

## DEPARTMENT OF MECHANICAL ENGINEERING

# MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY

Kalitheerthalkuppam, Puducherry 605107

## ABOUT THE DEPARTMENT

Undergraduate education (UG) course B.Tech in Mechanical Engineering is a comprehensive degree program. The goal of the Mechanical Engineering curriculum is to create a flexible undergraduate educational experience in Design, Mathematics, Modeling, computation, Quality management, Engineering science & humanities.

The Department of Mechanical Engineering has been continuously striving to make progress in Teaching and Research. The Department was started with an intake (UG) of 60 students in 2012 and 120 students from 2015. The Mechanical Department is well equipped with excellent laboratories to make the students to easily understand and study the latest research areas such as computational fluid dynamics, Mechanics of Robot, Aerospace and Defense field, etc and also has separate Department library houses best books in the technical field this vast reservoir of knowledge is a source of constant value addition to the students and faculty members the library's rich in manufacturing, design, metallurgy, drawing and materials science. To enhance the Technical Skills of the students, the Department also organizes various program such Value-added course, Quiz completion, Seminars, Workshops, Industrial visit and Guest lecturers which would make them globally competitive as well as students become an indispensable Engineer and earn the income they deserve.

The Mechanical Engineering Department was established in the year 2012. The department has established Manufacturing process lab, Dynamics of Machines, Material Testing and Measurement, CAD, CFD labs at an investment of about Rs. 2 Crores. The labs are equipped with world class HI-Tech equipments and Machineries to meet the latest Technological innovation.

## VISION

**"The Mechanical Engineering Department aspires to be acclaimed globally for renowned education and research to accelerate well qualified engineers who are creative, entrepreneurial and flourishing in advanced fields of engineering and research."**

## MISSION

**Higher Order Thinking:** To assure quality education to the students and broaden their profession to make them globally competent Mechanical Engineers.

**Continuous learning:** Nurturing vital state of art, research facility to provide students and faculty with outstanding opportunities to discover, illustrate, implement and disseminate wisdom.

**Competency:** To develop alliance with world class R&D organizations and Educational Institutions in India and overseas for teaching, research and consultancy services.

## Entrepreneurship:

To provide the students with academic environment of excellence, leadership and ethical guidelines needed for lifelong prospective career.

## Staff Activities

- ❖ Mr. A. Thiagarajan, Asst. Prof., published a paper on “Numerical Study on Jet Compressor with Forced Draft system for Entrainment Ratio Enhancement” in IJAFER, vol.3, pp.2478-2481.
- ❖ Mr. R. Muraliraja Asst. Prof., published a paper on “Influence of Nickel Recovery efficiency on Crystallinity and Micro hardness of Electroless Ni-P Coatings and Optimization using Taguchi Technique”, in tran. IMF. Maney publication.
- ❖ Mr. Vasanth.B, Ast. Prof., published a paper on, “Surface Roughness Prediction Depending on Process Parameters by Response Surface Methodology” accepted for oral presentation in International conference on future trends in Engineering and Technology – (ICFET-2015) organized by P.S.N.A college of Engineering and Technology., Dindigul.
- ❖ Mr. K. Selvam, Asst Prof., attended a National level workshop on “Materials for Automotive Industries (MAI 2015)” at Sri Manakula Vinayagar Engineering College on 12<sup>th</sup> September 2015.

## Department Activities

- ❖ On account of Energy Conservation week, an Awareness Rally was organized by the Department from 14<sup>th</sup> to 21<sup>st</sup> December, 2014. Er. T. Chanemougam, Executive Engineer, Electricity Department, Puducherry, Flagged off the rally and addressed the students for the significance of Energy conservation. The Students of Mechanical Engineering marched the rally from MIT Campus to Kalitheerthalkuppam Village by distributing the pamphlets for saving Electricity. This program was sponsored by Puducherry Electricity Department.
- ❖ The Department organized a One day workshop on “Industrial Safety and First Aid Practices” for the Students of Mechanical Engineering on 20<sup>th</sup> December 2015.
- ❖ Dr. A.V. Raviprakash, Professor, Mechanical Engineering, Pondicherry Engineering College, delivered a Guest Lecture on “Power of Positive Attitude” for the second and Third year students on 10<sup>th</sup> February 2015.



**Awareness Rally**



**Mr. K. Babu Nizam, Head –Operations, Rane Brake Lining Ltd, Puducherry inaugurated the workshop and delivered Lecture on Industrial Safety**

- ❖ Mr. R. Karthick, Assistant Director, Solar Energy Resource Assessment Cell, National Institute of Wind Energy delivered a Guest Lecture on “Solar Radiation Resource Assessment” for the First Year students on 3<sup>rd</sup> March 2015.
- ❖ The department conducted a Two Weeks Value Added Course on “AutoCAD” for the Second year students in association with CAD centre, Puducherry.
- ❖ The Department organized a Two Weeks Aptitude Training Programme for the Third year Students.
- ❖ An Industrial visit to “M/S Co-generation Plant @ EID Pary(I) Ltd., Nelikuppam on 21<sup>st</sup> march 2015”
- ❖ The Department coordinated the paper presentation session during national level

symposium “MITILENCE 2015” on 13<sup>th</sup> and 14<sup>th</sup> February 2015.

- ❖ About 24 participants enthusiastically participated and presented 12 papers in the National Conference (SCAN’ 15), Dr. B. Prabu Professor in



Mechanical Engineering, PEC, was the Chairman of the session and evaluated the papers.

- ❖ The department conducted the “Technical Quiz Competitions” for the second and third year students. The winners were awarded with cash prizes under the Aegis of Department Association during the months of January and March 2015.
- ❖ The department coordinated the paper presentation session during the national level conference on “Systems, Computation, Automation and Networking ‘SCAN 15’, organized by the Department of Computer Science and Engineering on 6<sup>th</sup> March, 2015.
- ❖ On account of World Environment Day, a Mass Rally was organized by Manakula Vinayagar Institute of Technology, Puducherry in Association with The Institutuin of Engineers (India) Puducherry state center on Monday, 22<sup>nd</sup> June 2015@ 4.00.p.m. The chief guest, Shri G. Ragesh Chandra, I.A.S., Secretary to Govt. – Education, Govt. of Puducherry, flagged off the rally. About 2000 students from various schools participated.
- ❖ Shri M. Danasekaran, Chairman and Managing Director, SMVE trust, presided over the occasion. Shri. S.V. Sugumaran, Vice Chairman, Dr. K. Narayanasamy, Secretary of SMVE, Trust felicitated the occasion. Manakula Vinayagar Institute of Technology, welcomed the gathering. Dr. R.Nakkeran, chairman, the Institution of

Engineers, India, Puducherry state center & Head, Dept. of Electronics, Pondicherry University and Dr. K. Pajaniradja@kicha, Honorary Secretary, The Institution of Engineers, India, Puducherry state center & Professor, Mechanical Engineering, Pondicherry Engineering College, also took part in the grand rally.

- ❖ School students from Sri Aravindar Hr Sec school, Swami Vivekananda Hr Sec School, Presidency Hr. sec School, Bonne Nehru Hr. Sec School, Don Bosco Hr Sec School, K.S.P. hr Sec School, Petit Seminare Hr. sec school, Vivekananda Hr sec school, Navalur Nedunchezhiyan Govt Hr sec School along with the college students of Manakula Vinayagar Institute of Technology and Sri Manakula Vinayagar polytechnic college participated in this grand occasion. Totally 2000 students participated and created an awareness among the public.
- ❖ A guest lecture was organized on 14th July 2015 for the students on the topic “Final year project and its relevance to future career for engineers”
- ❖ An interactive social awareness session on the topic, Suggestions for traffic control in Pondicherry, was conducted on 3rd September, 2015.
- ❖ A One day Workshop on “5-S AND KAIZEN PRACTICES” was conducted on 09th September 2015.
- ❖ A guest lecture was organized on the topic “Importance of Mechanical, Electrical & Plumbing co-ordination in Construction Industry” on 11th September 2015.
- ❖ A 5 days Faculty development program was organized by ICTACT on the topic “Autodesk AutoCAD 2015” on 12th December 2015.
- ❖ A guest lecture was organized on 24th Feb 2016 on the topic “CAD & CAE Techniques in Product Development”
- ❖ A One day Workshop on “Lean Manufacturing” was conducted for Mechanical Engineering Students on 05th March 2016.
- ❖ A one day symposium was organized on 08th March 2016 on the topic “Application of statistics in industry”.
- ❖ A guest lecture was organized on 10th March 2016 on the topic “Application on 3D Printing”.

## Student activities

- ❖ Mr. Surender.R and Mr. Surrendar.P of Third year, won the First Prize in the event “Technical Quiz” conducted by Sri Manakula Vinayagar Engineering College on 6<sup>th</sup> & 7<sup>th</sup> February 2015.
- ❖ Mr. Ragavan A, Mr. Amal Rajee of Third year, won the Second Prize In the events namely “Technical Quiz, A minute Waltz & Anagram”, conducted by Sri Manakula Vinayagar Engineering College on 6<sup>th</sup> & 7<sup>th</sup> February 2015.
- ❖ Mr. Bharath Kumar.S, Mr. Nirmal.S of Third Year, won the third prize in the event “Auto Assembly” conducted by Sri Manakula Vinayagar Engineering College on 6<sup>th</sup> & 7<sup>th</sup> February 2015.
- ❖ All second year students participated in the National level technical workshop at MIT Madras on 25<sup>th</sup> & 26<sup>th</sup> of January 2015.
- ❖ MR. Rajaganapathy. R, Mr. Patrick Amal Infant, Mr. Rajkumar of second year, participated in the National Level Technical workshop conducted by the Pondicherry Engineering College on 4<sup>th</sup> & 5<sup>th</sup> of March
- ❖ Mr.S.Santhosh, Mechanical II year student participated in Mega Project Expo organized in Sri Venkateswara College of Engineering and Technology dated on 21/1/16 and won 3<sup>rd</sup> prize
- ❖ Mr.Samuel Vijayakumar, Mechanical II year student participated in Mega Project Expo organized in Sri Venkateswara College of Engineering and Technology dated on 21/1/16 and won 3<sup>rd</sup> prize
- ❖ Mr.B.Gokulnath, Mechanical II year student participated in Mega Project Expo organized in Sri Venkateswara College of Engineering and Technology dated on 21/1/16 and won 3<sup>rd</sup> prize
- ❖ Mr.V.V.Rajan, Mechanical II year students participated in INTECH16 organized in Madras Institute of Technology dated on 12<sup>th</sup> and 13<sup>th</sup> Feb 2016.
- ❖ Mr.S.Santhosh, Mr.B.Gokulnath and Mr.Samuel Vijayakumar, Mechanical II year students participated in AUTIMEET16 organized in Madras Institute of Technology dated on 26<sup>th</sup> and 27<sup>th</sup> Feb 2016 and won amount Rs.5000.
- ❖ Toppers:  
2016 Passing out batch (till 7th sem):  
1. SURENDHAR .R-Mech/IV year-8.94  
2. GOGULNATH.B-Mech/IVyear-8.91  
3. SARAVANA PANDIAN.SMech/IVyear-8.68

### Faculty Publications/Publications in conferences & journals:

| Sl. No | Name of the Journal Year of publication (Impact factor, Vol. no, Page no)                                | Title of the paper   | Presented / published | Name of Staff        |
|--------|--|--|-----------------------|----------------------|
| 1      | Science Direct , Materials Today: Proceedings 2 (2015): pp 3627-3637.                                    | Studies on the mechanical properties of carbon black/halloysite nanotube hyrib fillers in nitrile rubber nanocomposites                        | Published             | Manikandan. K et al  |
| 2      | International Journal of applied engineering research. ISSN 0973-4562, VOL 10, No.50( 2015)pp 512-516    | Comparative evaluation of stress concentration of axially compressed dented plates using photoelasticity technique and finite element analysis | Published             | Karthikeyan. R et al |
| 3      | International Journal of applied engineering research. ISSN 0973-4562, VOL 10, No.50( 2015)pp 640-645    | Numerical analysis of axially compressed dented square plates on ultimate strength with distributed initial imperfections                      | Published             | Karthikeyan. R et al |
| 4      | International Journal of applied engineering research. ISSN 0973-4562, VOL 10, number 3 2015 pp2474-2477 | A simple method for reliability assessment of thin plates under uniaxial compression   | Published             | Karthikeyan. R et al |

| Sl. No | Name of the Conference Year of publication/ Hosting College  | Title of the paper  | Presented/published     | Name of Staff                           |
|--------|--|---|-------------------------|---|
| 1      | Malaysian international tribology conference " held on 16-17 Nov- 2015 pp-1-2 conducted by malaysian tribology society | Electroless Ni-P-Cu-CuO composite coatings on mild steel with zwitterionic surfactant | Presented and Published | R.Muraliraja                            |
| 2      | Session on waste management, held on 12 october 2015 by chemin C&I Pvt. Ltd., Pudhucherry                              | Session on waste management   | Participated            | Mr. K. Manikandan & Mr. K. Bharathiraja |
| 3.     | Conference on future automotive design held on 9 october 2015 at hotel Le Royal Meridien , Chennai                     | Conference on future automotive design  | Participated            | Dr. B. Radjaram                         |

**Achievement by students in sports:**

**Jan 2016**

| S. No | Name of the Student | Year/Sem | Name of the sports event                       | Date of sports event / extracurricular activity | Hosting Institution    | Position/ Prize, if any received |
|-------|---------------------|----------|--|---|------------------------|----------------------------------|
| 1.    | M.Jayakumar         | III/VI   | South Indian Inter Engineering Collegiate T-20 | 4/01/16 to 12/01/16                             | SR Engineering college | Winner<br>Amt Rs.20,000          |
| 2.    | V.Karthikeyan       | IV/VIII  | South Indian Inter Engineering Collegiate T-20 | 4/01/16 to 12/01/16                             | SR Engineering college |                                  |

**Feb 2016**

| Sl. No | Name of the Student | Year/Sem | Name of the sports event        | Date of sports event / extracurricular activity | Hosting Institution  | Position/ Prize, if any received |
|--------|---------------------|----------|---------------------------------|---|----------------------|----------------------------------|
| 1.     | M.Jayakumar         | III/VI   | National level sports - cricket | 10/2/16-14/2/16                                 | Sastra University    | Runner<br>Amt Rs.8000            |
| 2.     | V.Karthikeyan       | IV/VIII  | National level sports - cricket | 10/2/16-14/2/16                                 | Sastra University    |                                  |
| 3.     | J.Dhamodaran        | IV/VIII  | Volley ball                     | 4/2/16-7/2/16                                   | VIT                  | Winner<br>Amt Rs 16,000          |
| 4.     | T.Ananda Rajann     | II/IV    | Volley ball                     | 4/2/16-7/2/16                                   | VIT                  |                                  |
| 5.     | T. Amerdha Rajann   | II/IV    | Volley ball                     | 4/2/16-7/2/16                                   | VIT                  |                                  |
| 6.     | J.Dhamodaran        | IV/VIII  | Volley ball                     | 26/2/16-27/2/16                                 | VNR VJIET, Hyderabad | Winner<br>Amt Rs 15,000          |
| 7.     | T.Ananda Rajann     | II/IV    | Volley ball                     | 26/2/16-27/2/16                                 | VNR VJIET, Hyderabad |                                  |
| 8.     | T. Amerdha Rajann   | II/IV    | Volley ball                     | 26/2/16-27/2/16                                 | VNR VJIET, Hyderabad |                                  |

**Placement Details**

| SL.NO. | REG. NO. | NAME OF THE STUDENT   | COMPANY                  |
|--------|----------|-----------------------|--------------------------|
| 1      | 12TB1401 | AMAL REJEE            | KAIZEN CNC CENTER        |
| 2      | 12TB1402 | ANANDHA KUMAR R       | VEE TECH                 |
| 3      | 12TB1404 | BALUMAHENDRA .R       | IDBI BANK                |
| 4      | 12TB1405 | BHARATHKUMAR          | AAGNA CORPORATE SERVICES |
| 5      | 12TB1408 | DHAMODARAN .J         | IDBI BANK                |
| 6      | 12TB1410 | GOGULNATH .B          | IDBI BANK                |
| 7      | 12TB1411 | GOKUL .V              | AQUA PURE                |
| 8      | 12TB1413 | HARIHARAN .G          | TCS                      |
| 9      | 12TB1414 | HEMACHANDIRAN .P      | AAGNA CORPORATE SERVICES |
| 10     | 12TB1415 | JAYABALAJI .M         | SUTHERLAND (NV)          |
| 11     | 12TB1416 | KALAIVANAN .K         | VEE TECH                 |
| 12     | 12TB1419 | KARTHIKEYAN .K        | AAGNA CORPORATE SERVICES |
| 13     | 12TB1421 | MANIKANDAN .R         | VEE TECH                 |
| 14     | 12TB1422 | MOHANRAJ .T           | SUTHERLAND (NV)          |
| 15     | 12TB1423 | NIRANJAN .S           | AQUA PURE                |
| 16     | 12TB1424 | NIRMAL .S             | TCS                      |
| 17     | 12TB1426 | POOVARASU.A           | AAGNA CORPORATE SERVICES |
| 18     | 12TB1427 | PRADEEP .R            | ACCENT PHARMA            |
| 19     | 12TB1429 | PRASANNA RAM KUMAR .S | AQUA PURE                |
| 20     | 12TB1432 | SHARAN .P             | TCS                      |
| 21     | 12TB1433 | SIVA SUBRAMANI .M     | AAGNA CORPORATE SERVICES |
| 22     | 12TB1434 | SIVASUBRAMANIAN .V    | KAMAI ELEVATORS          |
| 23     | 12TB1435 | SRIRAM .A             | AQUA PURE                |
| 24     | 12TB1436 | SURENDHAR .R          | TCS                      |
| 25     | 12TB1437 | VIGNESH .K            | IDBI BANK                |
| 26     | 12TBL065 | KARTHIKEYAN .V        | VEE TECH                 |
| 27     | 12TBL066 | MANOBALAN. M          | AAGNA CORPORATE SERVICES |
| 28     | 12TBL067 | MEER AZARUDEEN.M      | IDBI BANK                |
| 29     | 12TBL068 | PRADHEEP KUMAR.R      | VEE TECH                 |
| 30     | 12TBL069 | SACHCHANDAN.A         | VENTURA SECURITIES       |
| 31     | 12TBL070 | SARAVANAPANDIAN.S     | ALTRAN                   |
| 32     | 12TBL074 | SURENDER.P            | IDBI BANK                |
| 33     | 12TD1420 | DHEEPANRAJ.M          | AAGNA CORPORATE SERVICES |
| 34     | 12TH1425 | KRISHNAKUMAR.M        | AQUA PURE                |

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