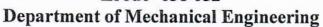


NANDHA ENGINEERING COLLEGE

(Autonomous) Erode- 638 052





NEC/MECH/PAC-01/2024-25

DATE: 24-09-2024

CIRCULAR

Originator:	Circulated to:
Chairman- PAC	Members of PAC& All faculty members

Sub: Programme Assessment Committee (PAC) meeting:

The PAC meeting is scheduled on 25.09.2024 to discuss the agenda listed below. In this connection, all the PAC members are requested to attend the meeting.

Date & Time of Meeting: 25.09.2024 (12.30 PM)-Wednesday

Venue: Block 7

	AGENDA
Disseminatio	n of vision and mission of the department
VISION	 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.
	To enrich technical knowledge and skills by imparting quality education with ethics and social responsibility.
MISSION	• To empower the students in the thrust areas of Mechanical, Allied Engineering and Entrepreneurship in the continually changing global market.
*	• To provide a conducive learning environment for improving continually to cater the needs of the society.
Item 1.01	Review of the previous PAC meeting minutes
Item 1.02	Result Analysis and attainment of the even semester 2023-24, overall attainment of the 2024 pass out batch & fix target for the I year (2024 – 2028 batch).
Item 1.03	Teaching Learning Process and Assessment.
Item 1.04	Class Committee Meeting (CCM) reports and action taken.
Item 1.05	Proctor meeting minutes and action taken reports
Item 1.06	Department academic plan and activities.
Item 1.07	Placement status of IV years, training schedule and performance of the student in training.
Item 1.08	Review of the activities involved in the quality plan and action taken
Item 1.09	Any other matter (if any)

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
ERODE - 638 052.

MINUTES OF THE PROGRAMME ASSESSMENT COMMITTEE MEETING

Name of the Body	PRO	PROGRAMME ASSESSMENT COMMITTEE (PAC)				
Department	Mechanical Engineering					
Meeting No.	01	2024-2025				
Date & Time	25.0	25.09.2024 & 12.30 PM				

Disseminate	ed the vision and mission of the department
VISION	• 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.
MISSION	 To enrich technical knowledge and skills by imparting quality education with ethics and social responsibility. To empower the students in the thrust areas of Mechanical, Allied Engineering and Entrepreneurship in the continually changing global market. To provide a conducive learning environment for improving continually to cater the needs of the society.

HEAD OF THE DEPARTMENT
DEPARTMENT OF MECHANICAL ENGINEERING,
NANDHA ENGINEERING COLLEGE
ERODE - 638 052.

.01	Review of t	he previous	PAC 1	meeti	ng minute	es ———						1
	The previou	s PAC meeti	ng mi	inutes	were rev	iewed	. There w	ere no	comme	ents from	n mem	2024
	maga out hat	ysis and atta ch & fix targ sented the re V Semester	et tor	the I	year (20)	24 - 21	er 2023-2 028 batch	24, ove).	rall atta	immen	or the	2024
	Course Title		TES	SMP	SOM	том	PYTHON	DCE	ΓES LAB	SMP I	AB N	NTMP
8 4	No of Students	Passed	58	- 63	51	57	16	41	64	64		38
	No of Students	s Failed	6	. 1	13	7	2	4	0	0		0
	No of Student	s Absent	0	0	0	0	0	0	0	0		0
	Subjectwise P	Subjectwise Pass Percentage		98	80	89	89	91	100	10	00	100
	Course Code	Course Title		Fa	culty Mem	ber	Pass %	CO1	CO2	CO3	CO4	CO5
	22MEC09	THERMAL ENGINEERIN SYSTEM	IG.	М	r. S. Balakı	rishnan	91	52.2	42.6	45.6	72.3	71.3
Item 1.02	22MEC10	SUBTRACTIVE			r. N. Sennia	angiri	98	70.5	67.5	59.0	65.9	67.3
	22MEC11	STRENGTH MATERIALS (THEORY +			r. M. Mani	kandan	80	56.6	43.7	41.6	37.1	51.3
	22MEC12	THEORY MACHINES + LAB)	(THEC	OF ORY M	ír. D. Ravio	chandra	1 89	37.2	58.0	66.2	58.0	50.0
	22ITZ01	PYTHON PROGRAMN	IING	D	r. B. Ashol	k Kuma	r 89	69.7	51.1	56.7	53.3	35.6
	22MEX04	IN ENGINEE	ONCE	111	⁄ir. N. Loga	nathan	91	58.8	53.6	54.9	59.6	53.4
	22MEP03	THERMAL ENGINEERI SYSTEMS LABORATO	RY	N	Mr. S. Balakrishnan		100	100.0	100.0	100.0	100.0	100
	22MEP04	SUBTRACT MANUFACT PROCESSES LABORATO	TURIN S	IG I	Or. N. Senn	iangiri	100	100.0	0 100.0	100.0	100.0	100
	22MEX03	NON-TRAD	ITION G		Mr. R. Arju	nraj	100	75.0	66.7	58.3	66.7	58.3

Attainments of COs of highlighted few courses are found to be low.
 Respective course handling faculty members were asked to analyze the reasons and take remedial measures to improve the pass percentage and CO attainment.

III Year - VI Semester								
Course Title	МСТ	DTS	MM	AE	FC&A	3D	MCT LAB	STS
No of Students Passed	98	97	97	99	45	52	100	53
No of Students Failed	2	3	3	1	3	0	0	7
No of Students Absent	0	0	0	1	0	0	0	0
Subject wise Pass Percentage	98	97	97	99	94	100	100	. 88

Course Code	Course Title	Faculty Member	Pass %	CO1	CO2	CO3	CO4	CO5
		Mr.T.Venkateshan						
17MEC17	MECHATRONICS	Mr.M.Mohammed Ajmal Mahasin	98	50.40	62.70	60.00	70.40	78.50
17MEC18	DESIGN OF	Mr. S.Eswaran	2220					31
1/MEC18	TRANSMISSION SYSTEMS	Mr.B.Velliyangiri	97 71.9		74.67	61.16	96.56	88.89
17MEC19		Mr.S.Muruganantham	.97	59.70	64.40	68.20	66.60	
TAMECTA	MEASUREMENTS	Dr. S.Magibalan						64.60
17MEX16	AUTOMOBILE	Mr. S. Balakrishnan	99	66.40	00.00	73.40	76.50	
TANIENTO	ENGINEERING	Dr.M.Eswaramoorthy			88.80			46.30
17MEX38	FUEL CELLS AND APPLICATIONS	Dr.M.Muthukumar	94	67.10	62.00	65.00	52.00	69.60
17MEX39	3D PRINTING TECHNOLOGY	Mr.M.Sengottaiyan	100	52.10	42.00	56.00	61.70	21.70
17MEP09	MECHATRONICS LAB	Mr.T.Venkateshan	100	100.00	100.00	100.00	100.00	100.00
17MEX15	SOLAR THERMAL SYSTEMS	Mr.R.Rajkumar	88	74.20	37.40	66.80	62.30	17.10

Attainments of COs of highlighted few courses are found to be low.
 Respective course handling faculty members were asked to analyze the reasons and take remedial measures to improve the pass percentage and CO attainment.

IV Year - VIII Semester

Course Title	PROJECT WORK II	RET
No of Students Passed	108	0
No of Students Failed	0	1
No of Students Absent	1	0
Subject wise Pass Percentage	100	0

S. No	Course Code	Course Title	Faculty Member	Pass %	COI	CO2	CO3	CO4	CO5
1	17EEZ01 PROJECT WORK -II	PROJECT Mr.B. VELLIYANGIRI			200				
1		Dr.N. SENNIYANGIRI	100	98	98	98	98	98	
2	17GEA03	RENEWABL E ENERGY TECHNOLO GY	Mrs. C.PRADEEPA	0	64	65	70	66	74

Attainments of COs of highlighted few courses are found to be low.

Respective course handling faculty members were asked to analyze the reasons and take remedial measures to improve the pass percentage and CO attainment.

Fixing PO target for 2024- 2028 batch: Students entry level academic performance and previous Batch PO attainment performance were discussed in detail. It decided to fix PO attainment target for 2024- 2028 batch as 67%.

PO1: Engineering Knowledge: an ability to apply knowledge of Mathematics, Science and Engineering

POs	Target Level	Attainment Level	Observations
PO1	65%	75.96	Target achieved.

PO2: Problem Analysis: an ability to design and conduct experiments, as well as to analyze and interpret data

POs	Target Level	Attainment Level	Observations	
PO2	65%	69.82	Target achieved.	

PO3: Design/ Development of Solutions: an ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, ethical, safety, manufacturability and sustainability

POs	Target Level	Attainment Level	Observations
PO3	65%	70.18	Target achieved.

PO4: Conduct Investigations of Complex Problems: an ability to function on multidisciplinary teams to solve complex problems

POs	Target Level	Attainment Level	Observations	
PO4	65%	65.51	Target achieved.	*

Action 1: Students are investigating real time problems by collecting data from literature/industry while doing their projects in the seventh and eighth semesters.

Action 2: One subject from III semester is made as Project Based Learning subject wherein they investigate a problem based on the subject and solve the problem through project fabrication process.

Action 3: Personality Career Development (PCD) clubs like trekking, NSS, safety, etc., helps the students to the identify the environmental problems and provide good solution for those problems.

PO5: Modern Tool Usage: an ability to use the techniques, skills and modern engineering tools necessary for engineering practice

POs	Target Level	Attainment Level	Observations	
PO5	65%	69.76%	Target achieved.	

PO6: The Engineer and Society: an ability to infer societal, health, safety, legal & cultural issues and consequent responsibilities relevant to the professional engineering practice.

POs	Target Level	Attainment Level	Observations	
PO6	65%	57.12%	Target not achieved.	

Action 1: Awareness programs and interactive sessions are arranged for the students to act as a professional engineer considering the societal, health, safety, legal & cultural issues

Action 2: Courses like Constitution of India and Essence of Indian tradition are incorporated in the curriculum as non-credit and mandate courses guiding the students to understand their societal and safety needs during their engineering practices.

- Action 2: Soft Skill- Listening and speaking; Soft Skills- Reading and Writing are introduced in the curriculum as a course to improve the communication and presentation skills.
- Action 3: Assessments like assignments, viva voce in laboratory courses are followed effectively for improving the writing and reading skills of the students.
- Action 4: Seminars/Project presentations are used as a platform to improve the communication skills.

PO11: Project Management and Finance: an ability to apply knowledge of engineering and management principles to the projects

Pos	Target Level	Attainment Level	Observations
PO11	65%	66.25%	Target achieved.

PO12: Life-long Learning: an ability to recognize the need for life-long learning

Pos	Target Level	Attainment Level	Observations	
PO12	65%	67.54%	Target achieved.	

PSO1: Ability to design mechanical systems with required specifications using latest software packages

PSOs	Target Level	Attainment Level	Observations
PSO1	65%	65.17%	Target achieved.

PSO2: Ability to identify sustainable materials and technologies for alternate engineered solutions

PSOs	Target Level	Attainment Level	Observations
PSO2	65%	65.60%	Target achieved.
DCO2	A 1 '1'		

PSO3: Ability to apply the concepts and principles of manufacturing engineering to innovate and to create products and processes with sustainable manufacturing

PSOs	Target Level	Attainment Level	Observations
PSO3	65%	56.06%	Target not achieved.
A ation	1. 0. 1	-4-4-1- C1	

Action 1: Students take up fabrication projects and learn the product development cycle.

Action 2: Industrial visits to manufacturing companies have been organized

Action 3: One credit courses titled GD&T ad Lean manufacturing have been organized in association with leading industries

Action 4: Students participate in Seminars on manufacturing technology

PSO4: Ability to provide solution to challenges in the solar thermal systems

evel	Attainment Level	Observations
5%	58.57%	Target not achieved.

Action 1: Field visits to solar systems inside the institution and other plants outside have been arranged for the students.

Action 2: Students are guided to take up solar thermal energy related projects.

Action 3: Industry supported lab namely Renewable Energy lab is established to provide experience to the students in the solar energy conversion

- Action 3: Students are given awareness about their requirement to the society through arranging blood donation camp and activities through NSS and other PCD clubs.
- Action 4: Students' have gone for internships in industries to understand the aspects of an engineer's work and its impact in societal, health, safety, legal & cultural issues.

PO7: Environment and Sustainability: an ability to explain, compare and summarize the impact of engineering solutions for sustainable development with societal and environmental perspective

POs	Target Level	Attainment Level	Observations	
PO7	65%	55.43%	Target not achieved.	

- Action 1: Hands on training on various Non-Destructive Techniques are given to make the students to understand the concepts of NDT.
- Action 2: Field visits to several renewable energy plants are organized. Students are guided to take up solar thermal energy related projects.
- Action 3: Students are engaged in various sustainable activities like having a rally for creating the awareness of many environmental issues.
- Action 4: MoUs have been signed with Sustainable Communities India Private Limited for enhancing technical skills related to energy management in industries.

PO8: Ethics: an understanding of professional and ethical responsibility

POs	Target Level	Attainment Level	Observations
PO8	65%	52.11%	Target not achieved.

- Action 1: Ethical practices and moral values in industries have been demonstrated during industrial visits, in-plant trainings and through industrial seminars by industrial experts.
- Action 2: Students are assigned with responsibilities as Event Coordinators/ Volunteers in organizing programs through Department association/Professional Society to learn the professional and ethical responsibilities.

PO9: Individual and Team Work: an ability to function effectively as an individual / team in different environments

POs	Target Level	Attainment Level	Observations
PO9	65%	60.79%	Target achieved.

- Action 1: Participation in Co-curricular and Extracurricular activities as a team.
- Action 2: Group activities like symposium, intra & inter department meet were organized and students show their interest in different team activities for effective team building.
- Action 3: Opportunities are provided to students to participate in inter and intra sports competitions as individual and as a team.
- Action 4: Students were separated into batches and made to work as a team for projects during seventh and eighth semesters.

PO10: Communication: an ability to communicate effectively

POs	Target Level	Attainment Level	Observations
PO10	65%	58.98%	Target not achieved.

Action 1: Inter-department meet have been conducted through department association in all semesters.

Teaching Learning Process and Assessment.			
Category of Course	Continuous Assessment (CA) marks	End semester Exam.(ES) marks	Total Mark
Theory Courses	40	60	100
Theory + Project Courses (Project Based Learning-PBL)	40	60	100
Laboratory Courses	60	40	100
Embedded Courses Theory + Laboratory	50	50	100
Project work	40		100
Employability Enhancement Courses (EEC), One credit Courses, Mandatory Courses (non- credit), Mini Project, etc. 1. Teaching-Learning Process	100		100
a) Lectures and Conceptual Understanding Theoretical Concepts: Classes should begin principles, equations, laws, and design Thermodynamics, Mechanics of Materials, Flu Design. Problem-Solving: Demonstrations of step- reinforce theory. Interactive Sessions: Incorporate discussion where students can engage with the material an b) Laboratory Work and Hands-On Learnin Practical Exposure: Students must apply the which can be done in workshops and laborate lathes, milling machines, or perform expet thermodynamics.	methodolog id Mechanics by-step prob n-based or find ask question ng oretical known pries. For example, relations	ies. Topics of the property of	nay inclu and Machi oproaches n techniqu cal problem ht work widynamics
Simulation and Software: Introducing s SolidWorks, can enhance their design and analyc) Design Projects and Case Studies Real-World Applications: Students can work real-world mechanical problems, from design to Case Studies: Present industrial problems or it HVAC, or manufacturing processes) and have sed) Industry Interaction Guest Lectures and Seminars: Inviting processes industrial Visits: Site visits to manufacturing allow students to connect theory with real-world Internships: Practical training in the industry in real-world operations. e) Peer Learning and Collaborative Learning Group Assignments: Assigning tasks that reteamwork and communication skills, critical in Problem-Solving Groups: Allowing students mechanical problems. f) Self-Learning	on individual on manufacturi neidents (like students analy ofessionals find plants, refined applications to expose students analy equire students analy sto expose students are to work in	l or group proje ng. those in autom ze or propose so rom industries ries, or automo dents to mechan ts to collaborat ngineering proje a groups to so	obile designolutions. can provious tive facilities ical systemes e can fosterets. live comple
 Online Resources: Encouraging the use of onli to stay updated on the latest mechanical engineer	ne courses, w	ebinars, and res	earch paper

Item 1.04	Review of Class Committee Meeting (CCM) reports and action taken.									
Discussion	Dr. MM shared the Class Committee Meeting (CCM) feedback and ATR request faculty members look at to this.									
Resolution	Resolved to approve the ATR of Class Committee Meeting (CCM).									
Item 1.05	Discussion on Proctor meeting minutes and action taken reports.									
	Mr. R. Rajkumar present the proctor meeting minutes on year wise student achiviement and the academic activities with proctor ATR									
Resolution	Resolved to a	approve the	ATR of Pro	ctor meeting	MoM.					
Item 1.06	Review of Department academic plan and activities.									
	Association coordinator Mr. M. Sengottaiyan present the academic activities event calendar 2024-2025									
						SOME				
A	Month	ISTE(2)	IEI(3)	SAE(3)	International (1)	National (2)	State level (6)			
	JULY						Association Inaugural			
	A 1814 - 141						(Week 4)			
	AUG	Industrial Seminar (Week1)		Tier 1 Event			Academic Seminar (Week 4)			
	SEP	(Weeki)	Teachers day Sep 5, Engineers Day Sep 15				Intra Dept Meet (Week 4)			
	OCT			Industrial Seminar (Week1)			Workshop (Week 4)			
	NOV			(WCCKI)		SYMPOSIU M 2024				
	DEC	(Week 1)								
	JAN	Academic			Exam	Academic				
	. 37111	Seminar (Week 1)				Seminar (Week 4)				
	FEB	- <u>J</u>	Guest Lecture (week 1)				Industrial Seminar (Week4)			
	MAR			Industrial Seminar (Week1)	International Conference /Seminar (Week 2)					
	APR						Workshop (Week) 4			
	Exam									
= - A	MAY									
Count 2 3 3 1 Resolution Resolved to accept and put forth to DAB.							2 6			
Item 1.07	Resolved to accept and put forth to DAB. Placement status of IV years, training schedule and performance of the student in training.									
		g – 61	presented th	e Final Year	placement statu	ıs				

	<u>IT:</u>
	No. of willing – 39
	No. of Placed - 02
	Placement co-ordinator inform to effect plan to the placement training activities and update the feedback of the students to the head of the department time to time.
	Students and training plan for 2022-2026 batch students IT - 16
277	CORE –48
Resolution	Resolved to accept and put forth to DAB.
Item 1.08	Review of the activities involved in the quality plan and action taken
0	Monthly review by IQAC and Dr.MM Present the quality plan and action taken.
Resolution	Resolved to accept and put forth to DAB.
Item 1.09	Any other matter (if any)

Date: 01-10-2024

PAC- CHAIRMAN

HEAD OF THE DEPARTMENT
DEPARTMENT OF MECHANICAL ENGINEERING,
MANDHA ENGINEER
ERODE - 638 602