Quiz	10	National Level	15 th Sept,2017
5	Lakshya2k17	CentralEvent (Yantrora)	4	National Level	15 th Sept,2017
6	Lakshya2k17	Central Event (Engine-X)	34	National Level	15 th Sept,2017
7	Futura2k17	Project presentation	1	National Level	07-09 th Sept , 2017
8	Medha2k17	Paper Presentation	1	National Level	14 th -15 th Sept, 2017

b) Students got prizes

- Mr. M. Jayamani Kumar, department of Mechanical Engineering, III year, secured second position in **SRUJANA(PAPER PRESENTATION)** contest, organized by LBRCE during 15th Sept,2017.
- Mr. V. Rama Krishna department of Mechanical Engineering, III year, secured second position in **SRUJANA (PAPER PRESENTATION)** Event, organized by LBRCE during 15th Sept, 2017.
- Mr. D. Sai Naresh department of Mechanical Engineering, III year, secured first position in **NIPUNA-PROJECT EXPO** contest, organized by LBRCE during 15th Sept, 2017.
- Mrs. D. GEETHIKA department of Mechanical Engineering, III year, secured first position in **NIPUNA-PROJECT EXPO** contest, organized by LBRCE during 15th Sept, 2017.



- Mrs. G. MADHAVI REDDY department of Mechanical Engineering, IV year, secured first position in **MEDHA-QUIZ** contest, organized by LBRCE during 15th Sept, 2017.
- Mr. K. PRANEETH YADAV department of Mechanical Engineering, IV year, secured first position in **MEDHA-QUIZ** contest, organized by LBRCE during 15th Sept, 2017.
- Mr. K. GOVINDAN department of Mechanical Engineering, III year, secured first position in **ENGINE-X** contest, organized by LBRCE during 15th Sept, 2017.
- Mr. K. HANUMANTH SAI department of Mechanical Engineering, III year, secured first position in **ENGINE-X** contest, organized by LBRCE during 15th Sept, 2017.
- Mr. K. SAI KUMAR department of Mechanical Engineering, II year, secured Second position in **ENGINE-X** contest, organized by LBRCE during 15th Sept, 2017.
- Mr. M. RAJA KRISHNA MOHAN department of Mechanical Engineering, II year, secured Second position in **ENGINE-X** contest, organized by LBRCE during 15th Sept, 2017.

c) Students participated in outside workshops/conferences etc.:

S.No	Regd.No of Student	Name of the student	Name of the workshop	Venue and Date
1	15761A0315	A.Ayyappa	Electrical Discharge Machining	PVPSIT, 23-09-2017
2	15761A0321	M.Mallikarjuna Rao	Electrical Discharge Machining	PVPSIT, 23-09-2017

d) Industrial Visit:

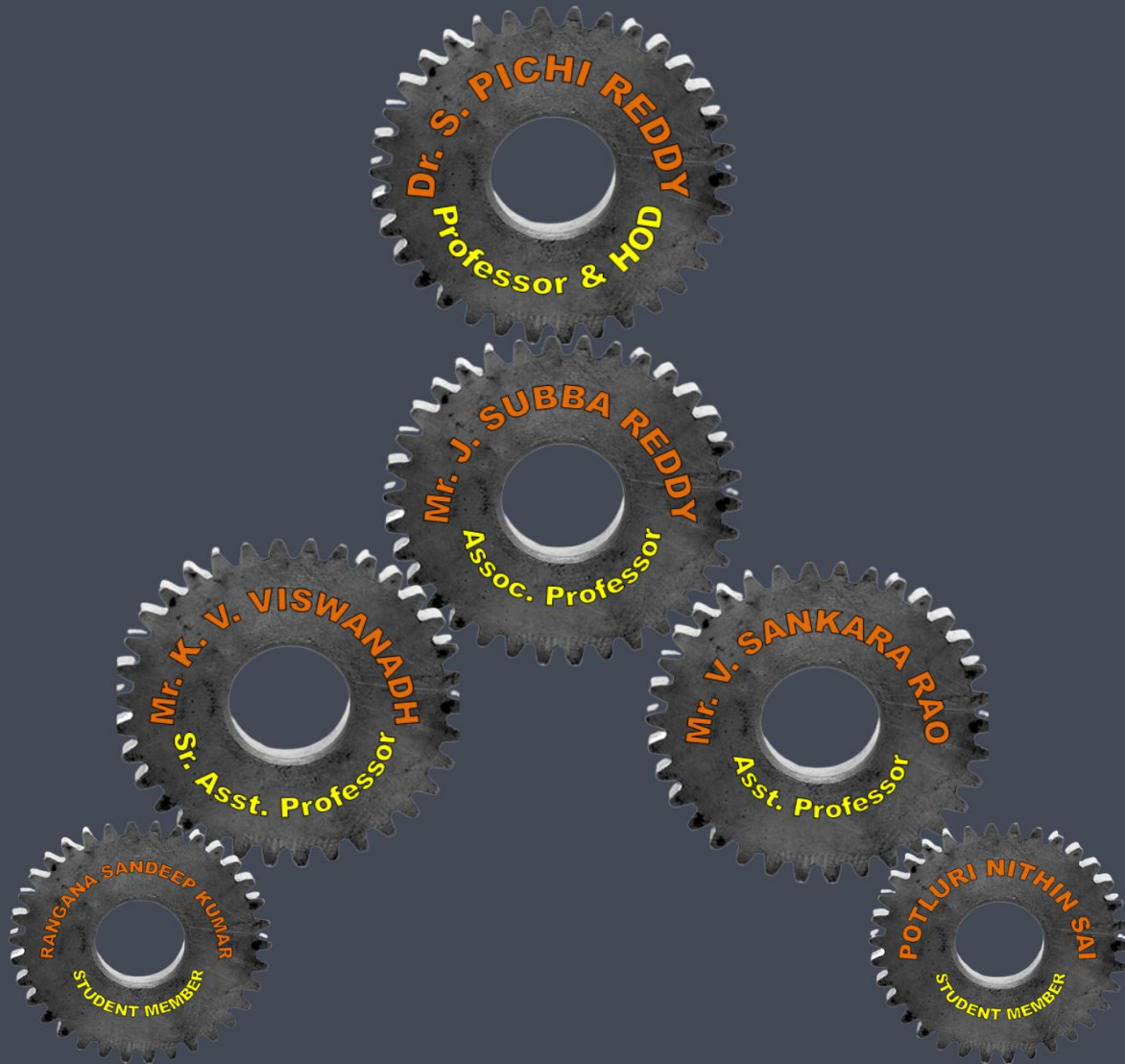
- The Dept. of Mechanical Engineering students of III year are visited the Dr.Narla Tata Rao Thermal Power Station – APGENCO on 30th Aug, 2017.

ACKNOWLEDGEMENTS

The department expresses sincere thanks to all faculty, technical staff and students for contribution towards the technical magazine- mech pulse.



Editorial Board



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