

Department of Mechanical Engineering *Brochure 2017-18*



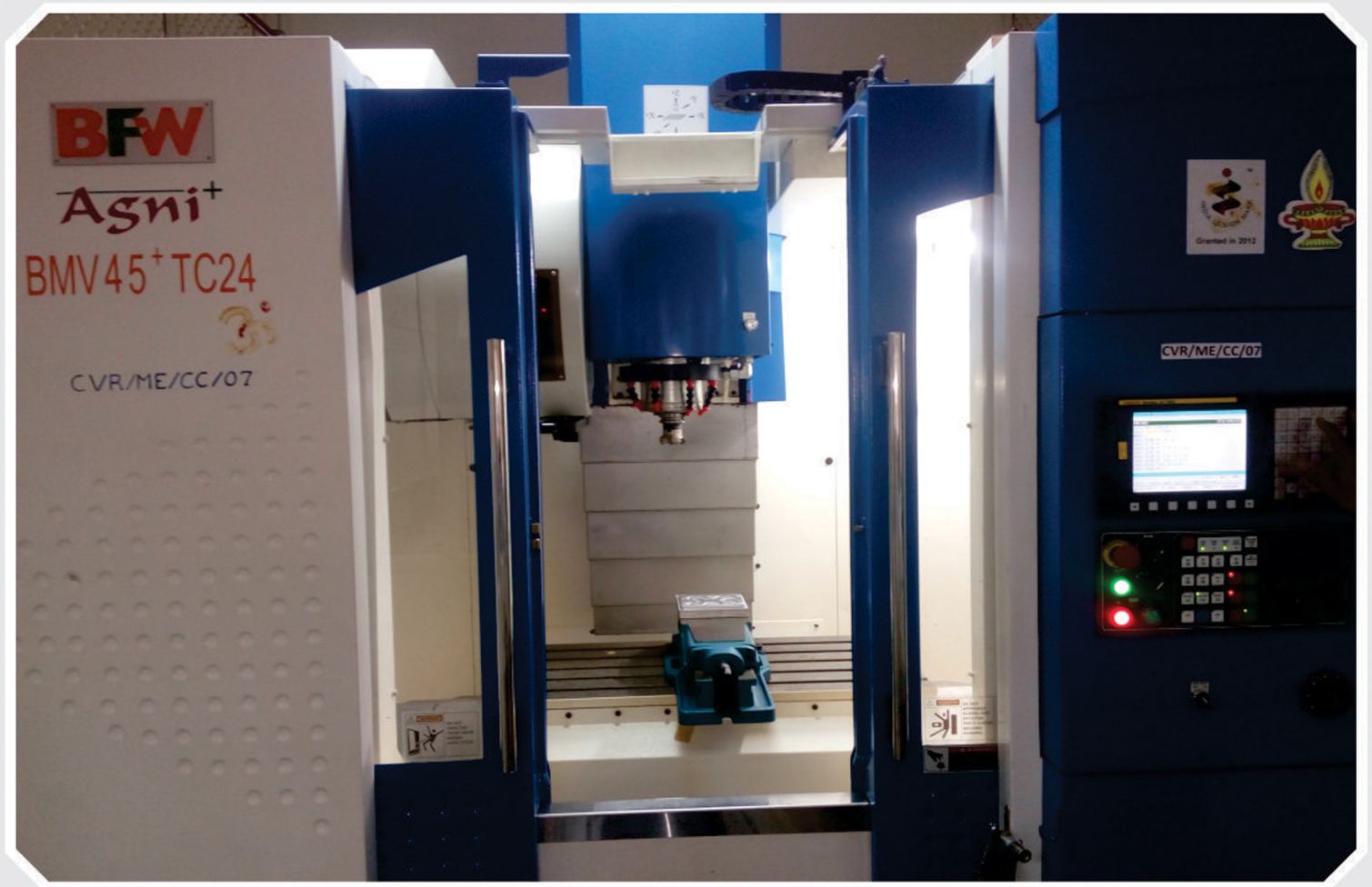
CVR COLLEGE OF ENGINEERING

(An Autonomous Institution)

Approved by AICTE, Affiliated to JNTUH, Accredited by NBA.

Vastunagar, Mangalpalli (V), Ibrahimpatanam (M), R.R.Dist, Pin-501 510.





CNC VERTICAL MACHINING CENTRE
Model : BMV 45TC24 Year : 2015 Make : BFW

MECHANICAL ENGINEERING DEPARTMENT

Vision: To emerge as a centre to develop excellent mechanical engineering graduates.

Mission:

- To produce best quality Mechanical Engineers through quality education.
- To have collaboration with top institutions & industry.
- To strengthen the research and consultancy activities in the department.
- To strengthen teaching – learning and motivate students for self-initiative and achievements.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Program Educational Objectives are broad statements for the Mechanical Engineering that describe the Career and Professional accomplishments that the program is preparing graduates to achieve.

PEO1. Employability and Higher Studies:

To enhance the potentiality of the graduates for higher education and employability.

PEO2. Professionalism:

The graduates will be imbued with human ethics and professional competence to meet the needs of global industry.

PEO3. Interdisciplinary Skills:

To build interdisciplinary skills in the graduates to be able to perform successfully in various domains.

PEO4. Life Long Learning:

To motivate graduates with a desire to keep abreast of emerging technologies.

ABOUT DEPARTMENT:

- The Department was started in the Academic year 2010-11 with a student intake of 60 (CVR College of Engineering was started in 2001-02). The current intake for B.Tech. Degree course is 240. The department has well-equipped workshops and laboratories which have been established at a cost of around Rs.3.5 Crores
- The department has faculty strength of 56 members during 2017-18, with six Professors, fifteen Associate Professors and thirty five Assistant Professors.
- All the teaching staff of the department are post-graduates with first class in UG & PG degrees.

Mile Stones:

2011	: Intake of 60 students under regular admission. Dr. T. A. Janardhan Reddy, former Prof & Head of Mechanical Engineering, Osmania University has taken over as head of the department.
2013	: Entrepreneurship Development Cell was started – AICTE Funded.
2013	: Purchase of CNC turning center at a cost of Rs 20 Lakhs (Production Machine) – Made by ACE Designers, Bengaluru.
2013 - 14	: Intake admission increased from 60 to 120 students
2014 – 15	: First batch of Mechanical Engineering Students graduated.
2014 - 15	: Intake admission increased from 120 to 240 students
2015 - 16	: Purchase of CNC machining center at a cost of Rs. 35 Lakhs (Production Machine) – BFW Make, Bengaluru.

INTAKE YEAR WISE AND STUDENTS STRENGTH

YEAR	INTAKE
2017-18	240
2016-17	240
2015-16	240
2014-15	240
2013-14	120
2012-13	60
2011-12	60

TEACHING STAFF, QUALIFICATIONS, EXPERIENCE WITH SPECIALIZATIONS

	<p>Dr.M.Venkata Ramana Professor & Head of the Department B.Tech (Mech), Kakatiya University M.Tech (Industrial Metallurgy) NIT Warangal PhD (Mechanical) Osmania University Research Areas: Metal casting, Composite materials, Optimization</p> <p>https://scholar.google.co.in/citations?user=x_VSoOkAAAAJ&hl=en</p>
	<p>Dr. T. A. Janardhan Reddy Professor & I/C EDC B.E.(Mech.), Osmania University M.Tech. (Production),NIT-Warangal Ph.D. (IIT Madras) Research Areas: CNC Machine Tools, Performance of Cutting Tools, RPT, Metal Drawing</p> <p>https://scholar.google.co.in/citations?hl=en&user=8tfsuHIAAAAJ</p>
	<p>Dr. G.Venkatesha Prasanna Professor B.E. (Mechanical Engg.), Gulbarga University M.Tech. (Production Engg Systems Tech), Mysore University Ph.D. (Hybrid Blended Bio Composites), Andhra University, Research Areas: Hybrid composites, Welding, Machining</p> <p>https://scholar.google.com/citations?hl=en&user=__W5oX0AAAAJ</p>
	<p>Dr. P. Uma Maheshwera Reddy Professor B.Tech (Mechanical Engg.), SKD University, Andhra Pradesh M.Tech (Maintenance Engg.), VTU Karnataka Ph.D. (Design & Manufacturing), BITS Pilani Research Areas: FEM, Tribology, Surface Engineering, Advanced Machining, Design of Experiments</p> <p>https://scholar.google.co.in/citations?user=pj7xLO8AAAAJ&hl=en</p>

	<p>Dr. Shashidhar K. Kudari Professor & Associate Dean Faculty Affairs B.E (Mech), Karnataka University M.Tech. (Machine Design), IIT Kharagpur Ph.D (Non Linear Fracture Mechanics), IIT Kharagpur Research Areas: Fatigue and Fracture analysis of Engineering Materials, Constraint issues in fracture, Stress analysis</p> <p>https://scholar.google.co.in/citations?user=4HQHFX8AAAAJ&hl=en</p>
	<p>Dr. M Sowjanya Professor B.Tech (Mechanical), Nagarjuna University M.Tech (Thermal Engg.) JNTU Hyderabad PhD (Mechanical Engg.), JNTU Hyderabad Research Areas: Melt Spinning , Heat Transfer , Thermal (Fluid) flows, Numerical Simulations using CFD, Non-Conventional cooling/heating</p> <p>https://scholar.google.co.in/citations?user=TR7Qk6AAAAAJ&hl=en</p>
	<p>Dr. Kandi Kishore Kumar Associate Professor B.Tech. (Mechanical), Kakatiya University M.Tech. (Design Engg.), Kakatiya University Ph.D. (Design & Manufacturing), NIT Warangal Research Areas: Design and Manufacturing, Ceramic Composites, Materials Engineering</p> <p>https://scholar.google.co.in/citations?user=6iT1GSMAAAAJ&hl=en</p>
	<p>Dr. D. Srinivas Rao Associate Professor BE.(Mechanical Engineering), Bangalore University M.Tech (Energy Systems Engineering), Visvesvara Technical University Ph.D (Materials Engineering), University of Hyderabad Research Areas: Nano materials, Nano fluids, I.C. Engines, Alternate Fuels, Magneto Caloric Engines</p> <p>https://scholar.google.co.in/citations?user=U2HxbKgAAAAJ&hl=en</p>
	<p>Dr. T G Arul Associate Professor B.E (Mechanical Engg.), Annamalai University M.Tech (Energy System), Vellore Institute of Technology PhD, Anna University Research Areas: Lean Manufacturing, Energy System</p> <p>https://scholar.google.co.in/citations?hl=en&user=BxdVwLkAAAAJ</p>

	<p>Dr. B K Patle Associate Professor B.E (Mechanical Engineering), RTM University, Nagpur M.E (CAD/CAM), RMIT, Amaravati PhD (Mobile Robotics), NIT Rourkela Research Areas: Robotics, CAD,CAM, FEM, Vibration, Composite Material https://scholar.google.co.in/citations?hl=en&user=4YANv3sAAAAJ</p>
	<p>Dr. Manjeet Kharub Assistant Professor B .Tech (Mechanical), Punjab Technical University M.E. (P&IE), Thapar University Patiala Ph.D (Mechanical), NIT, Hamirpur Research Areas: Quality Engineering, Competitive strategy, Technology Management, Small Business, Lean Manufacturing Six-Sigma, Statistical analysis. Lean manufacturing https://scholar.google.co.in/citations?user=Fid0etQAAAAJ&hl=en</p>
	<p>Mr. Appala Naidu Associate Professor B Tech (Mechanical), Bangalore University M Tech (Automation & Robotics) Osmania University Research Areas: Design https://scholar.google.co.in/citations?user=ljHddb8AAAAJ&hl=en</p>
	<p>Mr. V Rajender Kumar Associate Professor B.Tech (Mechanical), Osmania University M.Tech.(Thermal Engg), JNTUH Ph.D (Pursuing), JNTUH Research Areas: Thermal Engineering https://scholar.google.com/citations?hl=en&user=q-63ix4AAAAJ</p>
	<p>Mr. P V Ramana Associate Professor B.Tech (ME), JNTUA M.Tech (TE), JNTUH PhD (Pursuing), JNTUH Research Areas: Internal Combustion Engines https://scholar.google.com/citations?view_op=list_works&hl=en&user=-V7smUYAAAAJ</p>

	<p>Mr. G Mrudula Associate Professor B.Tech (Mechanical Engg.), Osmania University M.E(Production Engg.), Osmania University Ph.D (Pursuing),Osmania University Research Areas: Design and manufacturing https://scholar.google.co.in/citations?hl=en&user=Cdxlw08AAAAJ</p>
	<p>M. Gayatri Vineela Associate Professor B.Tech(Mechanical Engg.),JNTUH M.E(Production Engg.),Osmania University Ph.D (Pursuing),BITS Hyderabad Research Areas: Materials and manufacturing https://scholar.google.co.in/citations?hl=en&user=91Yg4nMAAAAJ</p>
	<p>Mr. M V B Krishnam Raju Associate professor D.Met-E, AMIIM (Metallurgy) M.Tech (Industrial Metallurgy), JNTUCEH PhD (Pursuing), IIT-B Research Areas : Metallurgy, Manufacturing & Metal Forming</p>
	<p>Mr. M Srinivas Reddy Associate Professor B.Tech (Mechanical),JNTUH M.Tech (Thermal Engg.),JNTUH Research Areas: Refrigeration and Air Conditioning, Heat Transfer https://scholar.google.com/citations?hl=en&user=VE0JCmAAAAAJ</p>
	<p>Mr. P Lava Kumar Associate Professor B.Tech (Mechanical), Osmania University M.Tech (Materials Engineering), NIT Suratkal Research Areas: Metallurgy https://scholar.google.co.in/citations?user=fNs-YVAAAAAJ&hl=en</p>
	<p>Mr. Neeraj Kumar Jha Associate Professor B.E (Mechanical), Maharshi Dayanand University M.E (Tool Design), Osmania University Research Areas: Design and Manufacturing https://scholar.google.co.in/citations?hl=en&user=mINC3jcAAAAAJ</p>

	<p>Mr. G Naveen Kumar Associate Professor B Tech (Mechanical), JNTUH M.Tech(CAD/CAM), JNTUH PhD (Pursuing) Research Areas: Thermal Energy Storage https://scholar.google.co.in/citations?user=gsLpZVoAAAAJ&hl=en</p>
	<p>Mr. Rakesh Kumar Gunda Associate Professor B.Tech (Mechanical), JNTUH M.Tech(Design Engg.), Kakatiya University Ph.D (Design and Manufacturing), BITS Pilani Research Areas: Design and Manufacturing https://scholar.google.co.in/citations?user=-lezzAgAAAAJ&hl=en</p>
	<p>Mr. D Ram Babu Assistant Professor B.Tech (Mechanical), JNTUH M.Tech (Thermal Engg.), IIT Madras Research Areas: Heat Transfer, I.C Engines https://scholar.google.com/citations?hl=en&user=r8X1ESAAAAJ</p>
	<p>Mr. G. Bharath Reddy Assistant Professor B.Tech (Mechanical), JNTUH M.Tech (Advanced Manufacturing System), JNTUH Ph.D (Pursuing), JNTUH Research Areas: Manufacturing Processes, Modeling and Optimization, Micro/nano machining, Advanced materials Coatings https://scholar.google.co.in/citations?user=_N98qyAAAAJ&hl=en</p>
	<p>Mr. P Srinivas Reddy Assistant Professor B.Tech(Mechanical), Osmania University M.Tech(Thermal Engg), NIT Bhopal Research Areas: Thermal https://scholar.google.co.in/citations?user=hDKn3W4AAAAJ&hl=en</p>

	<p>Mr.VRahul Assistant Professor B.Tech(Mechanical),JNTUH M.Tech(ManufacturingTechnology), AnnaUniversityPh.D (Pursuing) OsmaniaUniversity ResearchAreas:Manufacturing https://scholar.google.co.in/citations?hl=en&user=LhSmIA0AAAAJ</p>
	<p>Mr.M KishoreKumar Assistant Professor BE(Mechanical),Osmania University M.Tech(Fluidand Thermal Engg.),IITGuwahati ResearchAreas: Computationalfluid dynamics https://scholar.google.co.in/citations?user=jGdl7csAAAAJ&hl=en</p>
	<p>Mrs N Ankitha Assistant Professor BTech(Mechanical),JNTUH M.Tech(Thermal Engg.), JNTUH Research Areas: Thermal Engineering.</p>
	<p>Mrs GVanyasree Assistant Professor BTech(Mechanical),JNTUH M.Tech (Thermal Engg.), JNTUH Research Areas: Heat Transfer https://scholar.google.co.in/citations?hl=en&user=J8bA46AAAAAJ</p>
	<p>Mr.K Srikanth Assistant Professor BE(Mechanical), Osmania University M.S (Product Design.),Dalarna University,Sweden Research Areas: Design https://scholar.google.co.in/citations?hl=en&user=Ylo7G1sAAAAJ</p>
	<p>Mr. ALN ArunKumar Assistant Professor B.Tech(Mechanical),JNTU Anantapur M.E (CAD/CAM),Osmania University Research Areas: Production https://scholar.google.co.in/citations?user=LR8tzkoAAAAJ&hl=en</p>

	<p>P. Bhargavi Assistant Professor B.Tech(MechanicalEngg), Andhra University M.Tech(CAD/CAM), JNTUH Research Areas: Additive Manufacturing https://scholar.google.co.in/citations?hl=en&user=DxHJiwUAAAAJ</p>
	<p>Mr. KSriker Assistant Professor B.Tech(Mechanical), JNTUH M.Tech(Engineering Design), JNTUH Research Areas: Tribology https://scholar.google.co.in/citations?user=nudE17gAAAAJ&hl=en</p>
	<p>Mr. P RaviKumar Assistant Professor BTech(MechanicalEngg), NagarjunaUniversity M.Tech(MachineDesign), JNTUK Research Areas: Design https://scholar.google.co.in/citations?user=2jFOOfUAAAAJ&hl=en</p>
	<p>Mr. PathanYasin Assistant Professor B.Tech(Mechanical Engg.), JNTUH M.Tech(CAD/CAM), JNTUH Research Areas: FRP Composites https://scholar.google.co.in/citations?hl=en&user=Nu1VuywAAAAJ</p>
	<p>Mrs B Sravya Reddy Assistant Professor B.Tech(MechanicalEngg.), JNTUH M.Tech(ToolDesign)OsmaniaUniversity Research Areas: Manufacturing https://scholar.google.co.in/citations?hl=en&user=t-4NzVIAAAAAJ</p>
	<p>Mrs M.R.SRupasree Assistant Professor B.Tech(Mechanical Engg.), Osmania University M.Tech(Automation), JNTUH Research Areas : Robotics</p>

	<p>Mr. Sunil Kumar Assistant Professor B.Tech(Mechanical Engg), UPTU M.E (Tool Design),Osmania University Research Areas: Metal Forming https://scholar.google.co.in/citations?user=ucURI0wAAAAJ&hl=en</p>
	<p>Mr. T Venkatesh Assistant Professor B.Tech(Mechanical Engg.), JNTUH M.E (CAD/CAM), Osmania University Research Areas: CAD/CAM https://scholar.google.co.in/citations?view_op=list_works&hl=en&user=MT3YQ8sAAAAJ</p>
	<p>Mr. A Ramesh Assistant Professor B.Tech(Mechanical Engg.), JNTUH M.Tech(Thermal Engg), JNTUH Research Areas: Thermal analysis https://scholar.google.co.in/citations?user=Wlh8hgsAAAAJ&hl=en</p>
	<p>Mr. Animesh Sinha Assistant Professor B.Tech(Mechanical Engg.), Tripura University M.Tech(Materials and Manufacturing), NIT Silchar Research Areas: Mechanical and Thermal behavior of composites. https://scholar.google.co.in/citations?hl=en&user=by4LO-gAAAAJ</p>
	<p>Mr. M Ravi Kumar Assistant Professor B.Tech(Mechanical Engg.), Osmania University M.Tech(Materials Engg.), NIT Surathkal Research Areas: Metal matrix composites, Aluminium alloys, Heat Treatment. https://scholar.google.co.in/citations?user=KwcAVSUA AAAAJ&hl=en</p>
	<p>Mr. Vidyanand Kumar Assistant Professor B.Tech(Mechanical Engg.), LPU Punjab M.Tech(Manufacturing Technology), NITA Gargala Research Areas: Frictions and Welding process of different material alloys https://scholar.google.co.in/citations?user=SsnCqacAAAAJ&hl=en</p>
	<p>Mr. Sk Mohammad Shareef Assistant Professor B.Tech(Mechanical Engg.), JNTU Anantapur M.Tech(Advanced IC Engines), JNTU Anantapur Research Areas: Thermal, Heat transfer https://scholar.google.com/citations?hl=en&user=0enth6wAAAAJ</p>

	<p>Mr. RajeshKumar Assistant Professor B.E(Mechanicalengineering),Annamalai University,Chennai M.Tech(MachineDesign),NITDurgapur Research Areas: Aerodynamics, Automobiles, CFD,FEA https://scholar.google.co.in/citations?hl=en&user=zyvdFCIAAAAJ</p>
	<p>Mr. RajeshMadadi Assistant Professor B.Tech(Mechatronics),MGIT,JNTUH M.Tech(MechanicalEngg.),NITJalandhar ResearchAreas:FEA – Structures, Continuum Mechanics, Computational Methods & Bond Graph Methodology https://scholar.google.co.in/citations?user=gmx3SH0AAAAJ&hl=en</p>
	<p>Miss G Vasavi Assistant Professor BTech (MechanicalEngg.),JNTUA M.Tech(Advanced IC Engines),JNTUA ResearchAreas:ThermalEngineering</p>
	<p>Mr. Sarat Kumar Sahoo Assistant Professor B.Tech(MechanicalEngg),BPUT,Rourkela M.Tech(Production),VSSUT,Burla ResearchAreas:ModernManufacturing,RenewableEnergy. https://scholar.google.co.in/citations?user=RYyjPUQAAAAJ&hl=en</p>
	<p>MsJShruthi Assistant Professor B.Tech(Mechanical),JNTUH M.E(CAD/CAM), Osmania University ResearchAreas: Design for manufacturing https://scholar.google.co.in/citations?hl=en&user=BrExzvMAAAAJ</p>
	<p>Mr. C SaiKiran Assistant Professor B.Tech(Mechanical),JNTUH M.E.(CAD/CAM),Osmania University ResearchAreas: CAD/CAM and FEM https://scholar.google.com/citations?hl=en&user=l5PysT0AAAAJ</p>
	<p>Mrs.VLavanya AssistantProfessor B.Tech(Mechanical),JNTUH M.E.(CAD/CAM),OsmaniaUniversity Research Areas:Biomechanics https://scholar.google.co.in/citations?user=48qhPvkAAAAJ&hl=en</p>

	<p>Miss B Sushma Assistant Professor BTech (MechanicalEngg.),JNTUH M.Tech(CAD/CAM),Osmania University Research Areas: CAD/CAM& FEM</p>
	<p>Mr. BhaskarPathalavathi Assistant Professor B.Tech(Mechanical),JNTUH M.E.(Design),IITKharagpur Research Areas:Design https://scholar.google.co.in/citations?hl=en&user=DJ8qNFMAAAAJ</p>
	<p>Mr. ErendraMalekar Assistant Professor B.Tech(Mechanical),Sri Krishnadev Arya University M.E(CAD/CAM),JNTUH Research Areas: Design and Production https://scholar.google.co.in/citations?hl=en&user=XxKHv0cAAAAJ</p>
	<p>Mr. DipankarSaha AssistantProfessor B.Tech(Mechanical),NERIST,ArunachalPradesh M.Tech(ManufacturingTechnology),NITAgartala Research Areas: SAW,TIG, MIGand FSW https://scholar.google.co.in/citations?user=5vQOb4oAAAAJ&hl=en</p>

PROGRAM OUTCOMES (POs)

On completion of the four year B.Tech. Programme in Mechanical Engineering, the 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 analyse 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 modelling 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 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.

Program Specific Outcomes

On completion of the four year B.Tech. Programme in Mechanical Engineering, the Graduates will

- PSO1.** be able to confidently formulate and accomplish Industry oriented projects.
- PSO2.** become aware of entrepreneur techniques and culture.
- PSO3.** be Capable of handling various equipment and machinery including CNC production machines.
- PSO4.** be Able to address technically oriented issues and problems.

Course Outcomes:**B.Tech. II Year I Semester**

Course	Course Outcomes
Environmental Studies	CO1 : Define the concepts of Ecology and Ecosystem and emphasize the importance of biodiversity and its conservation CO2 : Gain knowledge on natural resources and advantages and disadvantages on renewable energy sources and technologies CO3 : Develop awareness on pollution control technologies and global atmospheric changes CO4 : Emphasize the importance of Environmental impact assessment and green technologies CO5 : Understand about Environmental legislation and the concept of Sustainable Development
Production Technology	CO1: Acquire, analyze and select suitable manufacturing process for a product. CO2: Elaborate fundamental of shaping processes and various casting techniques. CO3: Identify importance of permanent joining and principle behind different welding processes. CO4: Justify the significance of bulk deformation processes in metal working. CO5: Identify uniqueness of sheet forming and forging processes in metal working.
Mechanics of Solids	CO1 : Understand the concepts of stress at a point, strain at a point, and the stress-strain relationships for linear, elastic, homogeneous, isotropic materials CO2: Draw Shear Force, Bending Moment diagrams and determine the slope & deflections produced in beams subjected to various types of loading. CO3: Analyze and design the structural members subjected to bending, shearing and analyze the perfect frames. CO4: Determine principal stresses and strains, maximum shearing stresses and strains, and the stresses acting on any arbitrary plane within a structural element. CO5 : Design machine members subjected to torsion and analyze the thick & thin cylinders in order to meet desired conditions

Course	Course Outcomes
Thermodynamics	CO1: Explain the various thermodynamic terms & forms of energy, Concept of thermometry, analyze the work and heat interactions by using the first law of thermodynamics CO2: Analyze second law of thermodynamics; evaluate entropy changes in a wide range of processes, Gibbs and Helmholtz functions, Maxwell relations. CO3: Analyze the deviation of real gases from ideal gas behavior, compressibility chart, thermodynamic tables and Mollier diagram for pure substances. CO4: Apply the concepts of Mixture of perfect gases, Use of psychometric chart properties in air-water vapour mixtures for analysis and design of air conditioning systems. CO5: Evaluate the performance of gas and vapor power cycles, analyze the problems based on brayton and vapour compression cycles.
Metallurgy and Material Science	CO1: Describe the crystal structures of materials and correlate structure with properties CO2: Attain the knowledge of phases in solid state, phase diagrams and production of metals CO3: Express the importance of composition, properties and applications of ferrous and non-ferrous metals CO4: Acquire the knowledge on various heat treatment processes CO5: Attain the knowledge on ceramics, polymers and composites.
Production Technology Lab	CO1: Analyze the given problem CO2: Conduct investigation on the experimental setup CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc. CO4: Understand the environmental impact of the investigation CO5: Work individually and in a team for conducting the experiments CO6: Effectively communicate and explain the experimental analysis
Metallurgy and Mechanics of solids Lab	CO1: Analyze the given problem CO2: Conduct investigation on the experimental setup CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc. CO4: Understand the environmental impact of the investigation CO5: Work individually and in a team for conducting the experiments CO6: Effectively communicate and explain the experimental analysis
IT Workshop Lab	CO1: Identify the peripherals of PC, assemble and disassemble PC Components. CO2: Install the System software MS Windows, Linux and required device drivers CO3: Work with Word Processing tool (LibreOffice - Writer) for effectively documenting the reports CO4: Work with Spread Sheet tool (LibreOffice - Calc) for analysis of data using basic Mathematical and statistical methods CO5: Work with Presentation tool (Libre Office – Impress) for effectively presenting the reports using slideshows Co6: Design basic Web Pages.

Course	Course Outcomes
REASONING AND DATA INTERPRETATION LAB:	CO1: Analyze the given problem CO2: Conduct investigation on the experimental setup CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc. CO4: Understand the environmental impact of the investigation CO5: Work individually and in a team for conducting the experiments CO6: Effectively communicate and explain the experimental analysis

B.Tech. II Year II Semester

Course	Course Outcomes
Electrical and Electronics Engineering	CO1: To Understand the basics of electrical engineering like resistive, inductive, capacitive Networks CO2: To get idea of practical applications like Motors and Generators CO3: To understand the idea of transformers which are useful in industries CO4: To get idea of AC Machines like induction Motors and Alternators CO5: To understand the working of basic electrical measuring instruments
Applied Thermodynamics-I	CO1: Compare actual and air standard cycles and also understand the working of IC engines. CO2: Acquire the knowledge of phenomenon of combustion in SI and CI engines and its effect on environment and the concepts of knocking and fuel rating. CO3: Compute performance parameters, understand the working of reciprocating compressors and compute its efficiency. CO4: Acquire the knowledge of working of various rotary/ centrifugal compressors CO5: Explain the working of application of centrifugal, actual flow compressors and compute the efficiency
Mechanics Of Fluids And Hydraulic Machinery	CO1: Define the concepts of fluid statics and articulate the principles of flow measuring devices. CO2: Analyze the fluid flow using the concepts of kinematics (Continuity eqn.) and dynamics (momentum eqn.) and measurement of flow using various flow meters. CO3: compute losses in closed conduit flow and understand the concepts of boundary layer and the effect of drag and lift CO4: calculate the magnitude and location of hydrostatic forces on flat plate and curved surface, and apply its concepts for hydraulic turbines and compute their performance. CO5: Calculate required wattage and performance parameters of centrifugal pumps for different applications and working principle of reciprocating pumps.
Machine Drawing	CO1: Recognize the conventional representation of materials and various standard components CO2: Study different categories of drawings CO3: Draw various machine components in three orthogonal views CO4: Draw small assembly drawings with details CO5: Draw assembly drawings using the conventions

Course	Course Outcomes
PROBABILITY AND STATISTICS:	<p>CO1: Compare the accuracy of several schemes in engineering problems</p> <p>CO2: Illustrate the concepts of data interpretation in terms of variables associated with the outcomes of an experiment.</p> <p>CO3: Predict the past and future course of action in any engineering problem he is faced with.</p> <p>CO4: Reach a conclusion after using statistical techniques in solving his problems</p> <p>CO5: Use to queuing theory to serve a customer without much delay, thus reducing time and congestion by using probability law.</p>
ELECTRICAL AND ELECTRONICS ENGINEERING LAB:	<p>CO1: Analyze the given problem</p> <p>CO2: Conduct investigation on the experimental setup</p> <p>CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc.</p> <p>CO4: Understand the environmental impact of the investigation</p> <p>CO5: Work individually and in a team for conducting the experiments</p> <p>CO6: Effectively communicate and explain the experimental analysis</p>
MECHANICS OF FLUIDS AND HYDRAULIC MACHINERY LAB:	<p>CO1: Analyze the given problem</p> <p>CO2: Conduct investigation on the experimental setup</p> <p>CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc.</p> <p>CO4: Understand the environmental impact of the investigation</p> <p>CO5: Work individually and in a team for conducting the experiments</p> <p>CO6: Effectively communicate and explain the experimental analysis</p>
THERMAL ENGINEERING LAB:	<p>CO1: Analyze the given problem</p> <p>CO2: Conduct investigation on the experimental setup</p> <p>CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc.</p> <p>CO4: Understand the environmental impact of the investigation</p> <p>CO5: Work individually and in a team for conducting the experiments</p> <p>CO6: Effectively communicate and explain the experimental analysis</p>
VERBAL ABILITY LAB:	<p>CO1: Analyze the given problem</p> <p>CO2: Conduct investigation on the experimental setup</p> <p>CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc.</p> <p>CO4: Understand the environmental impact of the investigation</p> <p>CO5: Work individually and in a team for conducting the experiments</p> <p>CO6: Effectively communicate and explain the experimental analysis</p>
GENDER SENSITIZATION:	<p>CO1: Students will have developed a better understanding of important issues related to gender in contemporary India.</p> <p>CO2: Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film.</p> <p>CO3: Students will attain a finer grasp of how gender discrimination works in our society and how to counter it.</p> <p>CO4: Students will acquire insight into the gendered division of labour and its relation to politics and economics.</p> <p>CO5: Men and women students and professionals will be better equipped to work and live together as equals</p>

B.Tech. III Year I Semester

Course	Outcomes
Managerial Economics and Financial Analysis	<p>CO1: Evaluate the factors that influence the demand for gold</p> <p>CO2: Suggest some major action which a company can take to increase the net profit</p> <p>CO3: Discuss the economies of scale for an expanding software firm in Hyderabad</p> <p>CO4: Justify Long term investment evaluation techniques</p> <p>CO5: Who are the users of financial statements and for what purpose do they use them</p>
Applied Thermodynamics – II:	<p>CO1: Interpret the working cycle of steam power plant and working of different boilers with its applications and also combustion of fuels.</p> <p>CO2: analyze problems on steam power plant cycle, boiler draught, chimney height and can also on stem nozzles along with its application in steam power plant.</p> <p>CO3: Explain the working of various steam turbines and analyze the impulse and reaction turbines with their velocity diagrams</p> <p>CO4: Explain the concepts of steam condensers and requirement of steam condensing plant and understand the working principle of gas turbine plant and analyze the cycle to improve the efficiency with intercooling, reheating and regeneration.</p> <p>CO5: Classify the jet propulsive engines and working principle of turbojets and rockets with its nozzle design criteria and analysis.</p>
Kinematics of Machinery:	<p>Co1: Identify the inversions of fundamental mechanisms and write their applications.</p> <p>Cco2; Explain the application of Hooke's joint and various transmitted methods such as belt, rope and chain drive and solve problems</p> <p>Co3: Analyze velocity and acceleration of different links of a given mechanism.</p> <p>Co4: Classify gears and gear trains and compute velocity ratio.</p> <p>Co5: Analyze various types of cam and followers with different kinds of follower motion.</p>
Machine Tools & Metrology :	<p>CO1: Explain metal cutting principles, various materials used for metal cutting and types of lathes and operations performed on lathe.</p> <p>CO 2 : Acquire the basic structure of various machine tool equipment commonly found in industry such as drilling machines, shaping machines, planning machines, etc.</p> <p>CO 3:Identify the fine finishing operations to obtain dimensional accuracy and surface finish</p> <p>CO4: Apply the concept of system of limits and fits and design limit gauges.</p> <p>CO 5 : Measure surface finish, perform alignment test of machine tools and write applications of coordinate measuring machines.</p>

Course	Outcomes
DESIGN OF MACHINE MEMEBERS I :	CO1: Understands the impact of material properties and manufacturing considerations in design CO2: Understands the impact on strength of material due to stress concentration factor. CO3: Understands the different types of joints under varying loading conditions CO4: Understands the design of shafts under varying loading conditions CO5: Understands the design concept of springs under varying loading conditions
Machine Tools & Metrology LAB:	CO1: Analyze the given problem CO2: Conduct investigation on the experimental setup CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc. CO4: Understand the environmental impact of the investigation CO5: Work individually and in a team for conducting the experiments CO6: Effectively communicate and explain the experimental analysis
ADVANCED ENGLISH COMMUNICATION & SOFT SKILLS LAB:	CO1: Evolve as effective communicators. CO2: Emerge as decision makers, time managers and good negotiators. CO3: Develop holistic soft skills. CO4: Develop critical and analytical skills. Present their skills confidently in the job market. CO5: Gather ideas and information, and organize them relevantly and coherently. CO6: Develop leadership and team building skills
EFFECTIVE TECHNICAL COMMUNICATION LAB:	CO1: Attain proficiency in Technical Writing CO2: Use English language appropriately to write effective reports, notes and summaries CO3: Write Emails suitable for Professional Communication CO4: Develop Analytical and Critical Thinking Skills

B.Tech. III Year II Semester

Course	Outcomes
Measurement & Control Systems:	CO1: Student will be able to know the basics of measurement system CO2: Student will be able to improve skills in selecting a suitable transducer for a given application CO3: Student will be able to understand different functional elements in control system CO4: Student will able to calculate transfer functions of physical systems CO5: Understand about Environmental legislation and the concept of Sustainable Development

Course	Outcomes
Dynamics of Machinery:	<p>CO1: Determine the effect of gyroscopic couple in a dynamic body such as airplanes, ships and four and two wheelers.</p> <p>CO2: Perform static and dynamic analysis to attain equilibrium in mechanisms and synthesize mechanisms for motion, path and function generation.</p> <p>CO3: Analyze friction clutches, brakes dynamometer and flywheels.</p> <p>CO4: Determine balancing for rotating and reciprocating mass system and analyze different types of governors.</p> <p>CO5: Perform analysis of the response of one degree of freedom systems with free and forced vibration and evaluate the critical speed of the shaft and simple vibration problems</p>
Design of machine members-II:	<p>CO1: Determine the basic lubrication mode in bearings, load in ball and roller bearings and its selection procedure based on manufacturer's catalogue data.</p> <p>CO2: Demonstrate the ability to apply the fundamentals of force and stress analysis in the design of various components to successfully satisfy the function of IC engine.</p> <p>CO3: Design a power transmission system through belt, rope, and chain drive to meet desired needs in engineering applications.</p> <p>CO4: Analyse and evaluate the forces and stresses in various gear systems.</p> <p>CO5: Design the power screw for transmission applications.</p>
Finite element methods:	<p>CO1: Apply the concepts of Fem on 1D problems applied to different types of Bars by formulating different Mathematical methods.</p> <p>CO2: Investigate the Trusses in 2D and 3D and perform analysis by forming Stiffness equations.</p> <p>CO3: Analyze different types of Beams in 2D and problem representation, Solving using Stiffness Matrix and formation of Shape functions for an element.</p> <p>CO4: Design axi-symmetric Solids subjected to loads by meshing using Finite element Modeling.</p> <p>CO5: Solve Problems on different engineering components like Fins, thin plates, bars, slabs etc by Heat Transfer analysis using Dynamic equations.</p>
PROFESSIONAL ELECTIVE:	
Automobile Engineering	<p>CO1: Understands the components and types of engine construction and its servicing</p> <p>CO2: Understands the working and types of ignition and cooling system.</p> <p>CO3: Understands the different types of emissions and its controlling parameters</p> <p>CO4: Understands the different types and working of transmission and suspension system.</p> <p>CO5: Understands the working of various steering and braking system</p>

Course	Outcomes
Unconventional Machining Processes:	<p>CO1: Understand the concept of unconventional machining processes and the differences between the conventional and unconventional machining processes.</p> <p>CO2: Describe the working principle and applications of various unconventional machining processes.</p> <p>CO3: Examine the effect of process variables over the material removal rate and surface finish of various unconventional machining processes.</p> <p>CO4: Employ the suitable unconventional machining process for a given material and machining condition, or application.</p> <p>CO5: Understand the working of hybrid processes of ECM and EDM, and advanced finishing processes.</p>
Operations research:	<p>CO1: At the end of the course a student would develop skills to represent an engineering problem as an appropriate operations research model</p> <p>CO2: He will get the ability to collect and analyze the data in an engineering problem using different operations research methods</p> <p>CO3: He gets the ability to draw conclusions after analyzing the data and implementing them in the engineering problem</p> <p>CO4: He Can make decisions using Game theory in a competitive situation</p> <p>CO5: He will be able to take decision on when to replace machines using Replacement models</p>
Introduction to aircraft systems:	<p>CO1: Analyze the global and Indian aerospace industry scenario.</p> <p>CO2: Identify the type of aircraft and components of aircraft.</p> <p>CO3: Design the flight of aircraft from basic principles.</p> <p>CO4: Solve the difficulties in the actual design and manufacture of an aircraft.</p> <p>CO5: Explain the operating and control systems of an aircraft including manoeuvrability.</p>
Production drawing practice & Measurements and Control systems lab:	<p>CO1: Analyze the given problem</p> <p>CO2: Conduct investigation on the experimental setup</p> <p>CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc.</p> <p>CO4: Understand the environmental impact of the investigation</p> <p>CO5: Work individually and in a team for conducting the experiments</p> <p>CO6: Effectively communicate and explain the experimental analysis</p>
Team projects lab:	<p>CO1: Be acquainted with appropriate utility</p> <p>CO2: Apply fundamental principles of science and engineering to design and fabricate models for diversified applications</p> <p>CO3: To enhance team spirit and improve the ability of students to work together for solution of common engineering problem</p> <p>CO4: To improve ability of students for the selection of material and manufacturing process and approach for solving an engineering problem with minimum cost.</p> <p>CO5: To inculcate the habit of observing social problems and searching for a possible sustainable eco friendly solution</p>
Quantitative ability lab:	<p>CO1: Solve the problems using arithmetic, mensuration, geometry averages & clocks & calendars questions.</p> <p>CO2: Practice general problems in Placement, CAT and GRE etc. tests</p>

B.Tech. IV Year I Semester

Course	Outcomes
Heat transfer:	<p>CO1: Identify the mode of heat transfer and formulate the equation to calculate temperature distribution</p> <p>CO2: Compute the amount of heat dissipation during transient heat conduction using lumped system/charts.</p> <p>CO3: calculate the rate of heat transfer by convection in the boundary/potential flow regions</p> <p>CO4: Identify the heat exchanger required to transfer sensible/ latent heat between two fluids</p> <p>CO5: Interpret the concepts of radiation heat transfer between two bodies</p>
Refrigeration & Air Conditioning:	<p>CO1: Study the concepts and methods of refrigeration systems, and evaluate the performance of air refrigeration cycles for aircraft applications.</p> <p>CO2: Evaluate the performance of vapour compression refrigeration systems and understand the working of various evaporative.</p> <p>CO3: Explain the working of various vapour absorption, non conventional refrigeration systems and summarize the effects of refrigerants on Global Warming and ozone depletion.</p> <p>CO4: Estimate the heat load for the given conditions and suggest the requirements of a suitable AC system with respect to psychometric charts.</p> <p>CO5: Evaluate load calculations for industrial air conditioning; enumerate the equipments that are used in air conditioning systems</p>
Computer Aided Design and Manufacturing:	<p>CO1: Explain structure and units of a digital computer and its related hardware.</p> <p>CO2: Describe the role of computer graphics especially geometric transformations for CAD/CAM application.</p> <p>CO3: Recognize various modeling techniques.</p> <p>CO4: Describe the basic NC system and write part programming in CNC system</p> <p>CO5: Identify different quality control methods and apply inspection methods used in various manufacturing systems.</p>
PROFESSIONAL ELECTIVE –II	
Design for manufacturing:	<p>CO1: Evaluate the importance of design, process planning in manufacturing..</p> <p>CO2: Select the suitable material and its alternative for particular products.</p> <p>CO3: Apply the geometric dimension and tolerances in design and manufacturing of product and apply general design consideration in casting component.</p> <p>CO4: Selection of the parting line and its effect in forging die design and manufacturing.</p> <p>CO5: Apply design principle for punching, blanking and deep drawing</p>

Course	Outcomes
Jet propulsion & rocket engineering:	<p>CO1: Interpret the concepts of gas turbine theory and efficiency calculation for jet propulsion in rocket engines.</p> <p>CO2: Differentiate between Turbojet and Turbo-prop Engines for performance evaluation.</p> <p>CO3: Analyze the working of Ramjet engines and compute their performance.</p> <p>CO4: Explain the difference between liquid and solid propellant rocket engines.</p> <p>CO5: Analyze and apply the thrust augmentation methods to rockets and also understand the testing procedure for rocket engines</p>
Composite materials:	<p>CO1: Describe the different types of matrix, fiber and composite materials especially FRPS</p> <p>CO2: Study the composite properties and fabrication techniques</p> <p>CO3: Study the basic mechanical behavior of composite materials.</p> <p>CO4: Identify the choices made for using certain types of composites in certain applications with Reference to composite properties.</p> <p>CO5: Demonstrate simple micromechanics and failure modes of composites</p>
CNC Technology:	<p>CO1: Demonstrate the need of NC machines and its applications in the field of manufacturing.</p> <p>CO2: Use CNC's and their constructional features including automatic tool change.</p> <p>CO3: Develop manual part programming and APT programming for various complex geometries using CAD/CAM software's.</p> <p>CO4: Describe direct Numerical Control of NC machines controlled by central servers and understand the automatic tool changing of cutting parameters to suit work process conditions.</p> <p>CO5: Identify the concepts & physical elements of micro controllers and PLC's and their applications in CNC manufacturing field</p>
PROFESSIONAL ELECTIVE-III	
Robotics:	<p>CO1: Recognize various components of Robot, specification of Robot & Asimov's laws of Robot.</p> <p>CO2: Describe the coordinates of end- effector location with respect to the base of Robot.</p> <p>CO3: Select particular type sensors to be used with Robot.</p> <p>CO4: Design a variety of robot tasks by application of Robot programming.</p> <p>CO5: Design proper actuator to the Robot joints</p>
Tool engineering:	<p>CO1: Correlate tool and work behavior for various material in different machining operations.</p> <p>CO2: Select suitable press tool operation for given sheet metal component.</p> <p>CO3: Select and use appropriate clamping device for given work piece situation.</p> <p>CO4: Apply various special tools and suitable measuring instruments to improve production cycle time.</p> <p>CO5: Perform economic analysis of various tools to reduce cost of production.</p>

Course	Outcomes
Power Plant Engineering:	CO1: Explain the working of steam power plant, and its components. CO2: Describe the working of diesel power plants and their components, gas turbine plants and their components. CO3: Explain the working of hydroelectric power plant and elaborate typical layouts of hydro projects and plants. CO4: Interpret different types of reactors used in nuclear power plants. CO5: Define load factor, demand factor and methods of plant selection, make a load duration curve and estimate fixed and running costs of a plant and its depreciation
Mechanical Vibrations:	CO1: Explain the terms simple harmonic motion, natural frequency, resonance, damping, logarithmic decrement, vibration isolation and transmissibility. CO2: Formulate a mathematical relation for various one DOF free, damped and forced vibration systems. CO3: Explain the working of vibration measuring instruments. Obtain the principal modes of 2DOF systems, and design vibration absorbers CO4: Analyze the various multi degree freedom vibration systems using numerical methods
PROFESSIONAL ELECTIVE - IV	
Renewable energy sources:	CO1 : Define the basic principles and associated technical terms of solar radiation. CO2 : Explore about various solar energy collection and storage methods and perform thermal analysis. CO3 : Explore the harnessing of biomass and geothermal energy. CO4 : Evaluate the potential of wind energy and ocean energy plants based on the knowledge obtained. CO5 : Explore various types of direct energy conversion methods
Computational fluid dynamics:	CO 1 :Apply the concepts of numerical techniques to a find solution to a system using numerical methods CO2: Apply the Finite Difference method in heat conduction and convection problems. CO 3: Apply the concept of discretization for fluid flow modelling. CO 4 :Interpret the conservation equations for fluid flow and heat transfer CO 5 :Acquire the knowledge of finite volume methods
Industrial Engineering Practices:	CO1: Describe and apply method study and work measurement techniques CO2: Describe methods and principles of work place design. Enumerate and describe man-machine systems and visual displays CO3: Distinguish job evaluation and merit rating and describe methods of job evaluation and merit rating. CO4: Distinguish estimation and costing and perform estimating and costing of a job. CO5: Describe various industrial engineering practices

Course	Outcomes
ADDITIVE MANUFACTURING TECHNOLOGY:	CO1: Describe the need of prototyping before manufacturing and the process to be followed for it CO2: Describe the principle of liquid based, solid based, powder based RP process and Rapid tooling and differentiate them applications wise, understanding the physics of materials in it. CO3: Differentiate the various software associated with RP process and the technicality in its files and formats. Paraphrase RP processes in reverse engineering. CO4: Figure out and describe the real-time applications of RP processes across various fields of engineering, science and technology. CO5: Select the appropriate fabrication technology, or technologies, for a given prototyping task
CAD/CAM Lab:	CO1: Analyze the given problem CO2: Conduct investigation on the experimental setup CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc. CO4: Understand the environmental impact of the investigation CO5: Work individually and in a team for conducting the experiments CO6: Effectively communicate and explain the experimental analysis
HEAT TRANSFER LAB:	CO1: Analyze the given problem CO2: Conduct investigation on the experimental setup CO3: Use modern tools for measurements/modeling and simulation/draw the graphs etc. CO4: Understand the environmental impact of the investigation CO5: Work individually and in a team for conducting the experiments CO6: Effectively communicate and explain the experimental analysis
INDUSTRY ORIENTED MINI PROJECT:	

B.Tech. IV Year II Semester

Course	Outcomes
Industrial Management	CO1: Develop skills in supervision of any activity and also to enable to use the available resources to achieve the desired goal in a more efficient and effective way. CO2: Describe the structure of organization and its functions. CO3: Identify a plant layout for a specific product and able to perform the functions in the Marketing mix. CO4: Explore operations and material management functions. CO5: Elaborate the concepts of Human Resource Management and use various project management techniques
PROFESSIONAL ELECTIVE – V	
Production Planning & Material Handling:	CO1: Evaluate the concept of PPC, inventory & MRP, ERP, LOB system. CO2: Apply various forecasting techniques like qualitative and quantitative methods to the production system. CO3: Apply routing, scheduling & dispatching techniques to the

	<p>production control and management system.</p> <p>CO4: Describe the importance of layouts like plant layout, process layout and product layout to the production system.</p> <p>CO5: Apply the principles and techniques to minimize the cost of material handling in planning and control of production and service system.</p>
Mechatronics:	<p>CO1: Design the circuit based on Hydraulic, Pneumatic and PLC.</p> <p>CO2: Describe the signal conditioning like analog unit.</p> <p>CO3: Design the circuit which will control by mechanically and electronically and it contains electro-hydraulic auction system and sensor interfacing.</p> <p>CO4: Identify and analyze the hydraulic and pneumatic system and convert it into suitable system.</p> <p>CO5: Apply electromechanical drives-Relay & sensors, digital to analog and analog to digital converter.</p>
Automation in Manufacturing:	<p>CO1: Explore the importance of automation implementation in manufacturing.</p> <p>CO2: Analyze the automated flow lines.</p> <p>CO3: Perform Line balancing of assembly systems.</p> <p>CO4: Recognize the importance of automated storage and retrieval systems, automated industrial control.</p> <p>CO5: Integrate the logistics with Business Process Re-engineering, Concurrent Engineering.</p>
TRIBOLOGY:	<p>CO1: Apply principles of lubrication, lubrication regimes, bearing materials, lubricant properties and lubrication modes in bearing applications.</p> <p>CO2: Apply theoretical and practical knowledge of hydrodynamic, elasto-hydrodynamic and mixed/ boundary lubrication in journal bearings.</p> <p>CO3: Identify friction characteristics in journal bearings and methods to reduce friction and wear.</p> <p>CO4: Choose efficient and robust tribological systems such as rolling element bearings, hydrodynamic bearings and hydrostatic thrust bearings for the needs of a specific application.</p> <p>CO5: Apply knowledge in use of bearing materials and bearing oil pads and oil rings in different bearings.</p>
PRODUCT DESIGN AND PROCESS PLANNING:	<p>CO1: Describe an engineering design & development process and explain process planning.</p> <p>CO2: Concept generation and tool selection.</p> <p>CO3: Describe and apply ergonomics principles to promote safety, healthy and productivity in industry</p> <p>CO4: Demonstrate individual skill using selected manufacturing techniques.</p> <p>CO5: Work collaboratively on a team to successfully complete a design project</p>
Seminar:	<p>CO1: select a technical topic related to mechanical engineering, study, analyse and summarize the topic</p> <p>CO2: Prepare a report and make a presentation on the selected topic.</p> <p>CO3: Improve the communication skills</p> <p>CO4: demonstrate the understanding of impact of engineering solutions on the society</p> <p>CO5: Demonstrate the knowledge of professional and ethical responsibilities</p>

Comprehensive Viva:	<p>CO1: Demonstrate the understanding of engineering knowledge learnt in four year graduation course.</p> <p>CO2: Defend any type of interviews, viva-voce, and aptitude tests both at the academic and the industry sector.</p> <p>CO3: Perform well in group discussions and enhance the communications skills and interaction</p> <p>CO4: Apply knowledge in developing their career in particular fields.</p> <p>CO5: Apply the principles and phenomena, and their applications in solving engineering problems.</p>
Project Work:	<p>CO1: Identify an engineering problem, devise a means of solving and exhibit the ability to execute the solution.</p> <p>CO2: Demonstrate knowledge of professional and ethical responsibilities.</p> <p>CO3: Show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues</p> <p>CO4: Communicate effectively in both verbal and written form</p> <p>CO5: Develop confidence for self-education and ability for lifelong learning</p>

LABORATORIES OF THE DEPARTMENT

Following Laboratories were established in the Department at a cost of Rs. 3.5 crore.

1.	Machine Tools Lab.	10.	Research Lab
2.	Metrology Lab.	11.	Engineering Workshops
3.	Production Technology Lab		• Carpentry
4.	Metallurgy and Material Science Lab.		• Tin-smithy
5.	Computer Aided Design/Computer		• Fitting
6.	Mechanics of Solids Lab		• Foundry
7.	Thermal Engineering Lab.		• Welding
8.	Heat Transfer Lab.		• House Wiring
9.	Team Projects Lab		• Black Smithy

Machine Tools Laboratory (major equipment)

- Capstan's and Turret Lathe
- Slotting Machine
- Belt Driven Cone Pulley Lathes
- Precision Lathe Machines – G.D.Weiler
- Medium Precision Lathe Machines – Jinega
- Horizontal Milling Machine –BFW
- Radial Drilling Machine –Batliboy
- Surface Grinding Machine
- Hydraulic Power Hacksaw Machine –IFCO
- Pillar Type Drilling Machine –IFCO
- Shaping Machine –Sagar
- Cylindrical Grinding Machine –Micromatic
- Box Column Drilling Machine –IFCO
- Precision Centre Lathe –PINACHO



Machine Tools Laboratory



Radial Drilling Machine



Horizontal Milling Machine

Metrology Laboratory (major equipment)

- Electric Digimatic Vernier Calliper
- Vernier Height Gauge
- Dial Vernier Caliper
- Inside Micrometer Caliper
- Gear Tooth Micro Meter
- Lever Type Dial Test Indicator
- Depth Micro Meter
- Bevel Protractor
- Sine Bar
- Surface Finish Tester–Portable With Standard Accessories
- Bore Gauges
- Tool Maker's Microscope
- Three Wire Set With Micrometer Holder For Thread Mount Micro Gauge
- Profile Projector

- Surface Plate (Granite)



Optical Projector

- Precision Bench Centre



Tool Makers Microscope

Production Technology Laboratory (major equipment)

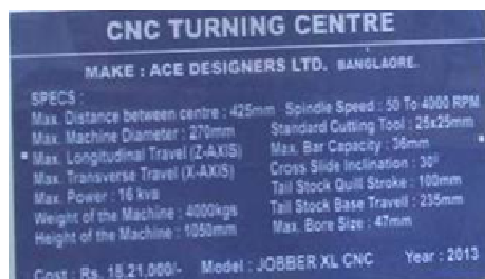
- Air compressor
- AC/ DC TIG Welding Machine
- Trunk Folding machine
- Hydraulic press
- Pipe bending machine
- Semi-automatic injection moulding machine

Metallurgy and Material Science Laboratory (major equipment)

- Single disc polishing machine
- Belt Grinder
- Binocular Metallurgical microscope
- Muffle Furnace
- Jominy end quench Apparatus
- Specimen Mounting Press
- Cut off Machine
- Specimen Drier

Computer Aided Design (CAD) / Computer Aided Manufacturing (CAM) Laboratory (major equipment)

- CNC Machine
- Horizontal turning centre (ACE Designers)
- Vertical Machining centre (Bharath Fritz Werner –BFW)
- CAD Software
- Master cam X7, DNC
- Creo 2.0
- Ansys 15, Ansys 17.2
- AutoCAD 2014





CNC Horizontal Turning Center (Make: Ace Designers)



Vertical Machining Centre (Make: Bharat Fritz Werner)

Mechanics of Solids Laboratory (major equipment)

- Binocular Metallurgical microscope
- Muffle Furnace
- Brinell Hardness Testing machine
- Compression Testing Machine
- Universal Testing Machine
- Torsion Testing Machine
- Rock-Well hardness Tester
- Spring Testing Machine
- Impact Testing Machine



Universal Testing Machine

Thermal Engineering Laboratory (major equipment)

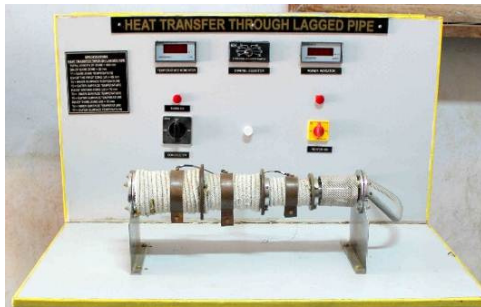
- Cut section of Various Engines
 - 2 stroke petrol engine
 - 4 stroke petrol/diesel engine
- Single cylinder 2 stroke petrol engine with eddy current dynamometer
- Multi cylinder 4 stroke petrol engine test rig with hydraulic dynamometer (MPFI) with Mohr's test
- Single cylinder 4-stroke diesel engine test rig with Retardation test
- Variable compression ratio petrol engine test rig with DC generator
- Single stage Reciprocating air compressor test rig
- Demo models of various types of boilers



Multi cylinder 4 stroke petrol engine test rig with hydraulic dynamometer (MPFI) with Mohr's test

Heat Transfer Laboratory (major equipment)

- Heat transfer through composite wall
- Thermal conductivity of metal bar
- Heat transfer from pin-fin
- Unsteady state heat transfer apparatus (Transient heat conduction)
- Heat transfer in natural convection
- Parallel /counter flow heat exchanger
- Emissivity measurement apparatus
- Heat pipe demonstration
- Condensation in dropwise /film wise



Heat Transfer Through Lagged Pipe

- from model"HT11 with stainless steel boiler and pressure release wall
- Heat transfer through lagged pipe
- Thermal conductivity on insulating powder(concentric sphere)
- Heat transfer in forced convection
- Stefan's Boltzmann apparatus
- Critical Heat flux apparatus
- Boiling heat transfer unit(Two phase flow)



Stefan Boltzmann Apparatus



Thermal Conductivity of Metal Rod



Parallel and Counter Flow Apparatus

Team Projects Lab

- Work station
- AUTO CAD 2014
- Ansys -17.2
- Creo
- General Fabrication Facilities

Research Lab

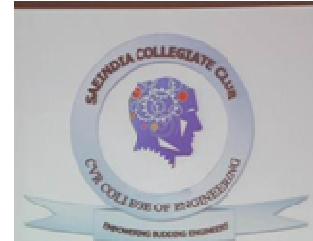
- Work stations
- AUTO CAD 2014
- Ansys -17.2
- Creo
- General Fabrication Facilities

Engineering Workshop (major equipment)

- Power Hack Saw M/C
- Hand Shearing Machine
- Marble/Wood Cutter M/C
- Electric Wood Planner M/C
- Angle Grinder M/C
- Drill Machine
- Rotary Hammers (Drilling)
- Arc Welding m/c
- TIG Welding m/c

HIGHLIGHTS OF THE DEPARTMENT

- **Society of Automotive Engineers (SAE) Club:** Inaugurated in the year 2014-15. The inauguration of SAE Club was held on 19-09-2014 and followed by a two days' workshop on Automotive Mechanics by Robo Sapiens. Present strength of SAE Club is 55 members which includes II, III and IV year mechanical B.Tech. Students.



**CVR - SAE Club Members with
Chief Guest Mr. Vijay A Deshmukh, TS Industrial Infrastructure Ltd., Hyderabad.**



Members of CVR - SAE Club

- **Team Projects Laboratory:** Team Projects Lab, based on learning outcomes was introduced in the II semester of III B.Tech, in the Academic year 2014-15. The main intension of this laboratory is to encourage the students to prepare working models using knowledge of various subjects and laboratories they have studied in their curriculum. In the present Academic year a total of 12 projects were executed. It was an exciting experience for the students.

Entrepreneurship Development Cell (EDC):

Starting an EDC at CVR College of Engineering:

- The Indian Industrial policy of 1990 and consequent economic growth has thrown ample opportunities for innovation and enterprise promotion.
- Andhra Pradesh produces 2.5 Lakh graduate engineers and a greater number of diploma engineers every year. This large number of Technical personnel is an added advantage to the state in building up its prosperity through entrepreneurship.
- Entrepreneurship is one important avenue that can give self-employment to some and generate employment to others. It creates sustainable wealth to the nation.
- CVR College of Engineering established an Entrepreneurship Development Cell (EDC) in the year 2011 to create interest and motivation in young graduates.
- AICTE, New Delhi sponsored the EDC and granted Rs 4.5 Lakhs for the cell.
- EDC Conducted 3 awareness camps in the college, with the help of Osmania University.
- Apart from motivating its own graduates, the college aims to help rural people in the surrounding areas to promote their own business ventures.
- Dr. T.A. Janardhan Reddy, Professor of Mechanical Engineering is the chief coordinator of the EDC.



Participants at Entrepreneurship Awareness Camp 2014

FACULTY PUBLICATIONS

SI NO	Name of the Faculty Member	Designation (all the designations since joining the institution)	Total No. of Publications in referred/SCI Journals				books/book Chapter
			IJ	NJ	IC	NC	
1	Dr. M Venkata Ramana	Professor & Head	18	2	8	7	-
2	T.A. Janardhan Reddy	Professor	19	7	26	31	1(Production Drawing Practice)
3	G. Venkatesha Prasanna	Professor	6				-
4	Dr. P Uma Maheshwera Reddy	Professor	8		4		
5	Dr. Shashidhar K. Kudari	Professor	19		11	7	1 (mechanical vibrations)

SI NO	Name of the Faculty Member	Designation (all the designations since joining the institution)	Total No. of Publications in referred/SCI Journals				books/book Chapter
			IJ	NJ	IC	NC	
6	Dr M.Sowjanya	Professor	8	1	6		
7	Dr. K.Kishore Kumar	Assoc. Professor	10		1		
8	Dr. D. Srinivas Rao	Assoc. Professor	2				
9	Dr. T.G.Arul	Assoc. Professor	10			1	
10	Dr.Bhumeswar Kunjilal Patle	Assoc. Professor	7		1	1	
11	Mr.G.Rakesh Kumar	Assoc. Professor	5	1	2	4	
12	Manjeet Kharub	Asst. Professor	14			1	
13	P.V.Ramana	Assoc. Professor	19		5		
14	Mr. B. Appala Naidu	Assoc. Professor				1	
15	Ms. M. Gayathri Vineela	Assoc. Professor	2		1		
16	Ms. G. Mrudula	Assoc. Professor			2		
17	Naveen Kumar	Asst. Professor	4	1			
18	Mr. V. Rajender Kumar	Assoc. Professor	1				
19	Mr. M. Srinivas Reddy	Asst. Professor					
20	Mr. M.V.B. Krishnam Raju	Asst. Professor					
21	Mr. P. Lava Kumar	Asst. Professor					
22	Mr. Neeraj Kumar Jha	Asst. Professor					
23	Bharat Reddy	Asst. Professor	3	1	1		
24	D. Rambabu	Asst. Professor	1		2		
25	Mr. P. Srinivas Reddy	Asst. Professor	1		1		
26	Mr. V. Rahul	Asst. Professor					
27	Ms. N. Ankitha	Asst. Professor	1				

SI NO	Name of the Faculty Member	Designation (all the designations since joining the institution)	Total No. of Publications in referred/SCI Journals				books/book Chapter
			IJ	NJ	IC	NC	
28	Mr. K. Srikanth	Asst. Professor	1				
29	Mr. A.L.N. Arun Kumar	Asst. Professor	1				
30	Ms. P. Bhargavi	Asst. Professor	1		1	1	
31	Mr. K. Sriker	Asst. Professor	2	1	5	4	
32	Mr. Pathan Yasin	Asst. Professor		1			
33	Ms. B. Sravya Reddy	Asst. Professor	1				
34	Ms. M.R.S. Rupa Sri	Asst. Professor	1			2	
35	Mr. Sunil Kumar	Asst. Professor	3	1	3		
36	Mr. T. Venkatesh	Asst. Professor					
37	Mr. A. Ramesh	Asst. Professor					
38	Mr. Animesh Sinha	Asst. Professor					
39	Mr.M.Ravi Kumar	Asst. Professor					
40	Ms.G.Vasavi	Asst. Professor	1			1	
41	Mr. Sarat kumar Sahoo	Asst. Professor	5		5		
42	Ms.Sruthi J	Asst. Professor		1			
43	Mr.C.Sai Kiran	Asst. Professor		1			
44	Ms. V.Lavanya	Asst. Professor					
45	Ms. B.Sushma	Asst. Professor					
46	Mr. Dipankar Saha	Asst. Professor	2		1		
47	Mr. Erendra Malekar	Asst. Professor					
48	Mr. P.Bhaskar	Asst. Professor					
49	Md.Shareef	Asst. Professor	3		1		
50	Vanya Sree	Asst. Professor	1				
51	P Tejasvi	Asst. Professor	1				
52	Rajesh Madadi	Asst. Professor			1		

SI NO	Name of the Faculty Member	Designation (all the designations since joining the institution)	Total No. of Publications in referred/SCI Journals				books/book Chapter
			IJ	NJ	IC	NC	
53	P. Ravi Kumar	Asst. Professor	1				
54	Lokeswar Patnaik	Asst. Professor	1	3	3		
Total			183	21	91	61	

VARIOUS PROGRAMMES ATTENDED BY FACULTY AT OTHER COLLEGES/CENTRES/ COUNTRIES

1. Dr. S. Deva Prasad attended State Level workshop on “Quality improvement in Engineering Education”, organized by Annamacharya Institute of Technology and science, Rajampet, Kadapa, Andhra Pradesh. 2010.
2. Mr. Prem Swarup attended International Conference on “Earth Sciences & Engineering” at Malla Reddy Engineering College in Hyderabad on 21st August 2010.
3. Mr. Prem Swarup attended a work shop on “Recent Developments in Mechanical Engineering” at Malla Reddy Engineering College, on 12th & 13th Feb 2011.
4. Mr. Krishnam Raju attended 2 Days workshop on “Teaching methodologies” at Malla Reddy College of Engineering and Technology, Hyderabad, July 2011.
5. Mr. Prem Swarup attended a work shop on "Computational Lab" held at MREC in Hyderabad on 8th and 9th August 2011.
6. Mr. Prem Swarup attended a Seminar on “College Environment Awareness and Action Programme” at MREC, Hyderabad on 14th Aug 2011.
7. Mr. Krishnam Raju attended 2 Days workshop on “Research methodologies” at JNTUH affiliated engineering college (MRCET), December 2011.
8. Mr. Krishnam Raju attended 2 Days course on “Failure Analysis” at JNTUH affiliated engineering college (MGIT), February 2012.
9. Mr. Prem Swarup attended a National Level workshop on "Recent Trends in Computational Fluid Dynamics" held at MREC in Hyderabad on 24th and 25th March 2012.
10. Mr. Prem Swarup attended a FDP Program on “effective teaching” at MREC in Hyderabad on June 2012.
11. Mr. S Venkata Sai Sudheer attended 2-Week ISTE workshop on “Engineering Mechanics” Conducted by Vignan Institute of Technology and Science (VITS), Deshmukhi, Nalgonda Dist, November 2012.
12. Mr. Krishnam Raju attended a course on “Powder Metallurgy” at JNTUH affiliated engineering college (MGIT), December 2012.
13. Mrs. G. Mrudula attended 3-day workshop on “Engineering Research Methodology” Conducted by University College of Engineering, Osmania University, 26th -28th August 2013.
14. Mr. Krishnam Raju attended 5 Days work shop on “Electron Micro Scope” at national institute of technology, Warangal (NITW), December 2013.
15. Mr. M. Srinivas Reddy attended one day workshop on “Outcome-based Education” conducted at JNTUH in December, 2013.
16. Mr. M. Srinivas Reddy attended a seminar on “Recent Trends in Power Production” at Vardhaman College of Engg., Shamshabad, December, 2013.
17. Mr. K. Chandra Sekhar attended a workshop on “Advances in CNC” at Osmania University, 2013.
18. Mr. V. Rajendra Kumar attended a one day National level workshop on “Outcome Based Education (OBE)” conducted by School of Information Technology (SIT), JNTUH Hyderabad, A.P, 2013.
19. Mr. V. Rajendra Kumar attended a one day workshop on “Engineering Research Methodology” at

- CVR College of Engineering, Telangana. Jan-2014.
20. Mr. Krishnam Raju attended 2 Days workshop on “Composite Materials” at JNTU KAKINADA, February 2014.
 21. Mr. M. Srinivas Reddy attended “A workshop on Innovation at Grassroots” conducted at JNTUH, Kukatpally, February, 2014.
 22. Dr. T. A. Janardhan Reddy and Mr. P.Srinivas Reddy attended an International conference organized by Wuhan College of Engineering, Wuhan, China and presented a paper on “Outcome Based Education – Some Initiatives” in Oct 2014.
 23. Mr.V.Rajendra Kumar attended 5 Days course work on “Research Methodology” at JNTUH, Telangana. 08th to 12th Dec-2014.
 24. Mr.K.Chandra Sekhar attended workshop on “3D modelling and simulation” organized by Autodesk at Vignana Bharathi College of Engineering, Ghatkesar, 2014.
 25. Mr. M. Prem Swarup attended a FDP on “English and communication skills” at CVR College of Engineering, 2014.
 26. Mr. G. Naveen Kumar attended and presented a paper “Dynamic analysis on Electric pole using GFRP material” at International Conference (ICSTM 2015), in New Delhi, 2015.
 27. Mr.G. Bharath Reddy attended and presented a paper at International Conference (ICSTM 2015), in New Delhi, 2015.
 28. Dr. T. A. Janardhan Reddy and Mr. P.Sadanandam attended a one day conference on “Entrepreneurship” at New Delhi, Organised by MHRD, Govt. of India in 2015.
 29. Dr. S. Deva Prasad attended a one day awareness workshop on “Outcome Based Education and Accreditation” organised by JNTUH in collaboration with NBA on 14th September 2015.

List of Workshops/Events conducted

1. Workshop on “Engineering Research Methodology” for two days on 17th & 18th January 2014 for the faculty members of the CVR College of Engineering.
2. Three-day workshop on “The Science of Aircraft” in collaboration with Tera Inc., Hyderabad on 23rd, 24th & 25th January 2014.
3. Awareness program on preparation of automobile models for participating in national and international competitions like GOKART, GOLFKART etc. on 5th Feb 2014.
4. Two-day workshop on Robotics (Robo Gravity) in association with AB Lab Solutions 28th Feb & 1st March 2014.
5. Yantranica in March 2014 to train the students in designing, manufacturing and simulation tools using our own laboratories like CAD/ CAM, Machine tools, Metrology Lab etc.
6. Workshop on AUTO CAD on 15th March 2014.
7. Engineers day celebrations on 16th September 2016.
8. Entrepreneurship awareness camp was conducted on 3rd – 5th October 2016 for Mechanical students.
9. A workshop on “Behavior of Composites” organized by Dr. M. Venkata Ramana, HOD and Dr.Venkatesha Prasanna, Professor, on 23rd & 24th December, 2016.
10. Two-day Technical fest “ENTORQUE” by Mechanical Dept association – Meknovates on 6th and 7th Jan 2017. Events conducted in Technical Fest include Technical events Paper & poster presentation, CAD Modelling, Turbo secrets, Funk from Junk and non-technical events like Art gallery, open talk, Blind cricket, treasure hunt etc.
11. CAD Training programme on 06th January 2017 for Mechanical students.
12. AUTO QUIZ by students of Meknovates on 21st February 2017.
13. One-day Technical Paper presentation by Meknovates students on 28th February 2017.
14. Technical paper contest on 01st March 2017
15. Technical QUIZ by SAE on 03rd March 2017
16. Live model contest on 28th March 2017.
17. CVRMUN (Model United Nation) is conducted on 6th- 7th Sept 2017.
18. CAD Training Program is conducted on 8th-9th Sept 2017.
19. Three-day workshop on “Emerging Trends in Manufacturing” organized by Dr. M. Venkata Ramana, HOD and Dr.Venkatesha Prasanna, Professor on 21st, 22nd and 23rd December, 2017.
20. Two-day Technical fest “ENTORQUE” by Mechanical Engineering Students Association –

Meknovates on 4th and 5th Jan 2018.

21. Workshop on “Knowledge transfer on BAJA and GOKART” is conducted on 11th Jan 2018.
22. Two-day workshop on “Application of FEM through ANSYS” is conducted on 8th-9th Feb 2018.
23. Two-day workshop on “Mercedes Benz overhauling” is conducted on 15th-16th Feb 2018.

DETAILS OF GUEST LECTURES/ SEMINARS/ WORKSHOPS/AWARENESS CAMPS CONDUCTED BY EXTERNAL EXPERTS



A Guest Lecture on Sustainable Future Environment



Dr. B.G.Krishna Reddy – Guest Speaker, Former Professor, NITW



Entrepreneurship Awareness Camp



Entrepreneurship Awareness Camp



CAD/CAM for Enhanced Quality



Guest Speaker - Sri K. Sujayath Khan
Principal Director, CITD, Balanagar,
Co-ordinator Ms. M. Gayathri Vineela



Learning Outcomes



Guest Speaker -Prof Dr. P.G. Sastry, Former Professor,
NITW



The Science of Aircraft



Co-ordinator Mr. S. Rakesh



Engineering Research Methodologies



Co-ordinator Mr. H. Krishnamurthy Dora and
Ms. M. Gayatri Vineela



ROBO GRAVITY



Co-ordinator Mr. Abhilash



A Guest Lecture on 3D- Printing



Guest Speakers - Mr. C. Somasekhar and Srinivasan Ramanan, Open Brick Systems Pvt Ltd



Entrepreneurship Awareness Camp



Co-ordinators Ms. M. Gayatri Vineela, Mr. P. Sadanandam and Mr. P. Srinivas Reddy



SAE Club Inauguration



Mr. Vijay A Deshmukh –Chief Guest, TS Industrial Infrastructure Ltd., Hyderabad

Co-ordinators Mr. S. Rakesh, Mr. G. Naveen Kumar



Workshop on Automobile Engine Mechanics



Organised jointly with Robo sapians, New Delhi



A Guest Lecture on Recent Advances in Cutting Tools



Guest Speaker - Mr. S.K.L.N. Prasanna,
Officer – Training & Communication (Technical),
Guhring India Pvt. Ltd, Bengalur.



Geometric Dimensioning and Tolerances Guest Speaker- Sri.G.V.N. Murthy, Former Dy. G.M., HMT, Hyderabad.



Rebuilding of Automotive Engines



Guest Speaker -Sri.Y.Vijay Kumar, Former MD, APSRTC



Advances in Manufacturing in Aeronautical Field



Guest Speaker -Dr.J.John Rozario Jegaraj, Scientist, DRDL



Hydraulic and Solar Power in Telangana State



Guest Speaker - Mr. C. Radha Krishna, Project Director, TSGENCO

Staff Development Program (SDP) on
A hands on session on Solid Works
SDP on

Mr. Sameer and Mr. Vishwanath Srinivas

Practice Oriented course on UniGraphics

Guest Speaker -Mr. D. Sandeep Kumar

A Guest Lecture on

Guest Speaker -Dr. B.V. Reddi

Nano Materials: Wonders of Science & Technology

A Guest Lecture on

Guest Speaker - Prof Dr. P.G. Sastry
Former Professor, NIT Warangal

Outcome Based Engineering Education for enhanced
Employability

Health Awareness Camp for women

Guest Speaker -Dr. Mrs. T. Dedeepya Reddy
MBBS, MS(USA), MD (USA)

Entrepreneurship Awareness Camp

Co-ordinator Mr. H. Krishnamurthy Dora

DETAILS OF GUEST LECTURES DELIVERED AT OTHER COLLEGES BY OUR FACULTY

Events conducted in the past few academic years are given below.

- workshop on “**Engineering Research Methodology**” for two days on 17th & 18th January 2014 for the faculty members of the CVR College of Engineering.
- Three day workshop on “**The Science of Aircraft**” in collaboration with Tera Inc., Hyderabad on 23rd, 24th & 25th January, 2014
- Awareness program on preparation of automobile models for participating in national and international competitions like GOKART, GOLFKART etc..on 5th Feb 2014
- Two day workshop on **Robotics (Robo Gravity)** in association with AB Lab Solutions 28th Feb & 1st March, 2014.
- **Yantrica** in March, 2014 to train the students in the area of designing, manufacturing and simulation tools using our own laboratories like CAD/ CAM, Machine tools, Metrology Lab etc.
- Workshop on AUTO CAD on 15th March 2014
- Guest Lecture on “Geometrical Dimensions and Tolerances” by GVN Murthy, former DGM, HMT, was held on 23 February, 2015.
- Guest Lecture on “Retrofitting of Automotive Engines”, by Y. Vijaya Kumar, Ex-Director APSRTC was held on 10 March 2015.
- Industrial visit to Nuclear Fuel Complex, Hyd. On 18th March-2015
- Guest Lecture on “Manufacturing Techniques Used in Aeronautical Applications” was conducted by Dr. John Rozario Jegaraj, Scientist, DRDL, Hyderabad, on 22nd March 2015.
- Industrial visit to BHEL, Ramachandrapuram, Hyderabad on 16th April 2015
- Industrial visit to Dolphin Food industries-Hyderabad on 18th Aug-2015
- Guest lecture on Overview of Power generation in Telangana State by C.Radhakrishna, Project Director (Hydel), TSGENCO on 21st Aug-2015.
- Guest lecture on “Retrofitting of Automobile engines” by Sri Y.Vijayakumar, MD, TSRTC 3rd October -2015
- Industrial visit to HMT-Balanagar, Hyderabad on 18th October 2015
- Industrial visit to Vishakhapatnam Steel Plant on 11th Dec 2015.
- Industrial visit to CITD-Balanagar on 18th Dec-2015.
- Guest lecture on “Nano fluids” on 1st Jan-2016 by Dr V.Vasudevarao, Professor, university of South Africa.
- Visit to IMTEX-2016(exhibition) by a group of faculty on 24th January -2016
- Industrial Visit to NRB bearings Uppal, Hyderabad on 5th July 2016.
- Guest lecture by Dr.Sivaramakrishna, Associate Professor, OUCE, Osmania University, Hyd. on “3-D-Printing” on 18th July 2016.
- Guest lecture on “Warm forming” by Dr.S.K.Singh, Professor of GRIET, Hyderabad on 09th September 2016.
- Engineers day celebrations on 16th September 2016.
- Guest lecture on “Application of Jigs and Fixtures” by Mr. P.C. Prasad Former Sr. Manager HMT on 21st September 2016.
- Industrial visit to KTPS on 30th September 2016.
- Entrepreneurship awareness camp was conducted on 3rd – 5th October 2016 for Mechanical students.
- Industrial visit to Srisailem Power plant on 4th and 5th of October 2016
- Guest lecture on “Non destructive testing” by Mr.Santosh Kumar of Newton inspection services is on 16th December, 2016.
- A workshop on “Behavior of Composites” organized by Dr. M. Venkata Ramana, HOD and Dr.Venkatesha Prasanna, Professor, on 23rd & 24th December, 2016.
- 2- day - **Technical fest** “ENTORQUE” by Mechanical Dept association –Meknovates on 6th and 7th Jan 2017. Events conducted in Technical Fest include Technical events Paper & poster presentation, CAD Modelling, Turbo secrets, Funk from Junk and non technical events like Art gallery, open talk, Blind cricket, treasure hunt etc..

- CAD Training programme on 06th January 2017 for Mechanical students.
- Guest lecture on “Career in Robotics” by Dr.P.Chandrasekhar, former IDL, Hyderabad, on 25th Jan 2017.
- AUTO QUIZ by students of Mechnovates on 21st February 2017.
- One day Technical Paper presentation by Meknovates students on 28th February 2017.
- Technical paper contest on 01st March 2017
- Technical QUIZ by SAE on 03rd March 2017
- Live model contest on 28TH March 2017.
- Guest Lecture on Personality development by Swamy Bodamaya Ananda, Director Vivekananda Institute of Human Excellence on 20th July 2017.
- Guest Lecture on Career opportunities for Mechanical Engineering students by Dr. E .Munendar, Prof K.U College of engineering, Kakatiya University, Warangal on 28th July 2017.
- Guest Lecture on “Structural Analysis of fluidized bed heat Exchanger “by Srikrishna Dath, Former GM BHEL, Hyderabad on 3rd Aug 2017.
- Guest Lecture on “Engineering Simulation for physical product Development and manufacturing” by Sri Kuvilla Lulokose, Chief Technical Officer, ALTAIR on 10th Aug 2017.
- Industrial Visit to CITD on 30th Aug 2017.
- Industrial Visit to CITD 16th Sep 2017.
- CVRMUN (Model United Nation) is conducted on 6th- 7th Sept 2017.
- CAD Training Program is conducted on 8th-9th Sept 2017.
- Guest Lecture on “Geometrical Dimensioning and Tolerances” by Sri GVN Murthy, former DGM HMT on 12th October 2017.

INDUSTRIAL VISITS

DATE	INDUSTRY VISITED
12-10-2012	Nagarjuna Sagar Dam Hydel Power Plant
15-10-2012	Srisaillam Dam and Hydel Power Plant
10-06-2014	HMT Praga Division. Hyderabad
12-01-2015	HMT, Bala Nagar, Hyderabad
18-03-2015	Nuclear Fuel Complex, Hyderabad
18-03-2015	Dolphin Foods (India) Ltd., Brahmanpally, RR Dist.
02-04-2015	NRB Bearings, Hyderabad
16-04-2015	BHEL, Hyderabad
09 and 10-08-2015	KTPS, Kothagudem
18-08-2015	Dolphin Foods (India) Ltd., Brahmanpally, RR Dist.



Industrial Visit by 3rd Year Students to HMT Balanagar, Hyderabad



Industrial Visit by 3rd Year Students to KTPS, Kothagudem

DETAILS OF TEXT BOOKS WRITTEN BY FACULTY

1. Dr.T.A.Janardhan Reddy co-authored a text book entitled Production Drawing Practice to meet the curriculum requirements of B.Tech. Course (III year) in Production Drawing - Himalaya Publishers.
2. Dr.M.Venkata Ramana “Thermal Engineering” for Diploma Course – Hi-tech Publishers
3. Dr.K.Shashidhar “Mechanical Vibrations” – Adaptation Author – G.Kelly – TMH Publishers
4. Dr.Sowjanya book chapter in “Polymer Processing and characterization” - Taylor & Francis

DEPARTMENT OF MECHANICAL ENGINEERING



**MECHANICAL ENGINEERING DEPARTMENT
STAFF MEMBERS**



CENTRAL LIBRARY

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