

NANDHA
Engineering College (Autonomous), Erode -638 052

Department of Mechanical Engineering

Ref:NEC-MECH_(Circular No. 02)/Autonomous-BoS [12]/ 2023-24

Date: 28/05/2024

To

The Members of the Board of Studies.

Dear Members,

Sub: Invite for 12th Board of Studies meeting reg.

We take pleasure in inviting you to the 12th Board of Studies meeting scheduled on 01-06-2024 at 10.00 am. Your expertise and insights are vital to the academic and curricular decisions of our institution. We would like to extend this invitation to you and eagerly anticipate your participation in the BoS meeting. The details of the meeting and agenda are provided below for your kind information.

Meeting Details:

Meeting No.	Date of meeting	Time	Meeting Venue, Address
12	01-06-2024	10.00 am	Block -7 Meeting Hall

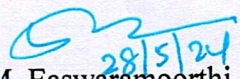
Agenda	
12.1	Welcome address and Introduction of members.
12.2	Review of the 11 th BoS meeting minutes and ATR
12.3	Review of the PAC and DAB meeting minutes
12.4	(a) Vision and Mission. ✓ Institute ✓ Department (b) PEOs and PSOs.
12.5	Approval of syllabi :5 th and 6 th semesters UG- B.E., Mechanical Engineering – Regulations R22 Semester -5 Course-1: Machine Design Course-2: Metrology and Measurements Course-3: Heat and Mass Transfer Course-4: Hydraulics and Pneumatics Course-5: Heat and Mass Transfer Laboratory Course-6: Metrology and Measurements Laboratory Semester -6 Course-1: Finite Element Analysis Course-2: Mechatronics & IOT Course-3: Computer Aided Analysis Laboratory Course-4: Mechatronics & IOT Laboratory



NANDHA
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12.6	Approval of Verticals (R22) and Minor for PEC & OEC and minor degree courses. Minor degree Minor 1: Electric Vehicle Technologies
12.7	Approval/ Ratification of One credit and NPTEL courses
12.8	Approval/ Ratification of CVAC courses
12.9	Ratification of PSE courses in R17 (UG) ✓ 17MEX42 Internship for providing credits as per Regulation. ✓ 17MEX43 Product life cycle management
12.10	Ratification of PEC courses in R22 (UG) ✓ 22MEX03 Non-traditional Machining Processes ✓ 22MEX04 Design Concepts in Engineering
12.11	Ratification of PEC courses in R22 (PG) ✓ 22EDX28 Fuel cell Technology ✓ 22EDX29 Energy Resources
12.12	Discussion on result and attainment of the CO - PO / PSO (Target fixed and attained) for the ODD semester of the academic year 2023-24 (I, II, III & IV year).
12.13	Approval of Panel of Examiners (UG & PG)
12.14	Review of best practices of the department.
12.15	Department Achievement for the academic year 2023 – 2024. ✓ Student Achievement ✓ Faculty Achievement
12.16	Any other matters

Sincerely,

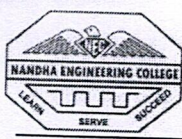

28/5/24
Dr. M. Easwaramoorthi
Chairman BoS/HoD

Department of Mechanical Engineering,
Nandha Engineering College (Autonomous), Erode-638 052



MINUTES OF THE 12th BOARD OF STUDIES MEETING

Name of the Body	Board of Studies
Name of the Board	Mechanical Engineering
Meeting No.	12
Date & Time	01.06.2024, 10.00 am
Mode	Offline Mode (Block 7 Meeting Hall)

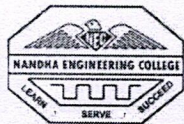


Minutes of 12th Board of Studies Meeting (BoS) held on 01.06.2024

The 12th Board of Studies (BoS) meeting was held on 01.06.2024 by 10.00 am at block 7 Meeting Hall, Nandha Engineering College. The members attended the meeting are given in **Annexure I**.

Dr. M. Easwaramoorthi, Chairman (BoS) and Professor & HoD, Mechanical Engineering chaired the meeting, welcomed all the members to the 12th BoS meeting followed by introduction of the members. After the brief introduction, the agenda items listed below were taken up for discussion and resolutions were passed.

Agenda	
12.1	Welcome address and Introduction of members.
12.2	Review of the 11 th BoS meeting minutes and ATR
12.3	Review of the PAC and DAB meeting minutes
12.4	(a) Vision and Mission. ✓ Institute ✓ Department (b) PEOs and PSOs.
12.5	Approval of syllabi :5 th and 6 th semesters UG- B.E., Mechanical Engineering – Regulations R22 Semester -5 Course-1: Machine Design Course-2: Metrology and Measurements Course-3: Heat and Mass Transfer Course-4: Hydraulics and Pneumatics Course-5: Heat and Mass Transfer Laboratory Course-6: Metrology and Measurements Laboratory Semester -6 Course-1: Finite Element Analysis Course-2: Mechatronics & IOT Course-3: Computer Aided Analysis Laboratory Course-4: Mechatronics & IOT Laboratory
12.6	Approval of Verticals (R22) and Minor for PEC & OEC and minor degree courses. Minor 1: Electric Vehicle Technologies
12.7	Approval/ Ratification of One credit and NPTEL courses
12.8	Approval/ Ratification of CVAC courses
12.9	Ratification of PSE courses in R17 (UG) ✓ 17MEX42 Internship for providing credits as per Regulation. ✓ 17MEX43 Product life cycle management
12.10	Ratification of PEC courses in R22 (UG) ✓ 22MEX03 Non-traditional Machining Processes ✓ 22MEX04 Design Concepts in Engineering
12.11	Ratification of PEC courses in R22 (PG) ✓ 22EDX28 Fuel cell Technology ✓ 22EDX29 Energy Resources
12.12	Discussion on result and attainment of the CO - PO / PSO (Target fixed and attained) for the ODD semester of the academic year 2023-24 (I, II, III & IV year).
12.13	✓ Approval of Panel of Examiners (UG & PG)
12.14	✓ Review of best practices of the department.
12.15	Department Achievement for the academic year 2023 – 2024. ✓ Student Achievement ✓ Faculty Achievement
12.16	Any other matters

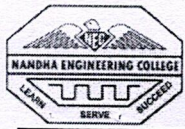


The proceedings of BoS started. The discussions and resolutions are recorded as follows:

Item 12.01	Welcome address and Introduction of members. Dr. M. Easwaramoorthi, Chairman BoS introduced the members and welcomed all followed by a brief note on autonomous functioning.
Item- 12.02	Review and approval of the 11 th BoS meeting minutes and ATR
Discussion	The salient decisions taken in the 11 th BoS meeting and action taken on the following point were presented. ✓ One copyright applied for Lab manuals. The members have appreciated the efforts taken to implement the suggestions.
Resolution	Resolved to approve the Action Taken Report of 11 th BoS meeting.
Item - 12.03	Review of the PAC and DAB meeting minutes
Discussion	The chairman BoS explained the frequency of PAC & DAB meetings and presented the salient points of the meetings held on the following dates. ✓ PAC meeting-1 held on 24-7-2023 ✓ PAC meeting-2 held on 27-9-2023 ✓ PAC meeting-3 held on 31-1-2024 ✓ PAC meeting-4 held on 17-4-2024 ✓ DAB meeting-1 held on 29-11-2023 ✓ DAB meeting-2 held on 23-4-2024
Resolution	All members have noted the MoM of PAC and DAB meeting. Resolved to record the proceeding.
Item- 12.04	(a) Vision and Mission. • Institute • Department (b) PEOs and PSOs.
Discussion	Dr. MEM presented the Institute and department (UG &PG) Vision, Mission statements followed by PEOs and PSOs (UG &PG). <u>VISION</u> • To be an Institute of excellence providing quality Engineering, Technology and Management education to meet the ever changing needs of the society. <u>MISSION</u> ▪ To provide quality education to produce ethical and competent professionals with social Responsibility ▪ To excel in the thrust areas of Engineering, Technology and Entrepreneurship by solving real- world problems. ▪ To create a learner centric environment and improve continually to meet the changing global needs. <u>VISION (UG & PG)</u> • 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. <u>MISSION (UG & PG)</u> ▪ 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.



	<p><u>PROGRAMME EDUCATIONAL OBJECTIVES (PEO) -(UG & PG)</u></p> <p>PEO1: Core Competency: Graduates will have technical knowledge, skills and analytical ability to design, develop and test Mechanical or allied Engineering systems using modern tools.</p> <p>PEO2: Research, Innovation and Entrepreneurship: Graduates will have ability to take up real life and/or research related problems and to provide innovative solutions through comprehensive analysis and designing for a successful career in research or entrepreneurship.</p> <p>PEO3: Ethics, Human values and Life-long learning: The graduates will have ability to develop lifelong learning attitudes, ethics and values for a successful professional career.</p> <p><u>PROGRAMME SPECIFIC OUTCOMES (PSO) - UG</u></p> <p>PSO1: Identify, formulate and analyze the problems of Mechanical, Allied Engineering systems and product development.</p> <p>PSO2: Apply appropriate computer aided engineering tools for modeling, simulation, analysis, and manufacturing techniques to solve engineering problems.</p> <p><u>PROGRAMME SPECIFIC OUTCOMES (PSO) - PG</u></p> <p>PSO1: An ability to identify, comprehend, formulate, design and analyse real life problems and develop Mechanical or allied Engineering systems/products/processes.</p> <p>PSO2: An ability to implement appropriate design techniques, computer aided engineering tools for modeling, simulation and analysis.</p>
Resolution	Resolved to record.
Item 12.05	<p>Approval of syllabi :5th and 6th semesters UG- B.E., Mechanical Engineering – Regulations R22</p> <p>Semester -5</p> <p>Course-1: Machine Design Course-2: Metrology and Measurements Course-3: Heat and Mass Transfer Course-4: Hydraulics and Pneumatics Course-5: Heat and Mass Transfer Laboratory Course-6: Metrology and Measurements Laboratory</p> <p>Semester -6</p> <p>Course-1: Finite Element Analysis Course-2: Mechatronics & IOT Course-3: Computer Aided Analysis Laboratory Course-4: Mechatronics & IOT Laboratory</p>
Discussion	<p>BoS Chairman presented R22 curriculum and 5th & 6th semester proposed courses.</p> <p><u>Semester -5</u></p> <p><u>Course-1: Machine Design</u> - No Comments</p> <p><u>Course-2: Metrology and Measurements</u></p> <ul style="list-style-type: none"> ✓ Dr. Vijay suggested to <ul style="list-style-type: none"> ➤ Modify the Course Outcome (CO5) ➤ Include non contact measuring equipments in unit 5 ➤ Use videos and animations to teach advanced techniques ✓ Dr. Arul NIT suggested to add Noise and Vibration measurement in unit V (add measurement system using Bluetooth) ✓ Mr. Pradeep (OLA) suggested to move Geometrical Dimensioning & Tolerance content from unit IV to unit I.



	<p><u>Course-3: Heat and Mass Transfer</u></p> <ul style="list-style-type: none"> ✓ Dr. Vijay and Mr. Pradeep suggested to add industry related examples and simulations in each unit. ✓ Mr. Pradeep suggested to include Hydrogen diffusion at appropriate unit. ✓ Dr. Arul NIT suggested to move contents related to Heat Exchangers from Unit III to Unit V (having contents related to mass transfer only) <p><u>Course-4: Hydraulics and Pneumatics</u></p> <ul style="list-style-type: none"> ✓ Mr. Pradeep suggested to include compressors and types in unit IV. <p><u>Course-5: Heat and Mass Transfer Laboratory</u></p> <ul style="list-style-type: none"> ✓ Dr. Arul NIT suggested have computers in laboratory to show simulations/do experiments. <p><u>Course-6: Metrology and Measurements Laboratory</u></p> <ul style="list-style-type: none"> ✓ Dr. Arul and Dr. Vijay suggested have computers in laboratory to show simulations/do experiments. ✓ Mr. Pradeep suggested to include experiment using anemometer. ✓ Dr. Vijay suggested to specify use the name of applications used in profile projector experiment (6th). <p><u>Semester -6</u></p> <p><u>Course-1: Finite Element Analysis</u></p> <ul style="list-style-type: none"> ✓ Dr. Vijay suggested to modify the contents in the introduction section. <p><u>Course-2: Mechatronics & IOT</u></p> <ul style="list-style-type: none"> ✓ Mr. Pradeep suggested to include Control modules in unit V. ✓ Dr. Vijay suggested to include a topic on IoT sensors for climate control. <p><u>Course-3: Computer Aided Analysis Laboratory</u></p> <ul style="list-style-type: none"> ✓ Mr. Pradeep and Dr. Vijay suggested to add Topology optimization of L- bracket experiments. ✓ Dr. Vijay suggested to merge fin experiment (Thermal) and contact analysis experiment. ✓ Dr. Vijay suggested to add experiment related to coupled-field analysis. <p><u>Course-4: Mechatronics & IOT Laboratory</u></p> <ul style="list-style-type: none"> ✓ Dr. Vijay stressed to swap the 6th and 9th experiments with 11th and 12th experiments. ✓ Dr. Vijay suggested to remove the experiment named due repetition in the previous experiment. <ul style="list-style-type: none"> • Members advised to maintain the total numbers of experiments in laboratory courses as 10 (uniform manner). • Members suggested see the possibility of changing contact (lecture) hours unit-wise based on the requirements.
Resolution	Resolved to approve the changes suggested by the members.
Item 12.06	Approval of Verticals (R22) and Minor for PEC & OEC and minor degree courses. Minor degree Minor 1: Electric Vehicle Technologies
Discussion	<p>Dr. MEM presented the curriculum list Verticals (R22) and Minor for PEC & OEC and minor degree courses.</p> <p><u>Vertical 1: Modern Mobility Systems</u></p> <p>Course 1: Automotive Materials, Components, Design & Testing – No Comments</p> <p>Course 2: Conventional and Futuristic Vehicle Technology – No Comments</p> <p>Course 3: Renewable Powered Off Highway Vehicles and Emission Control Technology – No Comments</p> <p>Course 4: Vehicle Health Monitoring, Maintenance and Safety – No Comments</p> <p>Course 5: CAE and CFD Approach in Future Mobility – No Comments</p> <p>Course 6: Hybrid and Electric Vehicle Technology – No Comments</p>



Course 7: Thermal Management of Batteries and Fuel Cells – No Comments

Vertical 2: Product and Process Development

Course 1: Value Engineering

✓ Dr. Vijay clarified the details of the contents in Value engineering course.

Course 2: Additive Manufacturing – No Comments

Course 3: CAD/CAM – No Comments

Course 4: Design For X

✓ Mr. Pradeep clarified the details of design for X Course name.

Course 5: Ergonomics in Design – No Comments

Course 6: New Product Development – No Comments

Course 7: Product Life Cycle Management – No Comments

Vertical 3: Robotics and Automation

Course 1: Sensors and Instrumentation – No Comments

Course 2: Electrical Drives and Actuators – No Comments

Course 3: Embedded Systems and Programming – No Comments

Course 4: Robotics – No Comments

Course 5: Smart Mobility and Intelligent Vehicles – No Comments

Course 6: Haptics and Immersive Technologies – No Comments

Course 7: Drone Technologies – No Comments

Vertical 4: Digital and Green Manufacturing

Course 1: Digital Manufacturing and IoT – No Comments

Course 2: Lean Manufacturing – No Comments

Course 3: Modern Robotics – No Comments

Course 4: Green Manufacturing Design and Practices – No Comments

Course 5: Environment Sustainability and Impact Assessment – No Comments

Course 6: Energy Saving Machinery and Components – No Comments

Course 7: Green Supply Chain Management – No Comments

Vertical 5: Process Equipment and Piping Design

Course 1: Design of Pressure Vessels – No Comments

Course 2: Failure Analysis and NDT Techniques – No Comments

Course 3: Material Handling and solid processing Equipment – No Comments

Course 4: Rotating Machinery Design – No Comments

Course 5: Thermal and Fired Equipment design – No Comments

Course 6: Industrial Layout Design and Safety – No Comments

Course 7: Design Codes and Standards – No Comments

Vertical 6: Clean and Green Energy Technologies

Course 1: Bioenergy Conversion Technologies – No Comments

Course 2: Carbon Footprint estimation and reduction techniques – No Comments

Course 3: Energy Conservation in Industries – No Comments

Course 4: Energy Efficient Buildings – No Comments

Course 5: Energy Storage Devices – No Comments

Course 6: Renewable Energy Technologies – No Comments

Course 7: Equipment for Pollution Control – No Comments

Vertical 7: Computational Engineering

Course 1: Computational Solid Mechanics – No Comments

Course 2: Computational Fluid Dynamics and Heat transfer – No Comments

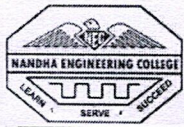
Course 3: Theory on Computation and Visualization – No Comments

Course 4: Computational Bio- Mechanics – No Comments

Course 5: Advanced Statistics and Data Analytics – No Comments

Course 6: CAD and CAE – No Comments

Course 7: Machine Learning for Intelligent Systems – No Comments



	<p><u>Vertical 8: Diversified Courses Group 1</u> Course 1: Automobile Engineering – No Comments Course 2: Measurements and Controls – No Comments Course 3: Design Concepts in Engineering – No Comments Course 4: Composite Materials and Mechanics – No Comments Course 5: Electrical Drives and Control – No Comments Course 6: Power Plant Engineering – No Comments Course 7: Refrigeration and Air Conditioning – No Comments <u>Vertical 9: Diversified Courses Group 2</u> Course 1: Turbo Machines – No Comments Course 2: Non-traditional Machining Processes – No Comments Course 3: Industrial safety – No Comments Course 4: Design of Transmission System – No Comments Course 5: Thermal Power Engineering – No Comments Course 6: Design for Manufacturing – No Comments Course 7: Power Generation Equipment Design – No Comments <u>Vertical 10: Diversified Courses Group 3</u> Course 1: Advanced Vehicle Engineering – No Comments Course 2: Advanced Internal Combustion Engineering – No Comments Course 3: Casting and Welding Processes – No Comments Course 4: Process Planning and Cost Estimation – No Comments Course 5: Surface Engineering – No Comments Course 6: Precision Manufacturing – No Comments Course 7: Gas Dynamics and Jet Propulsion – No Comments <u>Minor degree :Electric Vehicle Technologies</u> Course 1 : Basics of Electric Vehicles – No Comments Course 2 : Electric Vehicle Architecture and Control System – No Comments Course 3 : Materials for Electric Vehicles – No Comments Course 4 : Powertrain Design for Electric Vehicles – No Comments Course 5 : Battery Management – No Comments Course 6 : AI and IoT for Electric Vehicles – No Comments Course 7 : Autonomous Vehicles – No Comments Course 8 : Fuel Cell Technology & Safety Regulations – No Comments</p>
Resolution	Resolved include the recommendations.
Item 12.07	Approval/ Ratification of One credit and NPTEL courses
Discussion	<p>Dr.MEM presented the one credit course syllabus</p> <ul style="list-style-type: none"> • 22MEI01 – Geometric Dimensioning & Tolerancing (GD&T) – No Comments <p>Dr.MEM presented the NPTEL courses</p> <ul style="list-style-type: none"> • OCME014 - Principles of Industrial Engineering – No Comments • OCME018 - Wastewater Treatment and Recycling – No Comments • OCME019 - Air Pollution and Control – No Comments • OCME020 - Problem solving through programming in C – No Comments • OCME021 - Solar Energy Engineering and Technology – No Comments • OCME023 - Industrial Wastewater Treatment – No Comments • OCME024 - Design Thinking - A Primer – No Comments • OCME025 - Inspection and Quality in Manufacturing – No Comments <ul style="list-style-type: none"> • Dr. Vijay proposed to categorize the NPTEL (online) courses stream-wise and prepare verticals like PEC & OEC.
Resolution	Resolved to approve the suggestion.



Item 12.08	Approval/ Ratification of CVAC courses.
Discussion	Dr.MEM presented the CVAC courses ✓ 22CVAC01 Geometric Dimensioning & Tolerancing (GD&T) – No Comments ✓ The members have appreciated the efforts taken to implement the suggestions.
Resolution	Resolved to approve.
Item 12.09	Ratification of PSE courses in R17 (UG) ✓ 17MEX42 Internship for providing credits as per Regulation. ✓ 17MEX43 Product life cycle management
Discussion	Course 1 : 17MEX42 Internship <ul style="list-style-type: none"> • Dr. MEM explained the internship procedure along with evaluation pattern followed for internship 42 students have completed 6 weeks of internship. Course 2 : 17MEX43 Product Life Cycle Management <ul style="list-style-type: none"> • Dr.MEM presented the 17MEX43 Product life cycle management syllabus. • Dr. Vijay suggested to add concurrent engineering in Unit I and interchangeability, part numbering in Unit II. • Mr. Pradeep suggested to have industry tie-up or collaborations for supporting this course.
Resolution	Resolved to approve the suggestion.
Item 12.10	Ratification of PEC courses in R22 (UG) ✓ 22MEX03 Non-traditional Machining Processes ✓ 22MEX04 Design Concepts in Engineering
Discussion	22MEX03 Non-traditional Machining Processes – No Comments 22MEX04 Design Concepts in Engineering – No Comments
Resolution	Resolved to approve.
Item 12.11	Ratification of PEC courses in R22 (PG) ✓ 22EDX28 Fuel cell Technology ✓ 22EDX29 Energy Resources
Discussion	Course 1 : 22EDX28 Fuel cell Technology <ul style="list-style-type: none"> • Dr. Vijay confirmed the availability of hydrogen generation and storage in course contents • Dr. Arul NIT suggested to remove course contents like IC engines, comparison fuel cell, battery. • Mr. Pradeep suggested to include the challenges and economies of fuel cell in unit V. Course 2 : 22EDX29 Energy Resources <ul style="list-style-type: none"> • Members suggested to add energy balancing, energy estimation concepts, bifuels, (in unit II) and energy recovery. • Dr. Arul NIT suggested to have current energy scenario in India in unit I. • Dr. Arul NIT suggested to rename unit V as other Energy Resources.
Resolution	Resolved to approve.



Item 12.12	Discussion on result and attainment of the CO - PO / PSO (Target fixed and attained) for the ODD semester of the academic year 2023-24 (I, II, III & IV year).											
Discussion	AC's of I, II, III & IV years presented the following.											
Resolution	YEAR / SEMESTER : I / I (ODD SEMESTER) 2023-24											
	SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
	22MYB01	53	43	2	10	81.13%	70	74.7	55.3	55.4	74.5	55.9
	22CYB02	53	43	2	10	81.13%	70	65.3	66.0	48.7	50.0	74.0
	22MEC02	53	47	2	6	88.68%	70	77.8	80.2	77.9	78.3	90.0
	22CYP01	53	53	2	0	100.00%	70	100.0	100.0	100.0	100.0	100.0
	22GEP01	53	53	2	0	100.00%	70	98.4	98.9	97.4	98.9	99.4
	YEAR / SEMESTER : II / III (ODD SEMESTER) 2023-24											
	SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
	22MYB03	65	57	0	8	87.69	70	74.71	71.25	39.4	58.5	39.93
	22MEC04	65	63	0	2	96.92	70	74.64	55.2	58.6	77.6	59.07
	22MEC05	65	53	0	12	81.54	70	71.25	69.68	45.5	67.4	65.87
	22MEC06	65	61	0	4	93.85	70	98.15	94.77	77.6	95.1	91.69
	22MEC07	65	60	0	5	92.31	70	92.15	71.09	54.9	75.9	52.32
	22MEP02	65	65	0	0	100	70	98.46	98.46	100.00	98.46	100.00
	YEAR / SEMESTER : III / V (ODD SEMESTER) 2023-24											
	SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
	17MEC13	101	91	2	10	90.1	70	72.47	57.95	61.63	81.87	73.17
	17MEC14	101	96	2	5	95.05	70	98	81.33	81	66.67	86
	17MEC15	101	86	2	15	85.15	70	75.99	74.99	53.66	83.65	82.99
	17MEX21	60	55	0	5	91.67	70	65.67	82.89	73.44	81.67	73.44
	17MEX32	59	58	1	1	98.31	70	73.67	75.33	74.89	98.2	66.1
	YEAR / SEMESTER : IV / VII (ODD SEMESTER) 2023-24											
	SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
	17MEC20	109	103	1	6	94.5	70	70.78	70.02	71.83	70.08	70.09
	17MEC21	109	101	1	8	92.66	65	73.27	72.67	68.85	88.71	73.45
	17MEC22	109	106	1	3	97.25	70	70.78	71.08	71.81	48.91	49.03
	17GEA03	42	33	2	9	78.57	75	57.65	38.18	40.74	57.97	39.4
	17MEP10	109	109	1	0	100	80	90.36	94.87	93.36	86.87	87.37
	17MEP11	109	109	1	0	100	75	97.49	97	96.87	97.53	97.67
	7MED01	109	109	1	0	100	70	98.4	98.73	98.33	98.67	98.8



	<ul style="list-style-type: none"> ➤ BoS members appreciated the performance of students based on the pass percentage. Further, observed that the CO attainments were low in few courses preferable CO3 and suggested to take remedial measures to improve the attainment. ➤ Dr. Vijay and Dr. Arul NIT clarified about process of fixing CO targets. ➤ Dr. Vijay asked the details about action taken for low CO attainment case. ➤ Dr. MEM explained the details of action taken for non-attained course outcomes. ➤ Dr. Vijay suggested to develop a software for internal database management.
Resolution	Resolved to record.
Item 12.13	Approval of Panel of Examiners (UG & PG)
Discussion	<ul style="list-style-type: none"> ✓ BoS members clarified about minimum eligibility fixed for becoming a panel of examiner. ✓ Dr. MEM explained the process of preparing panel of examiner for question paper setting, valuation and laboratory examinations based on the examiner specialization viz., Design, Thermal, Manufacturing and Management. The minimum experience of 5 years is fixed for being an examiner on leading institution or NIRF ranked college. ✓ Members suggested to see feasibility of having examiners as given below <ul style="list-style-type: none"> • Question paper setting (minimum Ph.D) doctorates • Laboratory examiners (5+ years of experience) • Project course evaluation/examiner (minimum Ph.D) doctorates
Resolution	Resolved to approve the panel of Examiners for question paper setting, valuation and laboratory examinations
Item 12.14	Review of best practices of the department.
Discussion	<ul style="list-style-type: none"> • Internship cum placement • Dr.MEM presented the Internship cum placement (ICP) as to the best practice of the dept and highlighted the recent (2024 passing) achievement interns of stipends. • Dr. Vijay highlighted the best practice of their instituted about the provision of seed money for students and faculty members for research activities. • Dr. Vijay suggested the new teaching methodologies <ul style="list-style-type: none"> ✓ Flipped classroom ✓ Project Based Learning (PBL) ✓ Flexible assessment system by faculty (No standard QP)


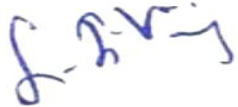




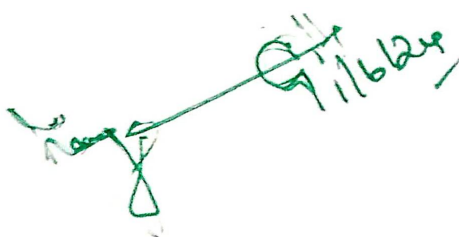
	<ul style="list-style-type: none"> ✓ Conduct online quiz in between the class ✓ Collaborative Learning (students work together in groups to solve problems) ✓ Case studies, role-playing, and visual aids
Resolution	Resolved to include the suggestion.
Item 12.15	<p>Department Achievement for the academic year 2023 – 2024.</p> <ul style="list-style-type: none"> ✓ Student Achievement ✓ Faculty Achievement
Discussion	<p>Dr.MEM presented the Student & Faculty Achievement for the academic year 2023 – 2024.</p> <p><u>Students</u></p> <p><u>Internship</u></p> <ul style="list-style-type: none"> • Kiruthika M, Janaga Nandhini M.P of final Year Mechanical Engineering have received offer letter from Universiti Teknologi PETRONAS (UTP) Malaysia for doing virtual Research Attachment Programme. <p><u>Awards</u></p> <ul style="list-style-type: none"> • Final year 2024 passing out 42 students have completed 6 weeks of internship. • Merlin Abinaya. D.V of Third Year Mechanical Engineering received a Best Performance Award from SAEISS. • Kiruthika. M of Final Year Mechanical Engineering received a Best Student Award (Female category) from IEI. • Gokulan. C of Final Year Mechanical Engineering received a Best Student Award (Male category) from IEI. <p><u>Prizes won in Co-curricular and extra-curricular</u></p> <ul style="list-style-type: none"> • A team of Second Year Mechanical Engineering students received second prize in SAE Bicycle Design Challenge 2023 held at PSNA College of Engineering and Technology, Dindigul. • Varun. K.R of 3rd Year Mechanical won 3rd place in Power lifting at Anna University Zonal. • Varun. K.R of 3rd Year Mechanical won 2nd place in Power lifting at State level Power Lifting. <p><u>Faculty</u></p> <p><u>Awards</u></p> <ul style="list-style-type: none"> • Dr. M. Easwaramoorthi, HoD/Mechanical, received the Leadership award from SAEISS. • Dr. N. Senniangeri, ASP/Mechanical, received the Best Faculty Advisor award from SAEISS. • Faculty members published papers in SCI /Scopus journal – 8, Others – 29 <p><u>Grand-in-aid</u></p> <ul style="list-style-type: none"> • Dr. M. Muthukumar, Professor/Mechanical, received the MSME funding of Rs. 15 Lakhs. • Mr. A. Vishnu, Assistant Professor/Mechanical, received the MSME funding of Rs. 14 Lakhs. • BoS members appreciate the achievements
Resolution	Resolved to record.

Item 12.16	Any other matter – Nil
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Finally, Dr. S. Magibalan - BoS Coordinator thanked all the members for their active participation.

Date: 01.06.2024

S.No.	Name of the Expert	Signature
1	Dr. S. P. Vendan, Professor, Department of Mechanical Engineering, PSG College of Technology Coimbatore	Leave of absence
2	Dr. V. Arul Mozhi Selvam, Associate Professor, Department of Mechanical Engineering, National Institute of Technology Trichy	
3	Dr. S. J. Vijay, Professor, Department of Mechanical Engineering, Karunya Institute of Technology and Sciences, Coimbatore	
4	Mr. Pradeep Chandrasekaran, Associate Director - Vehicle Engineering, OLA Electric Technologies Pvt Ltd, Bengaluru	
5	Mr. Karthikeyan Rajamanickam, Dev Ops Engineer, Eleviant Tech, Coimbatore	


Dr. M. Easwaramoorthi
(Chairman, BoS - Mechanical Engineering)

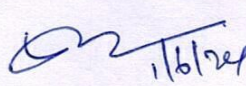

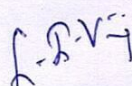
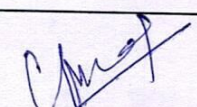
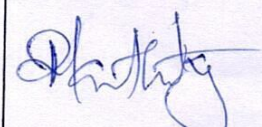


NANDHA ENGINEERING COLLEGE
(Autonomous Institution)
Pitchandampalayam, Erode To Perundurai Road, Erode-638 052
BOARD OF STUDIES

Academic Year: 2023 - 2024

Board	Mechanical Engineering	Meeting Date.	01-06-2024	Meeting No.	12	R2022
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LIST OF MEMBERS

Sl. No	Members	Representation	Signature
1	Dr. M.Easwaramoorthi, Professor & Dean – Mechanical	Chairman	 1/6/24
2	Dr. S. P. Vendan, Professor, Department of Mechanical Engineering, PSG College of Technology, Coimbatore – 641 004	University Nominee	Leave of absence
3	Dr. V. Arul Mozhi Selvan, Associate Professor, Department of Mechanical Engineering, National Institute of Technology, Tiruchirappalli – 620015	Expert Nominee (Nominated by Academic Council)	 1/6/2024
4	Dr. S. J. Vijay, Professor, Department of Mechanical Engineering, Karunya Institute of Technology and Sciences, Coimbatore – 641114	Expert Nominee (Nominated by Academic Council)	 S-J-Vijay
5	Mr. Pradeep Chandrasekaran Associate Director - Vehicle Engineering, OLA Electric Technologies Pvt Ltd. Bengaluru	Member (Expert from Industry)	
6	Mr. Karthikeyan Rajamanickam Dev Ops Engineer, Eleviant Tech. Coimbatore	Alumni	



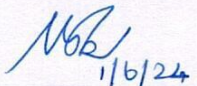
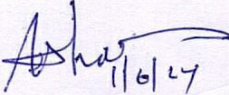
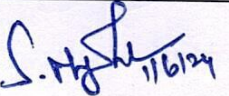


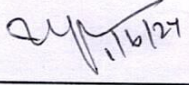
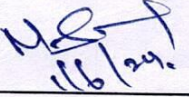
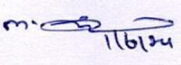
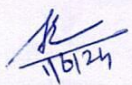
NANDHA ENGINEERING COLLEGE

(Autonomous Institution)

Pitchandampalayam, Erode To Perundurai Road, Erode-638 052

BOARD OF STUDIES

LIST OF MEMBERS (INTERNAL MEMBERS)

Sl.No	Members	Representation	Signature
1.	Dr. M. Muthukumar, Professor – Mechanical	Senior Members	 1/6/24
2.	Dr. B. Ashok Kumar, Professor – Mechanical		 1/6/24
3.	Dr. S. Magibalan, Associate Professor - Mechanical		 1/6/24
4.	Dr. N. Senniangiri, Assistant Professor - Mechanical		 1/6/24
5.	Dr. M. Manikandan, Assistant Professor - Mechanical		 1/6/2024
6.	Mr. V.N. Loganathan, Assistant Professor - Mechanical		 1/6/24
7.	Mr. M. Shanmugam, Assistant Professor - Mechanical		 1/6/24
8.	Mr. M. Sengottaiyan, Assistant Professor - Mechanical		 1/6/24
9.	Mr. S. Eswaran, Assistant Professor - Mechanical		 1/6/24