



NANDHA ENGINEERING COLLEGE

(Autonomous)  
ERODE- 638 052



Department of Mechanical Engineering

NEC/MECH/PAC-03/2023-24

DATE: 29.01.2024

CIRCULAR

<b>Originator:</b> Chairman- PAC	<b>Circulated to:</b> Members of PAC & All faculty members
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**Sub: Programme Assessment Committee (PAC) meeting:**

The PAC meeting is scheduled on **31.01.2024** to discuss the agenda listed below. In this connection, all the PAC members are requested to attend the meeting.

Date & Time of Meeting: **31.01.2024 (12.30PM)**

Venue: **Meeting Hall**

AGENDA	
Dissemination of vision and mission of the department	
VISION	<ul style="list-style-type: none"><li>To be recognised as a centre of excellence in the field of Mechanical Engineering and to produce competent engineers with multi-disciplinary exposure to meet the changing needs of the society.</li></ul>
MISSION	<ul style="list-style-type: none"><li>To enrich technical knowledge and skills by imparting quality education with ethics and social responsibility.</li><li>To empower the students in the thrust areas of Mechanical, Allied Engineering and Entrepreneurship in the continually changing global market.</li><li>To provide a conducive learning environment for improving continually to cater the needs of the society.</li></ul>
Item 3.01	Review of the previous PAC meeting minutes
Item 3.02	Review of result and attainment analysis of 3 <sup>rd</sup> year, identification of slow learners and corrective actions, advanced learners and activities for the advanced learners.
Item 3.03	Class Committee Meeting (CCM) reports and action taken.
Item 3.04	Department activity plan for the academic year 2023 – 2024.
Item 3.05	Online courses for students (NPTEL, etc...)
Item 3.06	IRS course details, placement status of IV years and training plan for III years.
Item 3.07	Discussion on R22 curriculum and BoS Sub-committee members of V & VI semester.
Item 3.08	Any other matter

To  
All members of PAC,  
✓ All Faculty members,  
✓ File (O/o Head)

  
CHAIRMAN - PAC  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF MECHANICAL ENGINEERING,  
NANDHA ENGINEERING COLLEGE  
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**Department of Mechanical Engineering**

**MINUTES OF THE PROGRAMME ASSESSMENT COMMITTEE MEETING (PAC)**

Name of the Body	<b>PROGRAMME ASSESSMENT COMMITTEE</b>	
Department	<b>Mechanical Engineering</b>	
Meeting No.	<b>03</b>	<b>2023-2024</b>
Date & Time	<b>31.01.2024 &amp; 12.30PM</b>	
Venue	<b>Meeting Hall</b>	

Disseminated the vision and mission of the department	
<b>VISION</b>	<ul style="list-style-type: none"><li>• To be recognised as a centre of excellence in the field of Mechanical Engineering and to produce competent engineers with multi-disciplinary exposure to meet the changing needs of the society.</li></ul>
<b>MISSION</b>	<ul style="list-style-type: none"><li>• To enrich technical knowledge and skills by imparting quality education with ethics and social responsibility.</li><li>• To empower the students in the thrust areas of Mechanical, Allied Engineering and Entrepreneurship in the continually changing global market.</li><li>• To provide a conducive learning environment for improving continually to cater the needs of the society.</li></ul>

  
**HEAD OF THE DEPARTMENT  
DEPARTMENT OF MECHANICAL ENGINEERING,  
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The proceedings of PAC started and the minutes of the meeting are recorded as follows:

The Chairman of the PAC Dr. M. Easwaramoorthi, HoD - Mech, welcomed the members followed by the introduction of members.

Item 3.01	Review of the previous PAC meeting minutes									
	MoM of PAC held on <b>24-7-2023 &amp; 27-9-2023</b> were reviewed. Faculty members are informed to focus on improving CO and PO attainment by taking suitable remedial measures in teaching learning process, involving students in co-curricular activities / industry interaction and improving the syllabus contents.									
Item 3.02	Review of result and attainment analysis of 3 <sup>rd</sup> year, identification of slow learners and corrective actions, advanced learners and activities for the advanced learners.									
Discussion	Dr. MEM presented the 2023-24 ODD semesters CAT-1&2 result analysis, CO attainment analysis of 5 <sup>th</sup> sem.. list of slow learners and fast learners, and corrective/improvement measures.									
	<b>CAT-1 result and attainment analysis III Year (5<sup>th</sup> Semester) 2023 - 2024 (Odd Semester)</b>									
	<b>Course Code</b>	<b>Present</b>	<b>Absent</b>	<b>Pass</b>	<b>Fail</b>	<b>Pass %</b>	<b>CO1</b>	<b>CO2</b>	<b>CO3</b>	<b>Course Target</b>
	17MEC13	102	01	82	20	<b>80</b>	2	2	2	2.1
	17MEC14	102	01	86	16	<b>84</b>	2	2	2	2.1
	17MEC15	101	02	76	25	<b>75</b>	2	2	1	2.1
	17MEC16	100	03	82	20	<b>80</b>	2	2	2	2.1
	<ul style="list-style-type: none"> <li>17MEC15 Dynamics of Machinery pass % is found to be 75%</li> <li>Members deliberated the reasons for CO not attainment and action taken for improving the CO attainment such as remedial classes, involving students in co-curricular activities / industry visit and improving the syllabus contents.</li> </ul>									
	<b>CAT-2 result and attainment analysis III Year (5<sup>th</sup> Semester) 2023 - 2024 (Odd Semester)</b>									
	<b>Course Code</b>	<b>Present</b>	<b>Absent</b>	<b>Pass</b>	<b>Fail</b>	<b>Pass %</b>	<b>CO3</b>	<b>CO4</b>	<b>CO5</b>	<b>Course Target</b>
17MEC13	97	6	93	4	<b>96</b>	2.1	3	3	2.1	
17MEC14	103	0	97	6	<b>94</b>	2.2	2.2	2.2	2.1	
17MEC15	101	2	91	10	<b>90</b>	1	3	3	2.1	
17MEC16	101	2	92	9	<b>91</b>	2.1	3	2.1	2.1	
Members appreciated the CAT-2 pass % and attainment of all CO's except CO3 for course 17MEC15										
<b>3<sup>rd</sup> year slow learners</b>										
<ul style="list-style-type: none"> <li>17 students.</li> <li>Students identified as a slow learner were reviewed and faculty members are ask to conduct remedial class to improve the academic performance. Further it's informed to keep all documents related to slower learners in the respective course files.</li> </ul>										
<b>3<sup>rd</sup> year fast learners</b>										
<ul style="list-style-type: none"> <li>14 students.</li> <li>Faculty member ask to motivate student to do online courses, placement training, Internship, <b>Higher studies</b>, participation in seminars/ workshops/conference.</li> </ul>										
Resolution	Resolved to record.									



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Item 3.03	Class Committee Meeting (CCM) reports and action taken.						
Discussion	Dr. MEM shared the Class Committee Meeting (CCM) feedback and Action taken report (ATR).						
Resolution	Resolved to approve the ATR of Class Committee Meeting (CCM).						
Item 3.04	Department activity plan for the academic year 2023 – 2024.						
Discussion	Association coordinator Mr. M. Sengottaiyan presented the academic activities as per event calendar 2023-2024 (ODD Semester)						
	<b>Month</b>	<b>ISTE(2)</b>	<b>IEI(3)</b>	<b>SAE(3)</b>	<b>SOME</b>		
					<b>International (1)</b>	<b>National (2)</b>	<b>State level (6)</b>
	JAN	Academic Seminar (Week 1)				Academic Seminar (Week 4)	
	FEB		Guest Lecture (week 1)				Industrial Seminar (Week4)
	MAR			Industrial Seminar (Week1)	International Conference /Seminar (Week 2)		
	APR						WORKSHOP (Week 4)
	MAY	<b>Exam</b>					
Count	2	3	3	1	2	6	
Resolution	Resolved to record.						
Item 3.05	Online courses for students (NPTEL, etc...)						
Discussion	<b>NPTEL Course 2023-24 (ODD)</b>						
	<b>Year</b>	<b>Registered</b>	<b>Completed</b>				
	IV	1	1				
	III	3	3				
		73	9				
43	3						
Resolution	Resolved to record.						
Item 3.06	IRS course details, placement status of IV years and training plan for III years.						
Discussion	Placement co-ordinators presented the Final Year placement status						
	<b>CORE:</b> No. of placed student – 24 /25						
	<b>IT:</b> No. of placed student – 33/54						
	I, II and III year IRS subject list and schedule.						
	<b>Description</b>	<b>I YEAR ACADEMIC SCHEDULE</b>	<b>II YEAR ACADEMIC SCHEDULE</b>	<b>III YEAR ACADEMIC SCHEDULE</b>			
			<b>IT PLACEMENT</b>		<b>CORE</b>		



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					PLACEMENT
IRS Courses 1	<u>22EYA01 - Professional Communication I</u>	<u>22MAN07 - Soft / Analytical Skills IV (Verbal)</u>	<u>17EYZ04 - Employability Enhancement and Analytical Skills (Verbal)</u>		<u>IRS1 &amp; IRS 2</u> IRS 1 (NDT&E) IRS 2 (RSE)
IRS Courses 2	<u>22MAN02 - Soft / Analytical Skills I</u>	22MAN08 - Soft / Analytical Skills IV (Aptitude)	<u>17EYZ04 - Employability Enhancement and Analytical Skills (Aptitude)</u>		<u>Electric Vehicle Technology Training</u>
IRS Courses 3	NA	NA	<u>17CSX31- Problem Solving and Programming</u>		<u>Aptitude</u>
IRS Courses 4	NA	NA	NA		<u>Internship</u>
Resolution	Resolved to record.				
Item 3.07	Discussion on R22 (V & VI semester) Syllabus Sub-committee members.				
	BoS Coordinator presented the syllabus Sub-committee members of V & VI semester.				
<b>S. No.</b>	<b>Name of the course</b>	<b>Semester</b>	<b>Name of syllabus sub-committee member</b>		
1.	Automotive Materials, Components, Design & Testing	Elective	Dr. Ashokkumar B		
2.	Conventional and Futuristic Vehicle Technology	Elective	Dr. Ashokkumar B		
3.	Renewable Powered Off Highway Vehicles and Emission Control Technology	Elective	Dr. Ashokkumar B		
4.	Hybrid and Electric Vehicle Technology	Elective	Dr. Ashokkumar B		
5.	Thermal Management of Batteries and Fuel Cells	Elective	Dr. Ashokkumar B		
6.	Basics of Electric Vehicles	Minor	Dr. Muthukumar M		
7.	Electric Vehicle Architecture and Control System	Minor	Dr. Muthukumar M		
8.	Materials for Electric Vehicles	Minor	Dr. Muthukumar M		
9.	Powertrain Design for Electric Vehicles	Minor	Dr. Muthukumar M		
10.	Battery Management	Minor	Dr. Muthukumar M		
11.	AI and IoT for Electric Vehicles	Minor	Dr. Muthukumar M		
12.	Autonomous Vehicles	Minor	Dr. Muthukumar M		
13.	Fuel Cell Technology & Safety Regulations	Minor	Dr. Muthukumar M		
14.	CAD/CAM	Elective	Dr. Magibalan S		
15.	Embedded Systems and Programming	Elective	Dr. Magibalan S		



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45.	Value Engineering	Elective	Mr. Eswaran S
46.	Ergonomics in Design	Elective	Mr. Eswaran S
47.	Non-traditional Machining Processes	Elective	Mr. Eswaran S
48.	Process Planning and Cost Estimation	Elective	Mr. Eswaran S
49.	Metrology and Measurements	V	Mr. Muruganantham S
50.	Metrology and Measurements Laboratory	V	Mr. Muruganantham S
51.	Lean Manufacturing	Elective	Mr. Muruganantham S
52.	Power Plant Engineering	Elective	Mr. Muruganantham S
53.	Design for Manufacturing	Elective	Mr. Muruganantham S
54.	Sensors and Instrumentation	Elective	Mr. Mohamed Ajmal Mahasin M
55.	Electrical Drives and Actuators	Elective	Mr. Mohamed Ajmal Mahasin M
56.	Design Concepts in Engineering	Elective	Mr. Mohamed Ajmal Mahasin M
57.	New Product Development	Elective	Mr. Mohamed Ajmal Mahasin M
58.	Advanced Statistics and Data Analytics	Elective	Mr. Mohamed Ajmal Mahasin M
59.	Material Handling and solid processing Equipment	Elective	Mr. Ravichandran D
60.	Rotating Machinery Design	Elective	Mr. Ravichandran D
61.	Measurements and Controls	Elective	Mr. Ravichandran D
62.	Casting and Welding Processes	Elective	Mr. Ravichandran D
63.	Gas Dynamics and Jet Propulsion	Elective	Mr. Ravichandran D
64.	Machine Design	V	Mr. Velliyangiri B
65.	Vehicle Health Monitoring, Maintenance and Safety	Elective	Mr. Velliyangiri B
66.	Failure Analysis and NDT Techniques	Elective	Mr. Velliyangiri B
67.	Industrial safety	Elective	Mr. Velliyangiri B
68.	Design of Transmission System	Elective	Mr. Velliyangiri B
69.	Smart Mobility and Intelligent Vehicles	Elective	Mr. Arjun Raj R
70.	Carbon Footprint estimation and reduction techniques	Elective	Mr. Arjun Raj R

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16.	Haptics and Immersive Technologies	Elective	Dr. Magibalan S
17.	Power Generation Equipment Design	Elective	Dr. Magibalan S
18.	Precision Manufacturing	Elective	Dr. Magibalan S
19.	Digital Manufacturing and IoT	Elective	Dr. Senninagiri N
20.	Modern Robotics	Elective	Dr. Senninagiri N
21.	Green Manufacturing Design and Practices	Elective	Dr. Senninagiri N
22.	Environment Sustainability and Impact Assessment	Elective	Dr. Senninagiri N
23.	Green Supply Chain Management	Elective	Dr. Senninagiri N
24.	Drone Technologies	Elective	Dr. Manikandan M
25.	Computational Solid Mechanics	Elective	Dr. Manikandan M
26.	Computational Bio-Mechanics	Elective	Dr. Manikandan M
27.	CAD and CAE	Elective	Dr. Manikandan M
28.	Turbo Machines	Elective	Dr. Manikandan M
29.	Design For X	Elective	Mr. Loganathan V N
30.	Industrial Layout Design and Safety	Elective	Mr. Loganathan V N
31.	Equipment for Pollution Control	Elective	Mr. Loganathan V N
32.	Composite Materials	Elective	Mr. Loganathan V N
33.	Tool Design	Elective	Mr. Loganathan V N
34.	Additive Manufacturing	Elective	Mr. Shanmugam M
35.	Energy Saving Machinery and Components	Elective	Mr. Shanmugam M
36.	Energy Conservation in Industries	Elective	Mr. Shanmugam M
37.	Energy Storage Devices	Elective	Mr. Shanmugam M
38.	Renewable Energy Technologies	Elective	Mr. Shanmugam M
39.	Product Life Cycle Management	Elective	Mr. Sengottaiyan M
40.	Robotics	Elective	Mr. Sengottaiyan M
41.	Design of Pressure Vessels	Elective	Mr. Sengottaiyan M
42.	Bioenergy Conversion Technologies	Elective	Mr. Sengottaiyan M
43.	Surface Engineering	Elective	Mr. Sengottaiyan M
44.	Hydraulics and Pneumatics	V	Mr. Eswaran S



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71.	Energy Efficient Buildings	Elective	Mr. Arjun Raj R
72.	Theory on Computation and Visualization	Elective	Mr. Arjun Raj R
73.	Machine Learning for Intelligent Systems	Elective	Mr. Arjun Raj R
74.	CAE and CFD Approach in Future Mobility	Elective	Mr. Balakrishnan S
75.	Computational Fluid Dynamics and Heat transfer	Elective	Mr. Balakrishnan S
76.	Advanced Internal Combustion Engineering	Elective	Mr. Balakrishnan S
77.	Automobile Engineering	Elective	Mr. Balakrishnan S
78.	Advanced Vehicle Engineering	Elective	Mr. Balakrishnan S
79.	Finite Element Analysis	VI	Mr. Venkateshan T
80.	Mechatronics & IOT	VI	Mr. Venkateshan T
81.	Computer Aided Analysis Laboratory	VI	Mr. Venkateshan T
82.	Mechatronics & IOT Laboratory	VI	Mr. Venkateshan T
83.	Design Codes and Standards	Elective	Mr. Venkateshan T
84.	Heat and Mass Transfer	V	Mr. Rajkumar R
85.	Heat and Mass Transfer Laboratory	V	Mr. Rajkumar R
86.	Thermal and Fired Equipment design	Elective	Mr. Rajkumar R
87.	Refrigeration and Air Conditioning	Elective	Mr. Rajkumar R
88.	Thermal Power Engineering	Elective	Mr. Rajkumar R
The members of the syllabus sub-committee are requested to draft syllabus for the courses mentioned above by referring leading institutions, Universities, and Industries. Further, it is informed to incorporate the suggestions provided by the experts into the syllabi, making them ready for presentation in the BoS for approval.			
Resolution	Resolved to record.		
Item 3.08	Any other matter		

Date : 27-02-2024

  
CHAIRMAN - PAC  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF MECHANICAL ENGINEERING,  
NANDHA ENGINEERING COLLEGE  
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