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# XXXXII Academic Council

## Department of Mechanical Engineering

## 27th BOS meeting minutes

Minutes of the 27th BOS meeting-Mechanical Department held on 16-10-2024 in Hybrid mode in room no.M118(HOD Chamber) from 2:00 pm onwards.

Following is the link for the meeting

https://kluniversity.webex.com/kluniversity/j.php?MTID=m314a153f7b7fe689a4f98696ed769e77

The following members were present

1. Dr.T.Vijaya Kumar, Associate Professor, HOD-ME & Chairman BOS
2. Dr. A.Jagadeesh, Director-FED, Professor-ME
3. Dr. P. V. Chalapathi, Professor, Dean Faculty affairs
4. Dr. A.Srinath, Dean Skill Development & progression
5. Dr. D.V.A. Rama Sastry, Associate professor
6. Dr.G.Diwakar, Professor, PG Coordinator
7. Dr. V .L.Mangesh, Professor
8. Dr. P. Kasi V Rao, Associate Professor, Associate Dean Academics
9. Dr.K.V.Durga Rajesh, Associate Professor, Deputy HOD
10. Dr.B.Kiran Kumar, Associate professor
11. Dr .T. Kanthimathi, Assistant Professor, Professor I/C Academics
12. Dr.P.Raj Kumar, Assistant professor
13. Dr.A.Venu Gopal, Professor & Dean Academics, NIT Warangal
14. Dr. P. Srinivasa Rao, Global Training Head, Cyient Technologies, Hyderabad
15. Dr.K.Ravi Teja, Manager, Hyundai R & D Division, Hyderabad

The following members were Absent

1. Dr. K.RamaKrishna, Dean-Quality, Professor-ME
2. Dr.S.N.Padhi, Professor, Group Head-Design & Manufacturing
3. Dr. K.V. Narasimha Rao, Professor-ME, Associate Dean Quality
4. Dr.S.S.Rao, Professor, Group Head-Smart Manufacturing
5. Dr.N.B.V.Prasad, Dean Placements & International Internships
6. Dr. R.Vijay Kumar, Senior Manager, R & D, HAL Bangalore.
7. Dr. Gnana Murthy, Professor-Dept. of ME, IIT Madras

Dr. T.K. RAMA KRISHNA RAO
PRINCIPAL
College of Engineering
Koneru Lakshmaiah Education Foundation
(Deemed to be University)
Green fields, VADDESWARAM-522 302
Guntur District, Andhra Pradesh

Dr. T. VIJAYA KUMAR 16/10/24
HOD-Mechanical Engineering
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# AGENDA and RESOLUTIONS

## AGENDA ITEM-1

| | |
|---|---|
| Agenda:To consider the department achievements during the A.Y. 2024-25 Odd Sem | Resolution Passed: The achievements made by the department is appreciated and forwarded to the academic council |

BOS chairman presented the following achievements of students & faculty of the department during 2024-25 odd sem to the BOS members

**Honors received by Faculty:**

- Dr. B. Nageswar Rao, Dr. M. Nageswar Rao, Dr. Atul Bhattad were honored as top 2% most cited scientists by Stanford University and Elsevier

**Honors received by students:**

- Mr. P. Abhiram Chowdary (2300070010), Won a grant of Rs. 40,000/- for his idea "Smart Car Parking" during Ideathon held at K L University by ACIC-KL Startups Foundation

**Placement Details:**

- 1 student was selected by Sansyu (Japanese Company) with 25 LPA.
- 1 student was selected Shikoku Kakoki Company Ltd. (Japanese Company) with 31 LPA.
- 1 student was selected for Deloitte with 7.6 LPA.
- 3 students were students selected for Procmart with 3 LPA.

**Ph.D Details:**

| S. No. | Dept. | Name of the Faculty/Scholar | Name of the Supervisor | Month and Year |
|---|---|---|---|---|
| 11 | ME | K M V Ravi Teja | Dr. B. Nageswara Rao | September 2024 |
| 12 | ME | A Sirisha Bhadrakali | Dr. D.V.A. Rama Sastry | September 2024 |
| 13 | ME | A Munitanuja | Dr. B. Nageswara Rao | September 2024 |

**Papers/Patents Published and papers presented by faculty:**

- 74 papers were published in International Journals in the calender year 2024 till date
- 2 Design and 3 utility patents were published in the present calender year till date.

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BOS members congratulated the award winners and appreciated the efforts made by the department. The significant events of the 2023-24 Even Sem are given in **Annexure-1.**

**AGENDA ITEM-2**

| | |
|---|---|
| Agenda:To approve the resolutions made in DAC meeting held on 08-10-2024 | Resolution Passed: The resolutions made in DAC are approved and recommended the same to the Academic Council for further approval. |

BOS Chairman presented the following DAC deliberations to the members

1. Mr. P.V.S.Rama Krishna Sarma.(2100079010), requested to include the simulation softwares other than Ansys like Hypermesh in regular courses.
   It is proposed to include the Hypermesh in Finite Element Analysis course in addition to Ansys Software.
2. Mr. K.Tilak(2100079041) and Ms.K.Eesha (2300049018), requested to include CATIA modelling tool instead of Autodesk Fusion 360.
   It is proposed to include CATIA in Visualization & Modelling of Engineering Design course instead of Autodesk Fusion 360 which is taught as certification course to all students. Dr. V.L. Mangesh replied to the student that it is not possible to teach all soft wares in the span of four years so, students have to learn few things on their own based upon their interest. He also suggested to do mathematical modelling in addition to simulation for final year project which gives more weightage.
3. Dr.G.Murali, suggested to validate the simulation results with the existing or published data to make the final year projects more worthy for publication in the journals
4. Final Year students Mr.Tilak and Mr. Rama Krishna complained that they are not able to participate in the Go-Kart events or in pit due to time constraints.
   HOD, Dr.T.Vijaya Kumar suggested to the students that if they are interested to participate in GO-Kart events they need to stay beyond working hours and complete the task.
5. IInd Year students Mr.Joseph (2300070015) & Ms.Eshitha (2300070003) complained about the laboratory equipment in MOS and FMHM lab. They said the readings obtained by the UTM and the flow sensors in these labs are giving fluctuating results for each batch.
   Dr.T.Vijaya Kumar-HOD informed students that the equipment will be repaired and the process is already started.
6. Mr. Sravan Kumar(2300070012) complained that Gas welding and TIG welding machine is not working in the manufacturing lab.
   HOD replied to students that new Gas welding machine is purchased and it will be made available once it is installed.
7. Mr.Joseph (2300070015) requested to include lab to Basic Electrical Engineering course which is very much useful during projects.

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It is proposed to include lab for Basic Electrical Engineering course for the upcoming Y25 admitted batch and for Y23 & Y24 batch students it is proposed to arrange a workshop on this lab so that students will get good knowledge on the electrical equipment.

8. Dr.V.L.Mangesh informed to the members that the project review presentation of practise school/internship students is far better than the in house projects. He insisted that the guides should encourage students to do mathematical modelling instead of simply doing simulation and presenting the results.
9. Dr.V.L.Mangesh proposed to include Professor of Practice to thermal related course which includes boilers and power plants concepts.
10. Dr.B.Kiran Kumar suggested in the course closure minutes of 2023-24 Even Sem, to use power tools in workshop practices lab instead of manual tools since all most all industries are using power tools.
    It is resolved to put forth the suggestion to the higher authorities for the purchase of power tools in workshop lab.
11. Dr.B.Kiran Kumar suggested in the course closure minutes of 2023-24 Even Sem, to arrange industrial visits for the course Modern Manufacturing Processes, so that students will be able to understand the latest manufacturing tools used in the industries.
    Industrial visits are arranged for each batch of students in every semester. It is resolved to arrange the visits to the manufacturing industries using modern tools to make students more acquainted with the manufacturing practices in the industries.
12. Dr.T.Parameshwaran Pillai, professor, Anna University, Trichy, appreciated the efforts in framing the curriculum.
    Chairman DAC, thanked the shareholder for his appreciation.

The DAC minutes are given in **Annexure-2**
Detailed Feed back analysis and action taken report is given in **Annexure-3**

**Agenda item-2**

| | |
|---|---|
| Agenda-2: To discuss on the inputs given by 2024-25 Even Sem Course Coordinators | Resolution: It is resolved to put forth the recommendations given by course coordinators in the upcoming BOS |

No recommendations were made by the course coordinators

**Agenda Item-3:**

| | |
|---|---|
| Agenda: To approve the B.Tech curriculum of Y24 admitted batch students and modifications proposed for Y23 batch curriculum | Resolution Passed: It is resolved to approve the curriculum of Y23 and Y24 admitted batch B.Tech students and to recommend the same to academic council for further approval. |

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Following are the deliberations made in the meeting in the curriculum of Y24 and Y23 admitted batch

- Department of ECE proposed "Nanotechnology and Optoeletronics" specialization under Biomedical Instrumentation cohort (E04), for Y24 admitted batch students.
- Department of EEE proposed "AI and Autonomous Systems" specialization under Smart Mobility and Autonomous Systems cohort for Y23, Y24 admitted batch students.
  Since we are following NEP for campus the specializations proposed by other departments are applicable to Mechanical Branch students.
  Detailed list of courses for these specializations is given in **Annexure-4**.
- Dr.Ravi Teja, external member enquired about the Hypermesh tool in Finite element analysis course and Autonomuous vehicle course in Automotive & Energy Engineering specialization, Dr.Rama Sastry Associate Professor replied that geometric clean up and mesh editing is done using Hypermesh and analysis using Ansys. Dr.V.L.Mangesh, professor replie that the autonomous vehicle course I offered as multidisciplinary for all branch students.
- The course structure and syllabus of Y24 admitted batch students is designed in line with the requirements of industry, societal needs. The curriculum also incorporated the feedback received from stake holders.
  It is resolved to propose the structure and curriculum of Y24 admitted batch B.Tech students
  The course structure of Y24 admitted batch is given in **Annexure-5.**

**Agenda Item-4:**

| | |
|---|---|
| Agenda: To approve the curriculum of M.Tech-Machine Design and M.Tech-Thermal Engineering programs of Y24 admitted batch students | Resolution Passed: It is resolved to approve the curriculum of Y24 admitted batch M.Tech-Machine Design and M.Tech Thermal Engineering programs and to recommend the same to academic council for further approval. |

- Chairman BOS presented the the course structure of 2024-25 admitted batch M.Tech-MD and M.Tech-TE programs.
  It is resolved to approve the course structure of 2024-25 admitted batch M.Tech-MD and M.Tech-TE programs and put forth the same in the upcoming BOS.

The course structure of M.Tech-MD and M.Tech-TE programs is given in **Annexure-6**.

Agenda Item-5

| | |
|---|---|
| Agenda-8: Any other point | Resolution: No other point was raised by the members |

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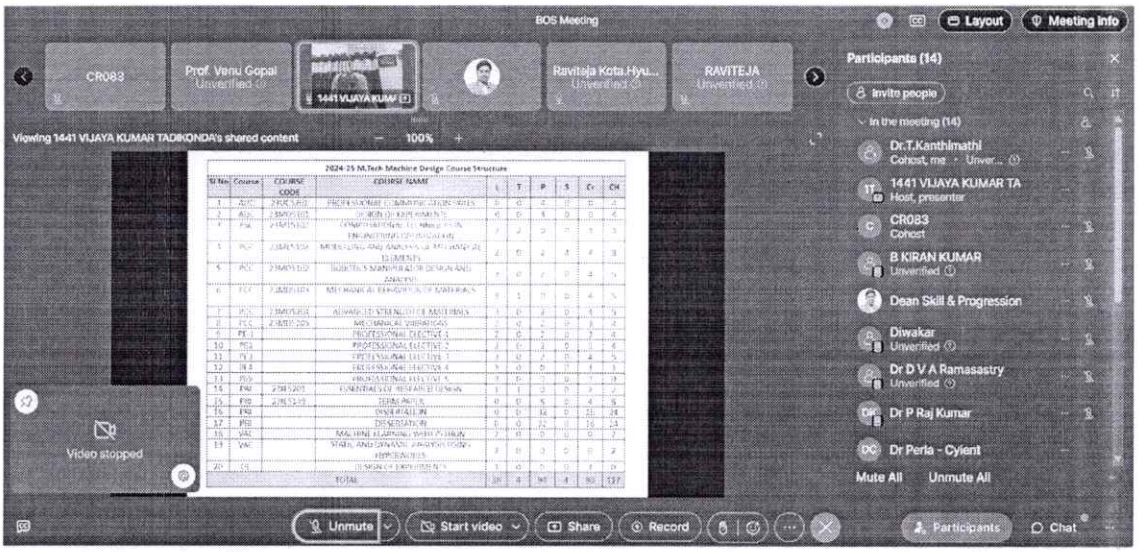
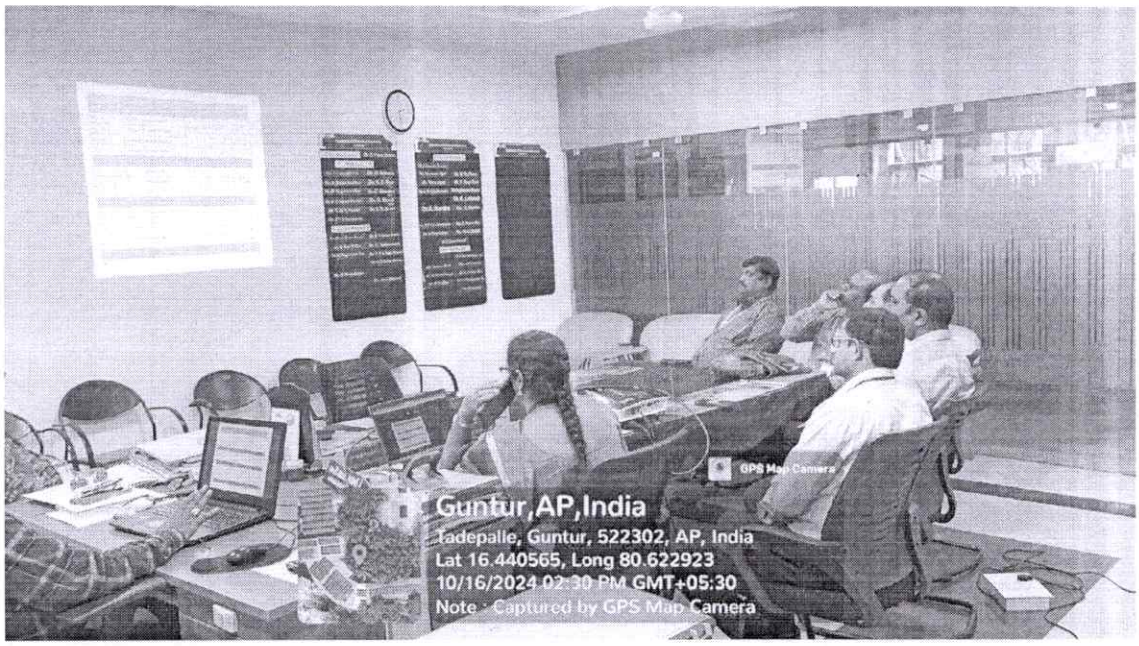
## Meeting Photos:

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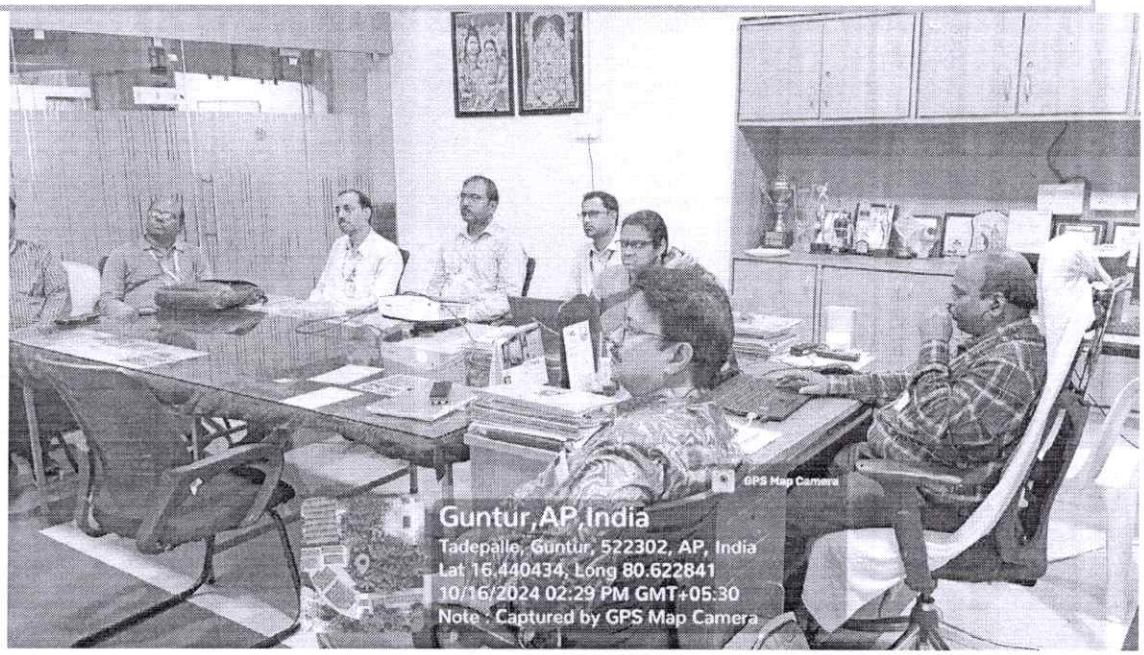


Professor I/C Academics

Chairman-BOS 16/10/24

HOD-ME

**Dr. T. VIJAYA KUMAR**
**HOD-Mechanical Engineering**
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# K L E F
## Department of Mechanical Engineering
## Significant Events happened in the Department from July-2024 to till date

### 1.0 Honours Received

#### 1.1 Honours received by Faculty

| Dept. | Name of the Faculty | Details of Honors | By |
|---|---|---|---|
| ME | Dr. B. Nageswara Rao | 2024 - Top 2% most cited scientists | Standford University and Elsevier |
| ME | Dr. M. Nageswara Rao | | |
| ME | Dr. Atul Bhattad | | |

#### 1.2 Honours received by Students

| Dept. | Name of the Student | Details of Honors | By |
|---|---|---|---|
| ME | Mr. P. Abhiram Chowdary (2300070010) | Won a grant of Rs. 40,000/- for his idea "Smart Car Parking" during Ideathon | Ideathon held at K L University by ACIC-KL Startups Foundation |

#### 1.3 Placements Details

| Sl. No. | Company Name | No. of students selected | Package (in Lakhs) | Company profile |
|---|---|---|---|---|
| 1 | Sansyu (Japanese company) | 1 | 25 LPA | |
| 2 | Shikoku Kakoki Co., Ltd (Japanese company) | 1 | 31 LPA | |
| 3 | Deloitte | 1 | 7.6 LPA | |
| 4 | Procmart | 3 | 3 LPA | |
| 5 | | | | |


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## 1.4 Ph.D. awarded

| S. No. | Dept. | Name of the Faculty/Scholar | Name of the Supervisor | Month and Year |
|---|---|---|---|---|
| 1 | ME | K M V Ravi Teja | Dr. B. Nageswara Rao | September 2024 |
| 2 | ME | A Sirisha Bhadrakali | Dr. D.V.A. Rama Sastry | September 2024 |
| 3 | ME | A Munitanuja | Dr. B. Nageswara Rao | September 2024 |

## 2.0 Research Publications

### 2.1 Number of Papers Published by Faculty

| S. No | Dept. | National Journals | International Journals |
|---|---|---|---|
| 1 | ME | | 74 till date for Calendar year 2024 |

## 3.0 Consultancy , Patents And Citations

### 3.2 Patents

| Patent Type | This Calendar Year | | | Cumulative | | |
|---|---|---|---|---|---|---|
| | Design | Utility | Plant | Design | Utility | Plant |
| Filed | 0 | 0 | 0 | 0 | 0 | 0 |
| Published | 2 | 3 | 0 | 281 | 32 | 0 |
| Granted | 0 | 0 | 0 | 0 | 1 | 0 |
| Licensed | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2** | **3** | **0** | **281** | **33** | **0** |

### 3.3 Citations

- Dr. B. Nageswara Rao, Professor in ME has 423 citations in 2024 till date with total citations of 4505 with h-index 32.
- Dr. G. Murali, Professor in ME has 297 citations in 2024 till date with total citations of 910 till date with h-index 16.
- Dr. A. Jagadeesh, Professor in ME has 181 citations in 2024 till date with total citations of 1012 till date.
- Dr. K. Rama Krishna, Professor in ME has 93 citations in 2024 till date with total citations of 1189 with h-index 20.

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## 4.0 Seminars / Workshops

### 4.2 Conferences/workshop/seminar Conducted by the Department through Virtual/Offline Mode

| S. No. | Dept. | Conference/Workshop/FDP/Seminar |
|---|---|---|
| 1 | ME | Workshop on "EV Vehicle Assembly Operations and Fault detection" by Gutta Jithendra Nath, Entrepreneur, ZEM (Zero Emission Mobility) Vehicles, Kanuru, Vijayawada on 04-10-2024 |

## 5.0 Guest Lectures/Webinar

### 5.1 Guest Lectures/Webinar Arranged through Virtual/Offline Mode

| S. No. | Dept. | Name of the Event | Date | On Topic |
|---|---|---|---|---|
| 1 | ME | Visit of Foreign Professor 'Dr. Filipe Fernandes' from University of Coimbra, Portugal to KLEF (Deemed to be University) to teach and engage with our academic community | 22nd July 2024 (Monday) to 27th July 2024 (Saturday) | Mechanical Engineering Course 'Manufacturing Technology - 22ME3313' |
| 2 | ME | Conducted Alumni Guest Lecture on **"Overview on Mechanical Industries & Growth Opportunities"** by Mr. Venkata Kumar Kancharla (Y0-Batch Y0IP224), Head-Production Engineering Department, TATA Hitachi, Dharwad, India, 2000-2004 batch of Industrial and Production Engineering, conducted by Smart Manufacturing Cohort | 24-08-2024 | Overview on Mechanical Industries & Growth Opportunities |
| 3 | ME | Conducted Alumni Guest Lecture on **"Industrial Evolution in Green Hydrogen"** by Mr. R Bala Venkata Murali (11207003), Senior Process Engineer, TATA Consulting Engineers, Bangalore, India., 2011-2013 batch of M.Tech (Thermal Engineering), conducted by Smart Manufacturing Cohort | 25-09-2024 | Industrial Evolution in Green Hydrogen |

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| | | | | |
|---|---|---|---|---|
| 4 | ME | Conducted Webinar on **"Digital Manufacturing, Zero Defects and Six Sigma"** Mr. Khadar Basha Abdul, Technology Program Manager for Element Materials Technology, Overseeing Operations across the UK, Europe and East Asia regions, conducted by Smart Manufacturing Cohort | 26-09-2024 | Digital Manufacturing, Zero Defects and Six Sigma |
| 5 | ME | Conducted Industry Expert Guest Lecture on **"Technology familiarization on Additive Manufacturing, 3D Scanning, Reverse Engineering and the future with Industry 4.0"** by Mr. P Srimannarayana Raju, Engineer – Design and Development, Intech Additive Solutions Pvt. Ltd., Bangalore, conducted by Smart Manufacturing Cohort | 28-09-2024 | Technology familiarization on Additive Manufacturing, 3D Scanning, Reverse Engineering and the future with Industry 4.0 |

| 5.2 | **Guest Lectures / Keynote sessions Delivered by our Faculty in other Colleges / Universities** |
|---|---|

| S. No. | Dept. | Name | At | Date | On Topic |
|---|---|---|---|---|---|
| 1 | ME | Dr. G. Murali, a distinguished professor of Mechanical Engineering and Alternate HOD of IRD at KL University, was invited to deliver a guest lecture at Aditya University, Surampalem, Kakinada, Andhra Pradesh. On 12-08-2024, he addressed the mechanical engineering students on the topic " An Overview of E-Vehicle Battery Cooling and Heating Technology" | Aditya University, Surampalem, Kakinada, Andhra Pradesh | 12-08-2024 | An Overview of E-Vehicle Battery Cooling and Heating Technology |

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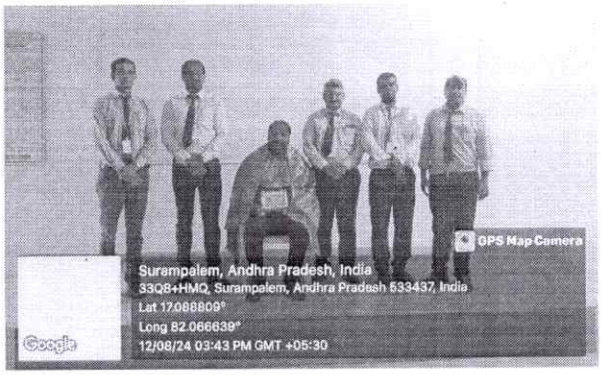


| 6.0 | NSS Activities conducted through Virtual Mode |
|---|---|

| S. No. | Dept. | Details of NSS Activities | Conducted On |
|---|---|---|---|
| 1 | ME | Independence Day Celebrations | 15-08-2024 |
| 2 | ME | Gandhi Jayanthi and Koneru Lakshmaiah gari vardhanthi, RSS events | 02-10-2024 |



Vijay Kumar 16/10/24
Dr. T. VIJAYA KUMAR
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HOD-ME 16/10/24

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# KLEF

## DEPARTMENT OF MECHANICAL ENGINEERING

## MINUTES OF DEPARTMENT ACADEMIC COMMITTEE (DAC)

**Date: 08-10-2024**

The 26th Department Academic Committee (DAC) Meeting was conducted at 3:00 P.M. on 08/10/2024 in HOD Cabin.`

**Agenda of the Meeting:**

1. To discuss on the feedback given by the stakeholders on curriculum and put forth the recommendations in the upcoming BOS
2. To discuss on the revisions and modifications suggested by the course coordinators of 2024-25 Even Sem and put forth the same in the upcoming BOS for further approval.
3. To discuss about the curriculum and syllabus of Y24 admitted batch students and to put forth the same in the upcoming BOS.
4. To discuss 2024-25 M.Tech-Machine Design and M.Tech-Thermal Engineering programs
5. Any other point with the permission of the chair.

**The following members were present:**

1. Dr. T. Vijaya Kumar, Associate Professor & HOD, Chairman
2. Dr. S. N. Padhi, Professor & Cohort Professor In charge-Engineering Design, Member
3. Dr. S.S Rao, Professor, Cohort Professor Incharge-Smart Manufacturing, Member
4. Dr. G. Murali, Professor, RPAC & Cohort Professor Incharge-Energy & CFD, Member
5. Dr. G. Diwakar, Professor, PG Coordinator, Member
6. Dr.V.L.Mangesh, Professor, Dept. Students projects and Internship Coordinator
7. Dr.A.V.S.Ram Prasad. Associate Professor
8. **Dr. T. Kanthimathi, Assistant Professor & Prof. I/C Academics, Member**
9. Mr. A. Bala yaswanth Sai Reddy (2401130005), I/II M.Tech. (MD)
10. Mr. P.Vamsi (2401130001) I/II M.Tech. (MD)
11. Mr. K.Thilak (2100079041), IV/IV B.Tech
12. Mr.P.V.S.Rama Krishna Sarma.(2100079010), IV/IV B.Tech
13. Ms.K.Eesha,(2300079018), II/II B.Tech
14. Ms.M.Eshitha, (2300070003), II/II B.Tech
15. Mr.J.Sravan Kumar, (2300070012), II/II B.Tech
16. Mr. D.Joseph Jakwes, (2300070015), II/II B.Tech
17. Mr. V.Sai Ananth, (2300070011), II/II B.Tech

Vijay Kumar 16/10/24
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| | |
|---|---|
| Agenda-1: To discuss on the feedback given by stake holders | Resolution: It is resolved to approve the feedback given by stake holders and to put forth the same in the coming BOS. |

1. Mr. P.V.S.Rama Krishna Sarma.(2100079010), requested to include the simulation softwares other than Ansys like Hypermesh in regular courses.
   It is proposed to include the Hypermesh in Finite Element Analysis course in addition to Ansys Software.
2. Mr. K.Tilak(2100079041) and Ms.K.Eesha (2300049018), requested to include CATIA modelling tool instead of Autodesk Fusion 360.
   It is proposed to include CATIA in Visualization & Modelling of Engineering Design course instead of Autodesk Fusion 360 which is taught as certification course to all students. Dr. V.L. Mangesh replied to the student that it is not possible to teach all soft wares in the span of four years so, students have to learn few things on their own based upon their interest. He also suggested to do mathematical modelling in addition to simulation for final year project which gives more weightage.
3. Dr.G.Murali, suggested to validate the simulation results with the existing or published data to make the final year projects more worthy for publication in the journals
4. Final Year students Mr.Tilak and Mr. Rama Krishna complained that they are not able to participate in the Go-Kart events or in pit due to time constraints.
   HOD, Dr.T.Vijaya Kumar suggested to the students that if they are interested to participate in GO-Kart events they need to stay beyond working hours and complete the task.
5. IInd Year students Mr.Joseph (2300070015) & Ms.Eshitha (2300070003) complained about the laboratory equipment in MOS and FMHM lab. They said the readings obtained by the UTM and the flow sensors in these labs are giving fluctuating results for each batch.
   Dr.T.Vijaya Kumar-HOD informed students that the equipment will be repaired and the process is already started.
6. Mr. Sravan Kumar(2300070012) complained that Gas welding and TIG welding machine is not working in the manufacturing lab.
   HOD replied to students that new Gas welding machine is purchased and it will be made available once it is installed.
7. Mr.Joseph (2300070015) requested to include lab to Basic Electrical Engineering course which is very much useful during projects.
   It is proposed to include lab for Basic Electrical Engineering course for the upcoming Y25 admitted batch and for Y23 & Y24 batch students it is proposed to arrange a workshop on this lab so that students will get good knowledge on the electrical equipment.
8. Dr.V.L.Mangesh informed to the members that the project review presentation of practise school/internship students is far better than the in house projects. He

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insisted that the guides should encourage students to do mathematical modelling instead of simply doing simulation and presenting the results.

9. Dr.V.L.Mangesh proposed to include Professor of Practice to thermal related course which includes boilers and power plants concepts.
10. Dr.B.Kiran Kumar suggested in the course closure minutes of 2023-24 Even Sem, to use power tools in workshop practices lab instead of manual tools since all most all industries are using power tools.
    It is resolved to put forth the suggestion to the higher authorities for the purchase of power tools in workshop lab.
11. Dr.B.Kiran Kumar suggested in the course closure minutes of 2023-24 Even Sem, to arrange industrial visits for the course Modern Manufacturing Processes, so that students will be able to understand the latest manufacturing tools used in the industries.
    Industrial visits are arranged for each batch of students in every semester. It is resolved to arrange the visits to the manufacturing industries using modern tools to make students more acquainted with the manufacturing practices in the industries.
12. Dr.T.Parameshwaran Pillai, professor, Anna University, Trichy, appreciated the efforts in framing the curriculum.
    Chairman DAC, thanked the shareholder for his appreciation.

| | |
|---|---|
| Agenda-2: To discuss on the inputs given by 2024-25 Even Sem Course Coordinators | Resolution: No recommendations were made |

No recommendations were made by course coordinators

| | |
|---|---|
| Agenda-3: To discuss on the proposed curriculum and syllabus of Y24 admitted batch B.Tech students | Resolution: It is resolved to propose the curriculum and syllabus of Y24 admitted batch B.Tech students and put forth the same in the upcoming BOS for further approval |

- Department of ECE proposed "Nanotechnology and Optoeletronics" specialization under Biomedical Instrumentation cohort (E04), for Y24 admitted batch students.
- Department of EEE proposed "AI and Autonomous Systems" specialization under Smart Mobility and Autonomous Systems cohort for Y23, Y24 admitted batch students.
  Since we are following NEP for campus the specializations proposed by other departments are applicable to Mechanical Branch students.
- The course structure and syllabus of Y24 admitted batch students is designed in line with the requirements of industry, societal needs. The curriculum also incorporated the feedback received from stake holders.

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It is resolved to propose the structure and curriculum of Y24 admitted batch B.Tech students.

| | |
|---|---|
| Agenda-4: To discuss on the course structure of 2024-25 admitted batch M.Tech-MD and M.Tech-TE programs | Resolution: It is resolved to approve the course structure of 2024-25 admitted batch M.Tech-MD and M.Tech-TE programs and put forth the same in the upcoming BOS |

- Chairman DAC presented the the course structure of 2024-25 admitted batch M.Tech-MD and M.Tech-TE programs.
  It is resolved to approve the course structure of 2024-25 admitted batch M.Tech-MD and M.Tech-TE programs and put forth the same in the upcoming BOS.

| | |
|---|---|
| Agenda-8: Any other point: Result analysis, placement analytics | Resolution: It is resolved to approve the result analysis and placement analytics of present and previous semester |

- The result analysis of 2023-24 even sem is done and the OBE attainment is done based on it Gap analysis is performed
- The 2024-25 Sem-in-I result analysis is done and the students who got less than 50% marks are identified and the remedial classes are being conducted for those students.
- The placement analysis for the Y21 admitted batch students is done and the same is presented in significant events of BOS annexure.

**.Meeting Photos:**


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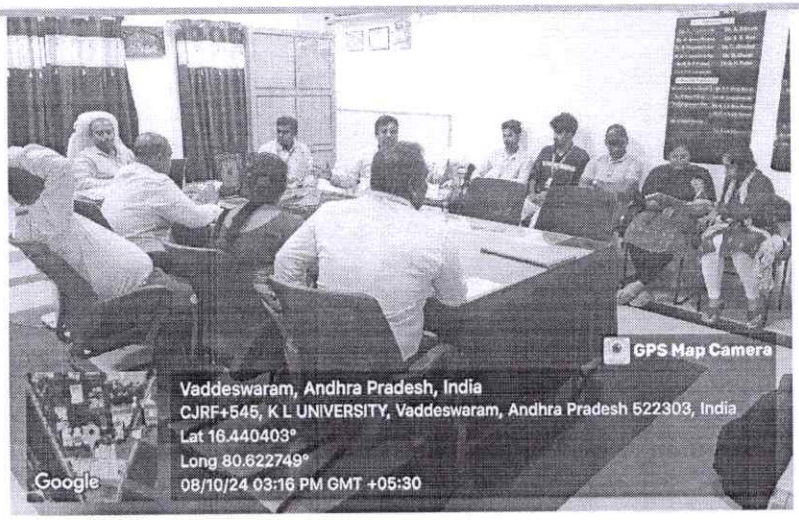
**Admin Off:** 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph. +91 - 866 - 3500122, 2577715, 2576129.


Professor I/C Academics

Chairman-DAC

HOD-ME

16/10/24

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Koneru Lakshmaiah Education Foundation
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## DEPARTMENT OF MECHANICAL ENGINEEEINRG

# Stake Holder Feedback Analysis and Action Taken Report

## Academic Year: 2024-25 Even Sem

| S.No | Stake Holders | Count |
|---|---|---|
| 1 | Academic Peers | 18 |
| 2 | Alumni | 15 |
| 3 | Faculty | 13 |
| 4 | Industry personnel | 10 |
| 5 | Parents | 9 |
| 6 | Students | 92 |
| | **Total** | **157** |

## Academic Peers

| Sl.No. | Department | Name of the Programme | Details of Stake Holder | Recommendations / Suggestion(s) | Analysis | Action Taken | DAC No. | Pg No. | Date | BOS No. | Pg NO. | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ME | B.Tech | Dr.T. pramaeswaran Pillai, Professor, Anna University, Trichy | Appreciated the efforts in framing the curriculum | Curriculum is designed in line with Industry needs | Chairman -DAC thanked the stake holder | 26 | 3 | 08-10-2024 | 27 | 2 | 16-10-2024 |

## Alumni

| Sl.No. | Department | Name of the Programme | Details of Stake Holder | Recommendations / Suggestion(s) | Analysis | Action Taken | DAC No. | Pg No. | Date | BOS No. | Pg NO. | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | | | | | | | | | | |

## Faculty

| Sl.No. | Department | Name of the Programme | Details of Stake Holder | Recommendations / Suggestion(s) | Analysis | Action Taken | DAC No. | Pg No. | Date | BOS No. | Pg NO. | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ME | B.Tech | Dr..Murali, Energy & CFD Cohort Professor In charge | Suugested the final year project guides to insist students to validate the simulation results with the experimental values or published data | Validation of simulation results will make the project worthy for publication | It is resolved to instruct the project guides to accept the projects only if the validation of simulation resiults is done by the students | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |

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| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | ME | B.Tech | Dr.V.L.Mangesh, Projects and Internships incharge | Suggested to do mathematical modelling in addition to simulation for final year year projects | Mathematical modelling makes the students to apply the concepts of courses he learned during his degree program | It is resolved to instruct the final year studetns to use mathematical modelling wherever applicable in their projects. | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |
| 3 | ME | B.Tech | Dr.V.L.Mangesh, Projects and Internships incharge | Suggested to include Professor of Practice for thermal related courses which includes boilers and power plants concepts | Students will understand better if an industrialist explains these concepts | It is resolved to include professor of practice for thermal related courses which includes boilers and power plant concepts | 26 | 3 | 08-10-2024 | 27 | 2 | 16-10-2024 |
| 4 | ME | B.Tech | Dr.B.Kiran Kumar, Associate Professor | Suggested to use power tools in workshop practices lab and also to plan for industrial visits as part of Modern manufacturing Processes course | Present industries are using power tools instead of manual tools and the industrial visists to studetns will enhance the knowledge on modern manufacturing processes in the present industry | It is resolved to paln for the procurement of power tools for workshop practices course and to plan for industrial tours to manufacturing industries | 26 | 3 | 08-10-2024 | 27 | 2 | 16-10-2024 |

## Industry Personnel

| Sl.No. | Department | Name of the Programme | Details of Stake Holder | Recommendations / Suggestion(s) | Analysis | Action Taken | DAC No. | Pg No. | Date | BOS No. | Pg NO. | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ME | | | | | | | | | | | |

## Parent

| Sl.No. | Department | Name of the Programme | Details of Stake Holder | Recommendations / Suggestion(s) | Analysis | Action Taken | DAC No. | Pg No. | Date | BOS No. | Pg NO. | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ME | B.Tech | | - | - | - | - | | - | | | |

## Student

| Sl.No. | Department | Name of the Programme | Details of Stake Holder | Recommendations / Suggestion(s) | Analysis | Action Taken | DAC No. | Pg No. | Date | BOS No. | Pg NO. | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ME | B.Tech | Mr.P.V.S.Rama Krishna IV Year (2100079010) | Requested to include the simulation softwares other than Ansys like Hypermesh in regular courses | During Interviews Placements companies are asking about Hypermesh | It is proposed to include the Hypermesh in Finite Element Analysis course in addition to Ansys Software. | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |

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| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | ME | B.Tech | Mr. K.Tilak-IV Year (2100079041) & Ms.Eesha-II Year (2300049018) | Requested to include CATIA modelling tool instead of Autodesk Fusion 360. | Autodesk Fusion 360 is taught as certificate courseand CATIA is not included in any course | It is proposed to include CATIA in Visualization & Modelling of Engineering Design course instead of Autodesk Fusion 360 | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |
| 3 | ME | B.Tech | Mr. K.Tilak-IV Year (2100079041) & Mr.P.V.S. RamaKrishna-IV Year (2100079010) | Requested to allot time to participate in GO-KART activites | GO-KART activities need to be done after college hours | IT is suggested to studetns that if they are interested in GO-KART activities they need to stay beyond college hours to complete thework | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |
| 4 | ME | B.Tech | Mr.Joseph-II Year(2300070015), Ms.Eshitha-II year(2300070003) & Mr.Sravan Kumar-II Year (2300070012) | Requested to repair the Gas welding equipment and aslo the machines in FMHM & MOS lab | UTM machine and flow sensors in these labs are giving fluctuationg results for different batches | Students were informed the equipment will be repaired and the process is started | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |
| 5 | ME | B.Tech | Mr.Joseph-II Year(2300070015) | Requested to include lab to Basic Electrical Engineering course | Lab for this course which is very much useful during projects | It is proposed to include lab for Basic Electrical Engineering course for the upcoming Y25 admitted batch and for Y23 & Y24 batch students it is proposed to arrange a workshop on this lab so that students will get good knowledge on the electrical equipment. | 26 | 2 | 08-10-2024 | 27 | 2 | 16-10-2024 |

HOD-ME

16/10/24

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List of Courses under **"AI and Autonomous Systems"** Specialization under Smart Mobility and Autonomous Systems Cohort offered by Department of Electrical & Electronics Engineering

| S.No. | PE # | Course Name |
|---|---|---|
| 1 | PE-1 | AI AND CONTROLS FOR AUTONOMOUS FUTURE TRANSPORT |
| 2 | PE-2 | AUTONOMOUS VEHICLE ECU DESIGN WITH AUTOSAR |
| 3 | PE-3 | AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS |
| 4 | PE-4 | CYBERSECURITY IN AUTONOMOUS VEHICLE |
| 5 | PE-5 | AI DRIVEN ECU DESIGN FOR AUTONOMOUS VEHICLES |
| 6 | SDC-4 | EVT HARDWARE PROTOTYPING |

List of Courses under **"Nanotechnology and Optoelectronics"** Specialization under Biomedical Instrumentation Cohort offered by Department of Electronics & Communication Engineering

| S.No. | PE # | Course Name |
|---|---|---|
| 1 | FC-1 | FUNDAMENTALS OF NANOTECHNOLOGY |
| 2 | FC-2 | NANOSCALE IMAGING AND ANALYSIS |
| 3 | PE-1 | THIN FILM TECHNOLOGIES FOR NANOELECTRONICS |
| 4 | PE-1 | NANOSCALE ENGINEERING FOR CLEAN ENERGY |
| 5 | PE-2 | NANOTECHNOLOGY AND NANOSENSORS |
| 6 | PE-2 | NANOPHOTONICS AND BIOPHOTONICS |
| 7 | PE-3 | NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS |
| 8 | PE-3 | NANOROBOTICS FOR ADVANCED APPLICATIONS |
| 9 | PE-4 | COMPUTATIONAL DATA SCIENCE FOR NANOTECHNOLOGY |
| 10 | PE-4 | INDUSTRIAL NANOTECHNOLOGY |
| 11 | PE-5 | BIOSENSING AND BIOELECTRONICS |
| 12 | PE-5 | MICRO/NANO FLUIDIC SYSTEMS FOR SENSORS |
| 13 | SDC-3 | OPTICAL SENSORS DESIGN |
| 14 | SDC-4 | NANOELECTRONICS FOR IOT |
| 15 | OE-1 | HYBRID NANO ELECTRONIC DEVICES AND PACKAGING TECHNOLOGY |

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# KLEF
## Department of Mechanical Engineering
## B.Tech 2024-25 Admitted Batch Category wise Course Structure

| S.No. | Category | Sub-Cat | Cohort | Course Code | Course Name | Short Name | Mode | L | T | p | S | Cr | CH | Pre-requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HAS | HAS-CORE | 777 | 23UC0026 | HUMAN VALUES, GENDER EQUALITY & PROFESSIONAL ETHICS | HGP | R | 2 | 0 | 0 | 0 | 2 | 2 | NIL |
| 2 | HAS | HAS-CORE | M57 | 23UC0027 | LEADERSHIP AND MANAGEMENT SKILLS | LAMS | R | 0 | 0 | 4 | 0 | 2 | 4 | NIL |
| 3 | HAS | HAS-CORE | 999 | 24UC1203 | DESIGN THINKING AND INNOVATION | DTI | R | 2 | 0 | 2 | 0 | 3 | 4 | NIL |
| 4 | HAS | HAS-CORE | M51 | 24UC1102 | LANGUAGE SKILLS FOR ENGINEERS | LSE | R | 0 | 0 | 4 | 0 | 2 | 4 | NIL |
| 5 | HAS | HAS-CORE | M51 | 24UC1204 | COMMUNICATION SKILLS FOR ENGINEERS | CSFE | R | 0 | 0 | 4 | 0 | 2 | 4 | NIL |
| 6 | HAS | HAS-FLE | M51 | FL | FOREIGN LANGUAGE | FL | R | 3 | 0 | 0 | 0 | 3 | 3 | NIL |
| 7 | HAS | HAS-MGE | E25 | 23MB4067 | INDUSTRIAL MANAGEMENT & PRODUCTION PLANNING | IMPP | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| TOTAL | | | | | | | | 11 | 0 | 14 | 0 | 18 | 25 | |
| 8 | BSC | BSC-CORE | M41 | 23MT1001 | LINEAR ALGEBRA AND CALCULUS FOR ENGINEERS | LACE | R | 2 | 2 | 0 | 0 | 4 | 4 | NIL |
| 9 | BSC | BSC-ME-1 | E14 | 23MT2010 | COMPUTATIONS IN APPLIED MECHANICS AND STATISTICS | CAMS | R | 2 | 2 | 0 | 0 | 4 | 4 | NIL |
| 10 | BSC | BSC-ME-2 | E25 | 23MT2011 | OPTIMIZATION TECHNIQUES FOR MECHANICAL ENGINEERS | OTQ | R | 2 | 2 | 0 | 0 | 4 | 4 | NIL |
| 11 | BSC | BSC-SE-2 | E25 | 23ME1005 | MATERIAL SCIENCE & METALLURGY | MSM | R | 3 | 0 | 2 | 0 | 4 | 5 | NIL |
| 12 | BSC | BSC-SE-2 | M50 | 24CY1001 | ENGINEERING CHEMISTRY | ECY | R | 3 | 0 | 2 | 0 | 4 | 5 | NIL |
| TOTAL | | | | | | | | 10 | 4 | 4 | 0 | 20 | 18 | |
| 13 | ESC | ESC-CORE | E02 | 24AD2001R | ARTIFICIAL INTELLIGENCE & MACHINE LEARNING | AIML | R | 3 | 0 | 2 | 0 | 4 | 5 | NIL |
| 14 | ESC | ESC-CORE | E06 | 24SC1102 | COMPUTATIONAL THINKING FOR PROBLEM SOLVING | CTP | R | 3 | 0 | 2 | 4 | 5 | 9 | NIL |
| 15 | ESC | ESC-CORE | E06 | 24SC1204 | DATA STRUCTURES USING PYTHON | DSP | R | 3 | 0 | 2 | 4 | 5 | 9 | CTP |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | ESC | ESC-CORE | E06 | 24SC2105O | COMPUTATIONAL THINKING FOR OBJECT-ORIENTED DESIGN | CTOD | O | 3 | 0 | 2 | 0 | 4 | 5 | CTP |
| 17 | ESC | ESC-CORE | E15 | 23ME1001 | ENGINEERING MECHANICS | EM | R | 3 | 0 | 0 | 0 | 3 | 3 | NIL |
| 18 | ESC | ESC-CORE | E15 | 23ME1002 | ENGINEERING GRAPHICS | EG | R | 0 | 0 | 4 | 0 | 2 | 4 | NIL |
| 19 | ESC | ESC-CORE | E15 | 23ME1103 | DESIGN TOOL WORKSHOP | DTW | R | 0 | 0 | 4 | 0 | 2 | 4 | NIL |
| 20 | ESC | ESC-CORE | E25 | 23ME1004 | WORKSHOP PRACTICES FOR ENGINEERS | WPE | R | 0 | 0 | 4 | 0 | 2 | 4 | NIL |
| 21 | ESC | ESC-CORE | E29 | 23EC1203 | BASIC ELECTRICAL AND ELECTRONIC CIRCUITS | BEEC | R | 2 | 0 | 0 | 0 | 2 | 2 | NIL |
| **TOTAL** | | | | | | | | **17** | **0** | **20** | **8** | **29** | **45** | |
| 22 | PCC | PCC-CORE | E14 | 23ME2107 | THERMODYNAMICS | TD | R | 3 | 0 | 0 | 0 | 3 | 3 | NIL |
| 23 | PCC | PCC-CORE | E14 | 23ME2116R | FLUID MECHANICS & HYDRAULIC MACHINES | FMHM | R | 3 | 0 | 2 | 0 | 4 | 5 | NIL |
| 24 | PCC | PCC-CORE | E14 | 23ME3110A | HEAT TRANSFER | HT | A | 4 | 0 | 4 | 0 | 6 | 8 | TD |
| 25 | PCC | PCC-CORE | E14 | 23ME3110E | HEAT TRANSFER | HT | E | 4 | 0 | 4 | 0 | 6 | 8 | TD |
| 26 | PCC | PCC-CORE | E14 | 23ME3110R | HEAT TRANSFER | HT | R | 3 | 0 | 2 | 0 | 4 | 5 | TD |
| 27 | PCC | PCC-CORE | E14 | 23ME3112R | THERMAL SYSTEMS ENGINEERING | TSE | R | 2 | 1 | 0 | 4 | 4 | 7 | TD |
| 28 | PCC | PCC-CORE | E15 | 23ME2106A | MECHANICS OF SOLIDS | MOS | A | 4 | 0 | 4 | 0 | 6 | 8 | EM |
| 29 | PCC | PCC-CORE | E15 | 23ME2106E | MECHANICS OF SOLIDS | MOS | E | 4 | 0 | 4 | 0 | 6 | 8 | EM |
| 30 | PCC | PCC-CORE | E15 | 23ME2106R | MECHANICS OF SOLIDS | MOS | R | 3 | 0 | 2 | 0 | 4 | 5 | EM |
| 31 | PCC | PCC-CORE | E15 | 23ME2209A | KINEMATICS & DYNAMICS OF MACHINES | KDOM | A | 4 | 1 | 4 | 0 | 7 | 9 | EM |
| 32 | PCC | PCC-CORE | E15 | 23ME2209E | KINEMATICS & DYNAMICS OF MACHINES | KDOM | E | 4 | 1 | 4 | 0 | 7 | 9 | EM |
| 33 | PCC | PCC-CORE | E15 | 23ME2209R | KINEMATICS & DYNAMICS OF MACHINES | KDOM | R | 3 | 1 | 2 | 0 | 5 | 6 | EM |
| 34 | PCC | PCC-CORE | E15 | 23ME3111A | MECHANICAL ENGINEERING DESIGN | MED | A | 4 | 1 | 0 | 0 | 5 | 5 | MOS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | PCC | PCC-CORE | E15 | 23ME3111E | MECHANICAL ENGINEERING DESIGN | MED | E | 4 | 1 | 0 | 0 | 5 | 5 | MOS |
| 36 | PCC | PCC-CORE | E15 | 23ME3111R | MECHANICAL ENGINEERING DESIGN | MED | R | 3 | 0 | 0 | 0 | 3 | 3 | MOS |
| 37 | PCC | PCC-CORE | E15 | 23ME3214A | MACHINE DESIGN | MD | A | 4 | 0 | 4 | 0 | 6 | 8 | MED |
| 38 | PCC | PCC-CORE | E15 | 23ME3214E | MACHINE DESIGN | MD | E | 4 | 0 | 4 | 0 | 6 | 8 | MED |
| 39 | PCC | PCC-CORE | E15 | 23ME3214R | MACHINE DESIGN | MD | R | 3 | 0 | 2 | 0 | 4 | 5 | MED |
| 40 | PCC | PCC-CORE | E25 | 23ME2208 | MANUFACTURING PROCESSES | MP | R | 3 | 0 | 2 | 0 | 4 | 5 | WPE |
| 41 | PCC | PCC-CORE | E25 | 23ME3113A | MANUFACTURING TECHNOLOGY | MT | A | 3 | 0 | 4 | 0 | 5 | 7 | MP |
| 42 | PCC | PCC-CORE | E25 | 23ME3113E | MANUFACTURING TECHNOLOGY | MT | E | 3 | 0 | 4 | 0 | 5 | 7 | MP |
| 43 | PCC | PCC-CORE | E25 | 23ME3113R | MANUFACTURING TECHNOLOGY | MT | R | 2 | 0 | 2 | 0 | 3 | 4 | MP |
| 44 | PCC | PCC-CORE | E25 | 23ME3215 | DIGITAL MANUFACTURING & ROBOTICS | DMR | R | 3 | 0 | 0 | 0 | 3 | 3 | KDOM |
| **TOTAL** | | | | | | | | **31** | **2** | **14** | **4** | **41** | **51** | |
| 45 | FCC | FC-1 | | | FLEXI CORE | | F | 2 | 0 | 2 | 0 | 3 | 4 | NIL |
| **TOTAL** | | | | | | | | **2** | **0** | **2** | **0** | **3** | **4** | |
| 46 | SDC | SDP-1 | | | SKILL DEVEOPMENT-1 | LAA | R | 0 | 0 | 2 | 4 | 2 | 6 | NIL |
| 47 | SDC | SDP-2 | | | SKILL DEVEOPMENT-2 | LAA | R | 0 | 0 | 2 | 4 | 2 | 6 | NIL |
| 48 | SDC | SDP-3 | | | SKILL DEVEOPMENT-3 | LAA | R | 0 | 0 | 2 | 4 | 2 | 6 | NIL |
| 49 | SDC | SDP-4 | | | SKILL DEVEOPMENT-4 | DAV | R | 0 | 0 | 2 | 4 | 2 | 6 | |
| **TOTAL** | | | | | | | | **0** | **0** | **8** | **16** | **8** | **24** | |
| 50 | PE | PE-1 | | | PROFESSIONAL ELECTIVE-1 | PE-1 | R | 3 | 0 | 2 | 4 | 5 | 9 | |
| 51 | PE | PE-2 | | | PROFESSIONAL ELECTIVE-2 | PE-2 | R | 3 | 0 | 0 | 0 | 3 | 3 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | PE | PE-3 | | | PROFESSIONAL ELECTIVE-3 | PE-3 | R | 3 | 0 | 2 | 4 | 5 | 9 | |
| 53 | PE | PE-4 | | | PROFESSIONAL ELECTIVE-4 | PE-4 | M | 4 | 0 | 0 | 0 | 4 | 4 | |
| 54 | PE | PE-5 | | | PROFESSIONAL ELECTIVE-5 | PE-5 | R | 3 | 0 | 0 | 0 | 3 | 3 | |
| **TOTAL** | | | | | | | | **16** | **0** | **4** | **8** | **20** | **28** | |
| 55 | PRI | PRI-CORE | 555 | 23IE2040 | SOCIAL INTERNSHIP | SIP | R | 0 | 0 | 0 | 4 | 0 | 4 | NIL |
| 56 | PRI | PRI-CORE | 555 | 23IE3041 | TECHNICAL INTERNSHIP | TIP | R | 0 | 0 | 0 | 4 | 0 | 4 | NIL |
| 57 | PRI | PRI-CORE | 555 | 23IE4053R | CAPSTONE PROJECT - 1 | CP-1 | R | 0 | 0 | 8 | 16 | 8 | 24 | NIL |
| 58 | PRI | PRI-CORE | 555 | 23IE4054R | CAPSTONE PROJECT - 2 | CP-2 | R | 0 | 0 | 8 | 16 | 8 | 24 | NIL |
| **TOTAL** | | | | | | | | **0** | **0** | **16** | **36** | **16** | **52** | |
| 59 | | OE | | | OPEN ELECTIVE-1 | OE-1 | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| 60 | | OE | | | OPEN ELECTIVE-2 | OE-2 | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| 61 | | OE | | | OPEN ELECTIVE-3 | OE-3 | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| **TOTAL** | | | | | | | | 12 | 0 | 0 | 0 | 12 | 12 | |
| 62 | | VAC | | | VAC-SPORTS | SPORTS | R | 0 | 0 | 0 | 2 | 0 | 2 | NIL |
| 63 | | VAC | | | VAC-CERT-1 | VAC-CERT | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| 64 | | VAC | | | VAC-CERT-2 | VAC-CERT | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| 65 | | VAC | | | VAC-CERT-3 | VAC-CERT | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| **TOTAL** | | | | | | | | 0 | 0 | 0 | 26 | 0 | 26 | |
| 66 | AUC | AUC-CORE | 555 | 23UC0013 | GLOBAL LOGIC BUILDING CONTEST PRACTICUM | GLBCP | R | 0 | 0 | 0 | 2 | 0 | 2 | NIL |
| 67 | AUC | AUC-CORE | 555 | 23UC0014 | GLOBAL LOGIC BUILDING CONTEST PRACTICUM | GLBCP | R | 0 | 0 | 0 | 2 | 0 | 2 | NIL |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68 | AUC | AUC-CORE | M12 | 23UC0008 | INDIAN CONSTITUTION | IC | R | 2 | 0 | 0 | 0 | 0 | 2 | NIL |
| 69 | AUC | AUC-CORE | M44 | 24UC0017 | INDIAN KNOWLEDGE SYSTEMS: VEDIC MATHEMATICS | IKSVM | R | 2 | 0 | 0 | 0 | 0 | 2 | NIL |
| 70 | AUC | AUC-CORE | M49 | 23UC0009 | ECOLOGY AND ENVIRONMENT | E&E | R | 2 | 0 | 0 | 0 | 0 | 2 | NIL |
| TOTAL | | | | | | | | 6 | 0 | 0 | 4 | 0 | 10 | |
| 71 | SIL | SIL-CORE | 666 | 22UC0021 | SOCIAL IMMERSIVE LEARNING | SIL-1 | R | 0 | 0 | 0 | 4 | 1 | 4 | NIL |
| 72 | SIL | SIL-CORE | 666 | 22UC0022 | SOCIAL IMMERSIVE LEARNING | SIL-2 | R | 0 | 0 | 0 | 4 | 1 | 4 | NIL |
| 73 | SIL | SIL-CORE | 666 | 22UC0023 | SOCIAL IMMERSIVE LEARNING | SIL-3 | R | 0 | 0 | 0 | 4 | 1 | 4 | NIL |
| TOTAL | | | | | | | | 0 | 0 | 0 | 12 | 3 | 12 | |
| GRAND TOTAL | | | | | | | | 105 | 6 | 82 | 114 | 170 | 307 | |

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## DEPARTMENT OF MECHANICAL ENGINEERING

### LIST OF SKILL DEVELOPMENT COURSES OFFERED TO Y24 ADMITTED BATCH STUDENTS

| S.NO | Category | SDP# | COHORT | Course Code | Course Name | Short Name | Mode | L | T | P | S | CR | CH | Pre-Requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SDC | SDP-1 | E15 | 23SDME01A | VISUALIZATION AND MODELLING FOR ENGINEERING DESIGN(Fusion 3 | VMED | A | 0 | 0 | 6 | 4 | 4 | 10 | NIL |
| 2 | SDC | SDP-1 | E15 | 23SDME01E | VISUALIZATION AND MODELLING FOR ENGINEERING DESIGN(Fusion 3 | VMED | E | 0 | 0 | 6 | 4 | 4 | 10 | NIL |
| 3 | SDC | SDP-1 | E15 | 23SDME01R | VISUALIZATION AND MODELLING FOR ENGINEERING DESIGN(Fusion 3 | VMED | R | 0 | 0 | 2 | 4 | 2 | 6 | NIL |
| 4 | SDC | SDP-2 | E25 | 23SDME02A | COMPUTER INTEGRATED MANUFACTURING(CNC Train)) | CIDM | A | 0 | 0 | 6 | 4 | 4 | 10 | NIL |
| 5 | SDC | SDP-2 | E25 | 23SDME02E | COMPUTER INTEGRATED MANUFACTURING(CNC Train)) | CIDM | E | 0 | 0 | 6 | 4 | 4 | 10 | NIL |
| 6 | SDC | SDP-2 | E25 | 23SDME02R | COMPUTER INTEGRATED MANUFACTURING(CNC Train)) | CIDM | R | 0 | 0 | 2 | 4 | 2 | 6 | NIL |
| 7 | SDC | SDP-3 | E15 | 23SDME03A | FINITE ELEMENT ANALYSIS(Ansys & Hypermesh) | FEA | A | 0 | 0 | 6 | 4 | 4 | 10 | NIL |
| 8 | SDC | SDP-3 | E15 | 23SDME03E | FINITE ELEMENT ANALYSIS(Ansys & Hypermesh) | FEA | E | 0 | 0 | 6 | 4 | 4 | 10 | NIL |
| 9 | SDC | SDP-3 | E15 | 23SDME03R | FINITE ELEMENT ANALYSIS(Ansys & Hypermesh) | FEA | R | 0 | 0 | 2 | 4 | 2 | 6 | NIL |
| 10 | SDC | SDP-4 | E14 | 23SDME04A | ANALYSIS OF ENERGY SYSTEMS(Ansys Fluent) | AES | A | 0 | 0 | 6 | 4 | 4 | 10 | TD |
| 11 | SDC | SDP-4 | E14 | 23SDME04E | ANALYSIS OF ENERGY SYSTEMS(Ansys Fluent) | AES | E | 0 | 0 | 6 | 4 | 4 | 10 | TD |
| 12 | SDC | SDP-4 | E14 | 23SDME04R | ANALYSIS OF ENERGY SYSTEMS(Ansys Fluent) | AES | R | 0 | 0 | 2 | 4 | 2 | 6 | TD |
| 13 | SDC | SDP-4 | E15 | 23SDME05A | 3D MODELLING AND DIGITAL PROTOTYPING(Solidworks) | 3DMDP | A | 0 | 0 | 6 | 4 | 4 | 10 | EM |
| 14 | SDC | SDP-4 | E15 | 23SDME05E | 3D MODELLING AND DIGITAL PROTOTYPING(Solidworks) | 3DMDP | E | 0 | 0 | 6 | 4 | 4 | 10 | EM |
| 15 | SDC | SDP-4 | E15 | 23SDME05R | 3D MODELLING AND DIGITAL PROTOTYPING(Solidworks) | 3DMDP | R | 0 | 0 | 2 | 4 | 2 | 6 | EM |
| 16 | SDC | SDP-4 | E25 | 23SDME06A | GEOMETRIC DIMENSIONING AND TOLERANCING(AutoCAD & Fusison 360) | GDAT | A | 0 | 0 | 6 | 4 | 4 | 10 | MSM |
| 17 | SDC | SDP-4 | E25 | 23SDME06E | GEOMETRIC DIMENSIONING AND TOLERANCING(AutoCAD & Fusison 360) | GDAT | E | 0 | 0 | 6 | 4 | 4 | 10 | MSM |
| 18 | SDC | SDP-4 | E25 | 23SDME06R | GEOMETRIC DIMENSIONING AND TOLERANCING(AutoCAD & Fusison 360) | GDAT | R | 0 | 0 | 2 | 4 | 2 | 6 | MSM |

### LIST OF FLEXI CORE COURSES OFFERED TO Y24 ADMITTED BATCH STUDENTS

| S.NO | Category | FC# | COHORT | Course Code | Course Name | Short Name | Mode | L | T | P | S | CR | CH | Pre-Requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FCC | FC-1 | E25 | 23ME2221F | SUPPLY CHAIN & QUALITY MANAGEMENT | SCQM | F | 3 | 0 | 0 | 0 | 3 | 3 | NIL |
| 2 | FCC | FC-1 | E14 | 23ME2223F | ELECTRIC VEHICLE TECHNOLOGY | EVT | F | 2 | 0 | 2 | 0 | 3 | 3 | NIL |
| 3 | FCC | FC-1 | E12 | 23ME2222F | INDUSTRIAL INTERNET OF THINGS | IIOT | F | 2 | 0 | 2 | 0 | 3 | 4 | NIL |
| 4 | FCC | FC-1 | E15 | 23ME1001F | ENGINEERING MECHANICS | EM | F | 2 | 1 | 0 | 0 | 3 | 3 | NIL |
| 5 | FCC | FC-1 | E14 | 23ME2107F | THERMODYNAMICS | TD | F | 2 | 1 | 0 | 0 | 3 | 3 | NIL |
| 6 | FCC | FC-1 | E25 | 23ME2225F | MATERIAL SCIENCE | MS | F | 2 | 0 | 2 | 0 | 3 | 4 | NIL |

### LIST OF VALUE ADDED COURSES OFFERED TO Y24 ADMITTED BATCH STUDENTS

| S.NO | Category | VAC# | COHORT | Course Code | Course Name | Short Name | Mode | L | T | P | S | CR | CH | Pre-Requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VAC | VAC-CERT | E06 | 23CC3071 | PROGRAMMING USING PYTHON | PUP | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |

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| 2 | VAC | VAC-CERT | E15 | 23CC3001 | 3D MODELLING USING CATIA | 3DMUC | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| 3 | VAC | VAC-CERT | E15 | 23CC3008 | AUTOCAD | ACAD | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| 4 | VAC | VAC-CERT | E15 | 23CC3009 | AUTODESK FUSION 360 | ADF | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| 5 | VAC | VAC-CERT | E15 | 23CC3084 | STATIC ANALYSIS USING ANSYS | SAUA | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |
| 6 | VAC | VAC-CERT | E15 | 23CC3085 | STATIC AND DYNAMIC ANALYSIS USING ALTAIR HYPERWORKS | SDAUAHW | R | 0 | 0 | 0 | 8 | 0 | 8 | NIL |

**LIST OF FOREIGN LANGUAGE COURSES OFFERED TO Y24 ADMITTED BATCH STUDENTS**

| S.NO | Category | FL | COHORT | Course Code | Course Name | Short Name | Mode | L | T | P | S | CR | CH | Pre-Requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HAS | HAS-FLE | M51 | 23FL3054 | FRENCH LANGUAGE | FLG | R | 3 | 0 | 0 | 0 | 3 | 0 | NIL |
| 2 | HAS | HAS-FLE | M51 | 23FL3055 | GERMAN LANGUAGE | GLG | R | 3 | 0 | 0 | 0 | 3 | 0 | NIL |
| 3 | HAS | HAS-FLE | M51 | 23FL3058 | JAPANESE LANGUAGE | JLG | R | 3 | 0 | 0 | 0 | 3 | 0 | NIL |

**LIST OF OPEN ELECTIVE COURSES OFFERED TO Y24 ADMITTED BATCH STUDENTS**

| S.NO | Category | OE# | COHORT | Course Code | Course Name | Short Name | Mode | L | T | P | S | CR | CH | Pre-Requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OEC | OE-1 | E22 | 23OEME01 | ROBOTICS | RBT | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| 2 | OEC | OE-2 | E22 | 23OEME02 | MECHATRONIC | MCT | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| 3 | OEC | OE-3 | E25 | 23OEME03 | OPERATIONS RESEARCH | ORS | R | 4 | 0 | 0 | 0 | 4 | 4 | NIL |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIST OF PROFESSIONAL ELECTIVES OFFERED TO Y24 ADMITTED BATCH STUDENTS | | | | | | | | | | | | | | |
| S.NO | Category | PE# | COHORT | Course Code | Course Name | Short Name | Mode | L | T | P | S | CR | CH | Pre-Requisite |
| 1 | PEC | PE-1 | E14 | 23ECF3101A | AUTOMOBILE ENGINEERING | AE | A | 4 | 0 | 4 | 4 | 7 | 12 | TD |
| 2 | PEC | PE-1 | E14 | 23ECF3101E | AUTOMOBILE ENGINEERING | AE | E | 4 | 0 | 4 | 4 | 7 | 12 | TD |
| 3 | PEC | PE-1 | E14 | 23ECF3101R | AUTOMOBILE ENGINEERING | AE | R | 3 | 0 | 2 | 4 | 5 | 9 | TD |
| 4 | PEC | PE-1 | E15 | 23EGD3101A | MODELING ANALYSIS & DESIGN OF ROBOTIC SYSTEMS | MADRS | A | 4 | 0 | 4 | 4 | 7 | 12 | EM |
| 5 | PEC | PE-1 | E15 | 23EGD3101E | MODELING ANALYSIS & DESIGN OF ROBOTIC SYSTEMS | MADRS | E | 4 | 0 | 4 | 4 | 7 | 12 | EM |
| 6 | PEC | PE-1 | E15 | 23EGD3101R | MODELING ANALYSIS & DESIGN OF ROBOTIC SYSTEMS | MADRS | R | 3 | 0 | 2 | 4 | 5 | 9 | EM |
| 7 | PEC | PE-1 | E25 | 23SMF3101A | REVERSE ENGINEERING & RAPID PROTOTYPING | MMC | A | 4 | 0 | 4 | 4 | 7 | 12 | MSM |
| 8 | PEC | PE-1 | E25 | 23SMF3101E | REVERSE ENGINEERING & RAPID PROTOTYPING | MMC | E | 4 | 0 | 4 | 4 | 7 | 12 | MSM |
| 9 | PEC | PE-1 | E25 | 23SMF3101R | REVERSE ENGINEERING & RAPID PROTOTYPING | MMC | R | 3 | 0 | 2 | 4 | 5 | 9 | MSM |
| 10 | PEC | PE-2 | E14 | 23ECF3202A | AUTOTRONICS & SAFETY | ATS | A | 5 | 0 | 0 | 0 | 5 | 5 | TD |
| 11 | PEC | PE-2 | E14 | 23ECF3202E | AUTOTRONICS & SAFETY | ATS | E | 5 | 0 | 0 | 0 | 5 | 5 | TD |
| 12 | PEC | PE-2 | E14 | 23ECF3202R | AUTOTRONICS & SAFETY | ATS | R | 3 | 0 | 0 | 0 | 3 | 3 | TD |
| 13 | PEC | PE-2 | E14 | 23ECF3203A | AUTONOMOUS VEHICLES | AV | A | 5 | 0 | 0 | 0 | 5 | 5 | TD |
| 14 | PEC | PE-2 | E14 | 23ECF3203E | AUTONOMOUS VEHICLES | AV | E | 5 | 0 | 0 | 0 | 5 | 5 | TD |
| 15 | PEC | PE-2 | E14 | 23ECF3203R | AUTONOMOUS VEHICLES | AV | R | 3 | 0 | 0 | 0 | 3 | 3 | TD |
| 16 | PEC | PE-2 | E15 | 23EGD3202A | CREEP, FATIGUE AND FRACTURE MECHANICS | CFFM | A | 5 | 0 | 0 | 0 | 5 | 5 | EM |
| 17 | PEC | PE-2 | E15 | 23EGD3202E | CREEP, FATIGUE AND FRACTURE MECHANICS | CFFM | E | 5 | 0 | 0 | 0 | 5 | 5 | EM |
| 18 | PEC | PE-2 | E15 | 23EGD3202R | CREEP, FATIGUE AND FRACTURE MECHANICS | CFFM | R | 3 | 0 | 0 | 0 | 3 | 3 | EM |
| 19 | PEC | PE-2 | E15 | 23EGD3203A | THEORY OF ELASTICITY AND PLASTICITY | TEP | A | 5 | 0 | 0 | 0 | 5 | 5 | EM |
| 20 | PEC | PE-2 | E15 | 23EGD3203E | THEORY OF ELASTICITY AND PLASTICITY | TEP | E | 5 | 0 | 0 | 0 | 5 | 5 | EM |
| 21 | PEC | PE-2 | E15 | 23EGD3203R | THEORY OF ELASTICITY AND PLASTICITY | TEP | R | 3 | 0 | 0 | 0 | 3 | 3 | EM |
| 22 | PEC | PE-2 | E25 | 23SMF3202A | ADVANCED MATERIALS MANUFACTURING & TESTING | AMMT | A | 5 | 0 | 0 | 0 | 5 | 5 | MSM |
| 23 | PEC | PE-2 | E25 | 23SMF3202E | ADVANCED MATERIALS MANUFACTURING & TESTING | AMMT | E | 5 | 0 | 0 | 0 | 5 | 5 | MSM |

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| 24 | PEC | PE-2 | E25 | 23SMF3202R | ADVANCED MATERIALS MANUFACTURING & TESTING | AMMT | R | 3 | 0 | 0 | 0 | 3 | 3 | MSM |
| 25 | PEC | PE-2 | E25 | 23SMF3203A | MODERN MANUFACTURING PROCESSES | MMP | A | 5 | 0 | 0 | 0 | 5 | 5 | MSM |
| 26 | PEC | PE-2 | E25 | 23SMF3203E | MODERN MANUFACTURING PROCESSES | MMP | E | 5 | 0 | 0 | 0 | 5 | 5 | MSM |
| 27 | PEC | PE-2 | E25 | 23SMF3203R | MODERN MANUFACTURING PROCESSES | MMP | R | 3 | 0 | 0 | 0 | 3 | 3 | MSM |
| 28 | PEC | PE-3 | E14 | 23ECF3304A | HYBRID AND ELECTRIC VEHICLE DESIGN | HEVD | A | 4 | 0 | 4 | 4 | 7 | 12 | NIL |
| 29 | PEC | PE-3 | E14 | 23ECF3304E | HYBRID AND ELECTRIC VEHICLE DESIGN | HEVD | E | 4 | 0 | 4 | 4 | 7 | 12 | NIL |
| 30 | PEC | PE-3 | E14 | 23ECF3304R | HYBRID AND ELECTRIC VEHICLE DESIGN | HEVD | R | 3 | 0 | 2 | 4 | 5 | 9 | NIL |
| 31 | PEC | PE-3 | E15 | 23EGD3304A | SUSTAINABLE DESIGN & SOCIAL INNOVATION IN ENGINEERING DESIGN | SDSIED | A | 4 | 0 | 4 | 4 | 7 | 12 | EM |
| 32 | PEC | PE-3 | E15 | 23EGD3304E | SUSTAINABLE DESIGN & SOCIAL INNOVATION IN ENGINEERING DESIGN | SDSIED | E | 4 | 0 | 4 | 4 | 7 | 12 | EM |
| 33 | PEC | PE-3 | E15 | 23EGD3304R | SUSTAINABLE DESIGN & SOCIAL INNOVATION IN ENGINEERING DESIGN | SDSIED | R | 3 | 0 | 2 | 4 | 5 | 9 | EM |
| 34 | PEC | PE-3 | E25 | 23SMF3304A | SUSTAINABLE DESIGN & SOCIAL INNOVATION IN SMART MANUFACTURING | SDSISM | A | 4 | 0 | 4 | 4 | 7 | 12 | MSM |
| 35 | PEC | PE-3 | E25 | 23SMF3304E | SUSTAINABLE DESIGN & SOCIAL INNOVATION IN SMART MANUFACTURING | SDSISM | E | 4 | 0 | 4 | 4 | 7 | 12 | MSM |
| 36 | PEC | PE-3 | E25 | 23SMF3304R | SUSTAINABLE DESIGN & SOCIAL INNOVATION IN SMART MANUFACTURING | SDSISM | R | 3 | 0 | 2 | 4 | 5 | 9 | MSM |
| 37 | PEC | PE-4 | E14 | 23ECF3405M | SPECIAL PURPOSE VEHICLES | SPV | M | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| 38 | PEC | PE-4 | E14 | 23ECF3406M | VEHICLE DYNAMICS | VD | M | 4 | 0 | 0 | 0 | 4 | 4 | NIL |
| 39 | PEC | PE-4 | E15 | 23EGD3405M | ADVANCED VIBRATIONS | AV | M | 4 | 0 | 0 | 0 | 4 | 4 | EM |
| 40 | PEC | PE-4 | E15 | 23EGD3406M | MECHANICS OF COMPOSITE MATERIALS | MOCM | M | 4 | 0 | 0 | 0 | 4 | 4 | EM |
| 41 | PEC | PE-4 | E25 | 23SMF3405M | ROBOTICS & INDUSTRIAL AUTOMATION | RIA | M | 4 | 0 | 0 | 0 | 4 | 4 | MSM |
| 42 | PEC | PE-4 | E25 | 23SMF3406M | MECHANICAL MEASUREMENTS AND METROLOGY | MMM | M | 4 | 0 | 0 | 0 | 4 | 4 | MSM |

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| 43 | PEC | PE-5 | E14 | 23ECF3507 | THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS | TMEES | R | 3 | 0 | 0 | 0 | 3 | 3 | NIL |
| 44 | PEC | PE-5 | E14 | 23ECF3508 | ALTERNATE ENERGY SOURCES FOR AUTOMOBILES | AESFA | R | 3 | 0 | 0 | 0 | 3 | 3 | NIL |
| 45 | PEC | PE-5 | E15 | 23EGD3507 | ADVANCED STRENGTH OF MATERIALS | ASM | R | 3 | 0 | 0 | 0 | 3 | 3 | EM |
| 46 | PEC | PE-5 | E15 | 23EGD3508 | HYBRID AND ELECTRIC VEHICLE DESIGN | HEVD | R | 3 | 0 | 0 | 0 | 3 | 3 | EM |
| 47 | PEC | PE-5 | E25 | 23SMF3507 | MACHINE TO MACHINE COMMUNICATION | RERP | R | 3 | 0 | 0 | 0 | 3 | 3 | MSM |
| 48 | PEC | PE-5 | E25 | 23SMF3508 | FLEXIBLE MANUFACTURING SYSTEMS | FMS | R | 3 | 0 | 0 | 0 | 3 | 3 | MSM |

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| **DEPARTMENT OF MECHNAICAL ENGINEERING** | | | | | | | | | | | |
| **2024-25 M.Tech-Machine Design Course Structure** | | | | | | | | | | | |
| **SEM** | **Sl No** | **Course** | **COURSE CODE** | **COURSE NAME** | **Mode** | **L** | **T** | **P** | **S** | **Cr** | **CH** |
| 1 | 1 | AUC | 23UC5201 | PROFESSIONAL COMMUNICATION SKILLS | R/M | 0 | 0 | 4 | 0 | 0 | 4 |
| 2 | 2 | AUC | 23MD5101 | DESIGN OF EXPERIMENTS | R/M | 0 | 0 | 4 | 0 | 0 | 4 |
| **Total** | | | | | | **0** | **0** | **8** | **0** | **0** | **8** |
| 1 | 3 | ESC | 23MT5102 | COMPUTATIONAL TECHNIQUES IN ENGINEERING OPTIMIZATION | R | 2 | 2 | 0 | 0 | 4 | 4 |
| **Total** | | | | | | **2** | **2** | **0** | **0** | **4** | **4** |
| 1 | 4 | PCC | 23ME5102 | MODELLING AND ANALYSIS OF MECHANICAL | R | 2 | 0 | 2 | 4 | 4 | 8 |
| 1 | 5 | PCC | 23MD5102 | ROBOTICS MANIPULATOR DESIGN AND ANALYSIS | R | 3 | 0 | 2 | 0 | 4 | 5 |
| 1 | 6 | PCC | 23MD5103 | MECHANICAL BEHAVIOUR OF MATERIALS | R | 3 | 1 | 0 | 0 | 4 | 5 |
| 2 | 7 | PCC | 23MD5204 | ADVANCED STRENGTH OF MATERIALS | R | 3 | 0 | 2 | 0 | 4 | 5 |
| 2 | 8 | PCC | 23MD5205 | MECHANICAL VIBRATIONS | R | 2 | 0 | 2 | 0 | 3 | 4 |
| **Total** | | | | | | **13** | **1** | **8** | **4** | **19** | **27** |
| 1 | 9 | PE-1 | | PROFESSIONAL ELECTIVE-1 | R | 2 | 0 | 2 | 0 | 3 | 4 |
| 2 | 10 | PE2 | | PROFESSIONAL ELECTIVE-2 | R | 2 | 0 | 2 | 0 | 3 | 4 |
| 2 | 11 | PE3 | | PROFESSIONAL ELECTIVE-3 | R | 3 | 0 | 2 | 0 | 4 | 5 |
| 2 | 12 | PE4 | | PROFESSIONAL ELECTIVE-4 | R/M | 3 | 0 | 0 | 0 | 3 | 3 |
| 3 | 13 | PE5 | | PROFESSIONAL ELECTIVE-5 | M | 3 | 0 | 0 | 0 | 3 | 0 |
| **Total** | | | | | | **13** | **0** | **6** | **0** | **16** | **16** |
| 1 | 14 | PRI | 23IE5201 | ESSENTIALS OF RESEARCH DESIGN | R | 1 | 1 | 0 | 0 | 2 | 2 |
| 2 | 15 | PRI | 23IE5149 | TERM PAPER | R | 0 | 0 | 8 | 0 | 4 | 8 |
| 3 | 16 | PRI | | DISSERTATION | R | 0 | 0 | 32 | 0 | 16 | 24 |
| 4 | 17 | PRI | | DISSERTATION | R | 0 | 0 | 32 | 0 | 16 | 24 |
| **Total** | | | | | | **1** | **1** | **72** | **0** | **38** | **58** |
| 3 | 18 | VAC | | MACHINE LEARNING WITH PYTHON | R/M | 2 | 0 | 0 | 0 | 0 | 2 |
| 4 | 19 | VAC | | STATIC AND DYNAMIC ANALYSIS USING HYPERWORKS | R/M | 2 | 0 | 0 | 0 | 0 | 2 |
| **Total** | | | | | | **4** | **0** | **0** | **0** | **0** | **4** |
| 4 | 20 | OE | | OPEN ELECTIVE | M | 3 | 0 | 0 | 0 | 3 | 0 |
| **Total** | | | | | | **3** | **0** | **0** | **0** | **3** | **0** |
| **GRAND TOTAL** | | | | | | **36** | **4** | **94** | **4** | **80** | **117** |

| | | LIST OF PROFESSIONAL ELECTIVES | L | T | P | S |
|---|---|---|---|---|---|---|
| PE-1 | 23MD51A1 | LEAN MANUFACTURING | 2 | 0 | 2 | 0 |
| | 23MD51A2 | PRECISION AND QUALITY ENGINEERING | 2 | 0 | 2 | 0 |
| | 23MD51A3 | MECHANICS OF COMPOSITE MATERIALS | 2 | 0 | 2 | 0 |
| PE-2 | 23MD52C1 | DESIGN FOR MANUFACTURING | 2 | 0 | 2 | 0 |
| | 23MD52B2 | DESIGN FOR SUSTAINABILITY | 2 | 0 | 2 | 0 |
| | 23MD52B3 | CONCURRENT MANUFACTURING | 2 | 0 | 2 | 0 |
| PE-3 | 23MD52C1 | FINITE ELEMENT ANALYSIS | 3 | 0 | 2 | 0 |
| | 23MD52C2 | FRACTURE MECHANICS | 3 | 0 | 2 | 0 |
| | 23MD52C3 | TRIBOLOGICAL SYSTEM DESIGN | 3 | 0 | 2 | 0 |
| PE-4 | 23MD52D1 | DESIGN OF PRESSURE VESSELS AND PLATES | 3 | 0 | 0 | 0 |
| | 23MD52D2 | ENGINEERING FAILURE ANALYSIS AND PREVEN | 3 | 0 | 0 | 0 |
| | 23MD52D3 | MODELING AND SIMULATION OF MECHATRO | 3 | 0 | 0 | 0 |
| PE-5 | 23MD53E1 | DESIGN OF HYBRID VEHICLES | 3 | 0 | 0 | 0 |
| | 23MD5205 | ENTERPRISE RESOURCES PLANNING | 3 | 0 | 0 | 0 |
| | 23MD52E2 | INDUSTRIAL INTERNET OF THINGS | 3 | 0 | 0 | 0 |

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## DEPARTMENT OF MECHNAICAL ENGINEERING

### 2024-25 M.Tech-Thermal Engineering Course Structure

| SEM | Sl No | Course | COURSE CODE | COURSE NAME | Mode | L | T | P | S | Cr | CH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | AUC | 23UC5201 | PROFESSIONAL COMMUNICATION SKILLS | R/M | 0 | 0 | 4 | 0 | 0 | 4 |
| 2 | 2 | AUC | 23TE5101 | SIMULATION OF ENERGY MANAGEMENT SYSTEMS | R/M | 0 | 0 | 4 | 0 | 0 | 4 |
| | | | | **Total** | | **0** | **0** | **8** | **0** | **0** | **8** |
| 1 | 3 | ESC | 23MT5102 | COMPUTATIONAL TECHNIQUES IN ENGINEERING OPTIMIZATION | R | 2 | 2 | 0 | 0 | 4 | 4 |
| | | | | **Total** | | **2** | **2** | **0** | **0** | **4** | **4** |
| 1 | 4 | PCC | 23TE5102 | DESIGN OF THERMAL SYSTEMS | R | 2 | 0 | 2 | 4 | 4 | 8 |
| 1 | 5 | PCC | 23TE5103 | ADVANCED THERMODYNAMICS | R | 3 | 0 | 2 | 0 | 4 | 5 |
| 1 | 6 | PCC | 23TE5104 | COMPUTATIONAL FLUID DYNAMICS | R | 3 | 0 | 2 | 0 | 4 | 5 |
| | 7 | PCC | 23TE5205 | ADVANCED HEAT AND MASS TRANSFER | R | 3 | 0 | 2 | 0 | 4 | 5 |
| 2 | 8 | PCC | 23TE5206 | MEASUREMENTS IN THERMAL ENGINEERING | R | 2 | 0 | 2 | 0 | 3 | 4 |
| | | | | **Total** | | **13** | **0** | **10** | **4** | **19** | **27** |
| 1 | 9 | PE-1 | 23TE51A2 | ELECTRIC VEHICLE ENGINEERING | R | 2 | 0 | 2 | 0 | 3 | 4 |
| 2 | 10 | PE2 | 23TE52B3 | CONVECTION AND TWO-PHASE FLOW | R | 2 | 0 | 2 | 0 | 3 | 4 |
| 2 | 11 | PE3 | 23TE52C1 | RENEWABLE ENERGY SOURCES AND TECHNOLOGY | R | 3 | 0 | 2 | 0 | 4 | 5 |
| 2 | 12 | PE4 | 23TE52D1 | REFRIGERATION AND CRYOGENICS | R/M | 3 | 0 | 0 | 0 | 3 | 3 |
| 3 | 13 | PE5 | | BATTERY AND THERMAL MANAGEMENT SYSTEMS | M | 3 | 0 | 0 | 0 | 3 | 0 |
| | | | | **Total** | | **13** | **0** | **6** | **0** | **16** | **16** |
| 1 | 14 | PRI | 23IE5201 | ESSENTIALS OF RESEARCH DESIGN | R | 2 | 0 | 0 | 0 | 2 | 2 |
| 2 | 15 | PRI | 23IE5149 | TERM PAPER | R | 0 | 0 | 8 | 0 | 4 | 8 |
| 3 | 16 | PRI | | DISSERTATION | R | 0 | 0 | 32 | 0 | 16 | 24 |
| 4 | 17 | PRI | | DISSERTATION | R | 0 | 0 | 32 | 0 | 16 | 24 |
| | | | | **Total** | | **2** | **0** | **72** | **0** | **38** | **58** |
| 3 | 18 | VAC | | MACHINE LEARNING WITH PYTHON | R/M | 2 | 0 | 0 | 0 | 0 | 2 |
| 4 | 19 | VAC | | FLOW ANALYSIS USING ANSYS CFD | R/M | 2 | 0 | 0 | 0 | 0 | 2 |
| | | | | **Total** | | **4** | **0** | **0** | **0** | **0** | **4** |
| 4 | 20 | OE | | OPEN ELECTIVE | | 3 | 0 | 0 | 0 | 3 | 3 |
| | | | | **Total** | | **3** | **0** | **0** | **0** | **3** | **3** |
| | | | | **Grand Total** | | **37** | **2** | **96** | **4** | **80** | **120** |

| | Course Code | LIST OF PROFESSIONAL ELECTIVES | L | T | P | S |
|---|---|---|---|---|---|---|
| PE-1 | 23TE51A1 | GAS TURBINE ENGINEERING | 2 | 0 | 2 | 0 |
| | 23TE51A2 | ELECTRIC VEHICLE ENGINEERING | 2 | 0 | 2 | 0 |
| | 23TE51A3 | ENERGY CONSERVATION & AUDIT | 2 | 0 | 2 | 0 |
| PE-2 | 23TE52B1 | ADVANCED ENERGY STORAGE TECHNOLOGIES | 2 | 0 | 2 | 0 |
| | 23TE52B2 | FOOD PROCESSING, PRESERVATION AND TRANSPORT | 2 | 0 | 2 | 0 |
| | 23TE52B3 | CONVECTION AND TWO-PHASE FLOW | 2 | 0 | 2 | 0 |
| PE-3 | 23TE52C1 | RENEWABLE ENERGY SOURCES & TECHNOLOGY | 3 | 0 | 2 | 0 |
| | 23TE52C2 | PRINCIPLES OF TURBO MACHINERY | 3 | 0 | 2 | 0 |
| | 23TE52C3 | HEAT EXCHANGER DESIGN | 3 | 0 | 2 | 0 |
| PE-4 | 23TE52D1 | REFRIGERATION AND CRYOGENICS | 3 | 0 | 0 | 0 |
| | 23TE52D2 | AIR CONDITIONING SYSTEMS | 3 | 0 | 0 | 0 |
| | 23TE52D3 | SOLAR ENERGY & SYSTEMS | 3 | 0 | 0 | 0 |
| PE-5 | 23TE53E1 | HYDROGEN AND FUEL CELLS | 3 | 0 | 0 | 0 |
| | 23TE53E2 | AIRCRAFT & JET PROPULSION SYSTEMS | 3 | 0 | 0 | 0 |
| | 23TE53E3 | BATTERY AND THERMAL MANAGEMENT SYSTEMS | 3 | 0 | 0 | 0 |

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