NANDHA ENGINEERING COLLEGE
(Autonomous)
ERODE- 638 052
(Accredited by NAAC with A+ Grade and accredited by NBA)
Department of Mechanical Engineering

Department of Mechanical Engineering

NEC/MECH/BoS-02/2023 DATE: 02.05.2023

CIRCULAR

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

Sub: **11 th Board of Studies Meeting – Reg.**

The 11 th Board of Studies Meeting is scheduled on 06.05.2023 by 10.00 am at Meeting Room (Block 7), Nandha Engineering College, Erode 52. The agenda and list of members of the Board of Studies are enclosed herewith as annexure. Hence all the members are requested to attend the meeting.

02/05/23

BoS- Chairman

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

Enclosure:

1. Agenda
2. List of members

Copy to:

1. The Principal
2. BoS members

NANDHA ENGINEERING COLLEGE
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Department of Mechanical Engineering

Department of Mechanical Engineering

NEC/MECH/BoS-03/2023 DATE: 02.05.2023

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

The BoS meeting is scheduled on 06.05.2023 to discuss the agenda listed below. In this connection, all the BoS members are requested to attend the meeting.

Date & Time of Meeting: **06.05.2023 (10.00 - 12.30 PM)**

Venue: **Meeting Room (Block-7)**

AGENDA	
Item 11.01	Welcome address and Introduction of members.
Item 11.02	Review and approval of the 10th BOS meeting minutes and ATR
Item 11.03	Review and approval of the PAC and DAB meeting minutes
Item 11.04	Review of Institute Vision and Mission.
Item 11.05	Review of Department Vision, Mission, PEOs and PSOs.
Item 11.06	**UG- B.E., Mechanical Engineering** **Approval of** ▪ Curriculum (R22) ▪ Syllabus – 3rd & 4th semesters with CO – PO / PSO Mapping. **Semester -3** ▪ Course-1: Engineering Thermodynamics ▪ Course-2: Fluid Mechanics and Machinery (Theory + Lab) ▪ Course-3: Manufacturing Processes ▪ Course-4: Engineering Materials and Metallurgy ▪ Course-5: Computer Aided Machine Drawing **Semester -4** ▪ Course-1: Thermal Engineering Systems ▪ Course-2: Subtractive Manufacturing Processes ▪ Course-3: Strength of Materials (Theory + Lab) ▪ Course-4: Theory of Machines (Theory + Lab) ▪ Course-5: Elective (OEC/PEC) ▪ Course-6: Thermal Engineering Systems Laboratory ▪ Course-7: Subtractive Manufacturing Processes Laboratory
Item 11.07	Approval/ Ratification of Tamil courses semester – 1& 2
Item 11.08	Approval of Vertical - Minor and Honour degree (R17)
Item 11.09	Discussion on Result Analysis and Attainment of the CO - PO / PSO (Target fixed and attained) for the ODD semester of the academic year 2022-23 (11, III & IV year)
Item 11.10	Approval of Panel of Examiners (UG & PG)
Item 11.11	Any other matter

2/5/23

BoS- Chairman

Dr. M.EASWARAMOORTHI M.E.,Ph.D.,
Head of the Department,
Department of Mechanical Engineering
Nandha Engineering College (Autonomous)
ERODE - 638 052.

NANDHA ENGINEERING COLLEGE

(Autonomous Institution)
Pitchandampalayam, Erode To Perundurai Road, Erode-638 052

BOARD OF STUDIES

Academic Year: 2022 - 2023

Board	Mechanical Engineering	Meeting Date.	06-05-2023	Meeting No.	11	R2022

LIST OF MEMBERS

Sl. No	Members	Representation	Signature
1	Dr. M.Easwaramoorthi, Professor & Dean – Mechanical	Chairman	6/5/23
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 Selvam, Associate Professor, Department of Mechanical Engineering, National Institute of Technology, Tiruchirappalli – 620015	Expert Nominee (Nominated by Academic Council)	6/5/2023
4	Dr. S. J. Vijay, Professor, Department of Mechanical Engineering, Karunya Institute of Technology and Sciences, Coimbatore – 641114	Expert Nominee (Nominated by Academic Council)	6/5/23
5	Mr. Pradeep Chandrasekaran Associate Director - Vehicle Engineering, OLA Electric Technologies Pvt Ltd. Bengaluru	Member (Expert from Industry)	6/5/23
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	
1.	Dr. M. Muthukumar, Professor – Mechanical	Senior Members	6/5/23
2.	Dr. B. Ashok Kumar, Professor – Mechanical		6/5/23
3.	Dr. M.K. Murthi, Associate Professor – Mechanical		6/5/23
4.	Dr. S. Magibalan, Associate Professor - Mechanical		6/5/23
5.	Mr. V.N. Loganathan, Assistant Professor - Mechanical		6/5
6.	Mr. M. Shanmugam, Assistant Professor - Mechanical		6/5/23
7.	Mr. M. Sengottaiyan, Assistant Professor - Mechanical		
8.	Mr. S. Eswaran, Assistant Professor - Mechanical		6/5/23
9.	Mr. T. Venkateshan, Assistant Professor - Mechanical		6.5.23
10.	Mr. R. Rajkumar, Assistant Professor - Mechanical		6/5/23

NANDHA ENGINEERING COLLEGE, ERODE - 638 052

(An Autonomous Institution, Affiliated to Anna University Chennai and Approved by AICTE New Delhi)

MINUTES OF THE 11th BOARD OF STUDIES MEETING

Name of the Body	Board of Studies
Name of the Board	Mechanical Engineering
Meeting No.	11
Date & Time	06.05.2023, 10.00 am
Mode	Offline Mode (Board Room)

NANDHA ENGINEERING COLLEGE, ERODE - 638 052

(An Autonomous Institution, Affiliated to Anna University Chennai and approved by AICTE New Delhi)

Minutes of 11th Board of Studies Meeting (BoS) held on 06.05.2023

The 11th Board of Studies (BoS) meeting was held on 06.05.2023 by 10.00 am at Board room, 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 11th BoS meeting followed by introduction of the members. After the brief introduction, the agenda items listed below were taken up for discussion and the following resolutions were passed.

AGENDA	
Item 11.01	Welcome address and Introduction of members.
Item 11.02	Review and approval of the 10th BoS meeting minutes and ATR
Item 11.03	Review and approval of the PAC and DAB meeting minutes
Item 11.04	Institute Vision and Mission.
Item 11.05	Department Vision, Mission, PEOs and PSOs.
Item 11.06	**UG- B.E., Mechanical Engineering** **Approval of Curriculum (R22)** Syllabus – 3rd & 4th semesters with CO – PO / PSO Mapping. **Semester -3** Course-1: Engineering Thermodynamics Course-2: Fluid Mechanics and Machinery (Theory + Lab) Course-3: Manufacturing Processes Course-4: Engineering Materials and Metallurgy Course-5: Computer Aided Machine Drawing **Semester -4** ▪ Course-1: Thermal Engineering Systems ▪ Course-2: Subtractive Manufacturing Processes ▪ Course-3: Strength of Materials (Theory + Lab) ▪ Course-4: Theory of Machines (Theory + Lab) ▪ Course-5: Elective (OEC/PEC) ▪ Course-6: Thermal Engineering Systems Laboratory ▪ Course-7: Subtractive Manufacturing Processes Laboratory ▪ Course- 8: Engineering Mechanics For Biomedical Engineers (Bio-medical) ▪ Course-9: Basic Mechanical Engineering (Chemical)
Item 11.07	Approval/ Ratification of Tamil courses in semester – 1 & 2
Item 11.08	Approval of Vertical for Minor and Honour degree (R17)
Item 11.09	Discussion on result analysis and attainment of the CO - PO / PSO (Target fixed and attained) for the ODD semester of the academic year 2022-23 (II, III & IV year)
Item 11.10	Approval of Panel of Examiners (UG & PG)
Item 11.11	Any other matter

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

Item 11.01	Welcome note and introduction of members
	Dr. M. Easwaramoorthi, Chairman BoS introduced the members and welcomed all followed by a brief note on functioning of BoS.
Item- 11.02	Review and approval of the 10th BoS meeting minutes and ATR
Discussion	The salient decisions taken in the 10th BoS meeting and action taken on the following point were presented. ✓ Projection of orthographic and isometric views for pyramid/ prism using free hand sketching. The members have appreciated the efforts taken to implement the suggestions.
Resolution	Resolved to approve the Action Taken Report of 10th BoS meeting.
Item - 10.03	Review and approval of the PAC and DAB meeting minutes.
Discussion	Along with the important suggestions given by the members. ✓ PAC meeting-1 held on 17.06.2022 ✓ PAC meeting-2 held on 26.12.2022 ✓ PAC meeting-3 held on 08.03.2023 ✓ DAB meeting-1 held on 07.07.2022 ✓ DAB meeting-2 held on 31.03.2023
Resolution	All members have noted the MoM of PAC and DAB meeting. Resolved to record the proceeding.
Item- 10.04	Institute Vision & Mission
Discussion	Dr. MEM presented the proposed Institute Vision, Mission. **VISION** • To be an Institute of excellence providing quality Engineering, Technology and Management education to meet the ever changing needs of the society. **MISSION** ▪ 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.
Resolution	Resolved to record.
Item-10.05	Department Vision, Mission, PEOs and PSOs.
Discussion	Dr. MEM presented the proposed Department Vision, Mission, PEOs and PSOs statements. **VISION (UG)** • 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 (UG)** ▪ 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. **PROGRAMME EDUCATIONAL OBJECTIVES (PEO) -UG** **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.

	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. **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. **PROGRAMME SPECIFIC OUTCOMES (PSO) - UG** **PSO1:** Identify, formulate and analyze the problems of Mechanical, Allied Engineering systems and product development. **PSO2:** Apply appropriate computer aided engineering tools for modeling, simulation, analysis, and manufacturing techniques to solve engineering problems. **VISION (PG)** • 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 (PG)** ▪ 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. **PROGRAMME EDUCATIONAL OBJECTIVES (PEO) - PG** **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. **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. **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. **PROGRAMME SPECIFIC OUTCOMES (PSO) - PG** **PSO1:** An ability to identify, comprehend, formulate, design and analyse real life problems and develop Mechanical or allied Engineering systems/products/processes. **PSO2:** An ability to implement appropriate design techniques, computer aided engineering tools for modeling, simulation and analysis.
Resolution	Resolved to record.
Item 11.06	**UG- B.E., Mechanical Engineering** Approval of Curriculum (R22) ➢ Syllabus –3rd &4th semesters with CO–PO / PSOMapping. **Semester -3** ➢ Course-1: Engineering Thermodynamics ➢ Course-2: Fluid Mechanics and Machinery (Theory + Lab) ➢ Course-3: Manufacturing Processes ➢ Course-4: Engineering Materials and Metallurgy ➢ Course-5: Computer Aided Machine Drawing **Semester -4** ➢ Course-1: Thermal Engineering Systems ➢ Course-2: Subtractive Manufacturing Processes

	➢ Course-3: Strength of Materials (Theory + Lab) ➢ Course-4: Theory of Machines (Theory + Lab) ➢ Course-5: Elective (OEC/PEC) ➢ Course-6: Thermal Engineering Systems Laboratory ➢ Course-7: Subtractive Manufacturing Processes Laboratory ➢ Course- 8: Engineering Mechanics For Biomedical Engineers (Bio – medical) ➢ Course-9: Basic Mechanical Engineering (Chemical)
Discussion	➢ BoS Chairman presented R22 curriculum, Semester – (3 &4) syllabi of courses and Honours degree and minor degree (R17) courses developed based on AICTE model curriculum, Parent University and other leading universities / institutions. ➢ Dr. S. J. Vijay suggested ✓ To have a course on Non-Destructive testing. ✓ To apply ISSN and copyright for Lab manuals. ✓ To include a course on New Manufacturing Processes as an elective or audit course. ➢ Dr. S. J. Vijay, Dr. V. Arul Mozhi Selvam, Mr. Pradeep chandrasekaran, Mr. Karthikeyan Rajamanickam suggested to ✓ Have text books & reference book at the end of the syllabus content under one heading as reference books. ✓ To rewrite the course outcomes, objectives using blooms taxonomy action verbs by involving senior faculty members. ✓ Whether Course objective needs for each unit. If the board approval to reduce the course objectives. **Semester -3** **Course-1: Engineering Thermodynamics – No Comments** **Course-2: Fluid Mechanics and Machinery (Theory + Lab) – No Comments** **Course-3: Manufacturing Processes– No Comments** **Course-4: Engineering Materials and Metallurgy** ➢ Dr. S.J. Vijay appreciated the syllabus content and course outcomes. **Course-5: Computer Aided Machine Drawing** ➢ Dr. S.J. Vijay and Mr. Karthikeyan suggested to included the title as 3D modeling , assembly and drafting followed by the name of experiments. **Semester -4** **Course-1: Thermal Engineering Systems** ➢ Dr. Pradeep Chandrasekar suggested ✓ To include contents related to Refrigeration and Air Conditioning in unit 5. ✓ To swap following books Ganesan V, Internal Combustion Engines, 4 th Edition, McGraw-Hill companies, 2017 : reference to text book. ✓ **Course-2: Subtractive Manufacturing Processes** ➢ Dr. S.J Vijay suggested to modify the blooms taxonomy action verbs in Course objective and Course outcome. ➢ Dr. S.J Vijay and Mr.Karthikeyan alumini opined to keep two text books out of 5, such as on text book ✓ Kalpakjian. S, "Manufacturing Engineering and Technology", Pearson Education India,7th Edition, 2018. ✓ Richard R Kibbe, John E Neely, Roland O Meyer and Warren T White, "Machine Tool Practices", Prentice Hall of India, New Delhi, 10th Revised edition, 2014. **Course-3: Strength of Materials (Theory + Lab) – No Comments**

	Course-4: Theory of Machines (Theory + Lab) ➢ Dr. S.J Vijay suggested to add the text book named, "Kinematics and dynamics of machinery" by Norton, R.L. **Course-5: Elective (OEC/PEC)** ➢ Mr. Karthikeyan suggested to add the cloud computing concept in Unit- V of the course of Problem solving by using Python Programming. **Course-6: Thermal Engineering Systems Laboratory – No Comments** **Course-7: Subtractive Manufacturing Processes Laboratory – No Comments** **Course- 8: Engineering Mechanics For Biomedical Engineers** Dr. MEM presented the Engineering Mechanics For Biomedical Engineers syllabi. ➢ Dr. S. J. Vijay, Dr. V. Arul Mozhi Selvam, Mr. Pradeep chandrasekaran, Mr. Karthikeyan Rajamanickam have suggested to include applications related to Biomedical concept in 5th Unit. **Course-9: Basic Mechanical Engineering – No Comments**
Resolution	Resolved to approve the changes suggested by the members.
Item 11.07	Approval / Ratification of Tamil courses semester – 1& 2
Discussion	**Course-1: 22GYA01 Heritage of Tamil – No Comments** **Course-2: 22GYA02 Tamils and Technology – No Comments**
Resolution	Resolved to approve.
Item 11.08	Approval of Vertical for Minor and Honour degree (R17)
Discussion	Dr. MEM presented the courses for minor degree on Electric vehicle technology ➢ **Course-1: EV Vehicle Design** ✓ Pradeep chandrasekaran suggested the book "Soylu, Seref, ed. Electric vehicles: the benefits and barriers. BoD–Books on Demand, 2011" ➢ **Course-2: EV Architecture and Control System – No Comments** ➢ **Course-3: Material Technology for EV** ✓ Karthikeyan Rajamanickam suggested to add semiconductor materials for EV. Gold, Copper, rare earth materials. ➢ **Course-4: Powertrain Design** ✓ Dr. V. Arul Mozhi Selvam suggested to change the course title is power train for EV. ✓ Dr. S. J. Vijay suggested to add ADAS, IoT connected cars with cyber physical system topic in Unit -5. ➢ **Course-5: Battery Management** Pradeep chandrasekaran suggested to ✓ Add thermal runaway topic in Unit -1. ✓ Add the reference web link to the syllabus. ➢ **Course-6: AI and IoT for EV - No Comments** ➢ **Course-7: Autonomous Vehicle - No Comments** ➢ **Course-8: Safety Regulations & Future Technology - No Comments**
Resolution	Resolved to approve.

Item 11.09	Discussion on result analysis and attainment of the CO - PO / PSO (Target fixed and attained) for the ODD semester of the academic year 2022-23 (II, III & IV year)

Discussion

Dr.MEM HoD of II, III & IV years presented the following.

YEAR / SEMESTER : II / III (ODD SEMESTER) 2022-23

SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
17MYB03	104	79	2	25	75.96	70	58.71	39.25	39.41	58.5	55.93
17MEC03	104	96	2	8	92.31	75	58.66	39.33	39.33	58.66	40
17MEC04	104	95	2	9	91.35	70	74.27	55.07	39.73	58.93	55.73
17MEC05	103	98	3	5	95.15	70	76.23	77.42	68.12	81.01	77.1
17MEC06	104	100	2	4	96.15	70	58.56	74.61	70.83	90.78	55.22
17MEP03	103	103	3	0	100.00	75	97.93	97.86	97.73	97.99	97.93
17MEP04	103	103	3	0	100.00	75	99.90	98.93	99.60	99.13	98.90

YEAR / SEMESTER : III / V (ODD SEMESTER) 2022-23

SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
17MEC13	110	101	6	9	91.82	70	72.48	57.59	57.96	65.38	81.49
17MEC15	110	103	6	7	93.64	70	64.33	89.66	48.66	68	74
17MEC16	110	104	6	6	94.55	70	75.91	75.79	57.97	76.08	76.54
17MEX32	110	102	6	8	92.73	70	57.00	57.66	73.66	81.33	73.66
17MEX22	51	51	5	0	100.00	70	57.33	56.31	73.28	80.68	72.44
17MEC14	110	95	6	15	86.36	70	62.66	54.66	51.33	58.33	51.33
17MEX24	54	49	1	5	90.74	70	72.78	56.83	73.50	81.00	49.44
17MEP08	110	110	6	0	100.00	75	66.67	66.67	66.67	66.67	66.67

YEAR / SEMESTER : IV / VII (ODD SEMESTER) 2022-23

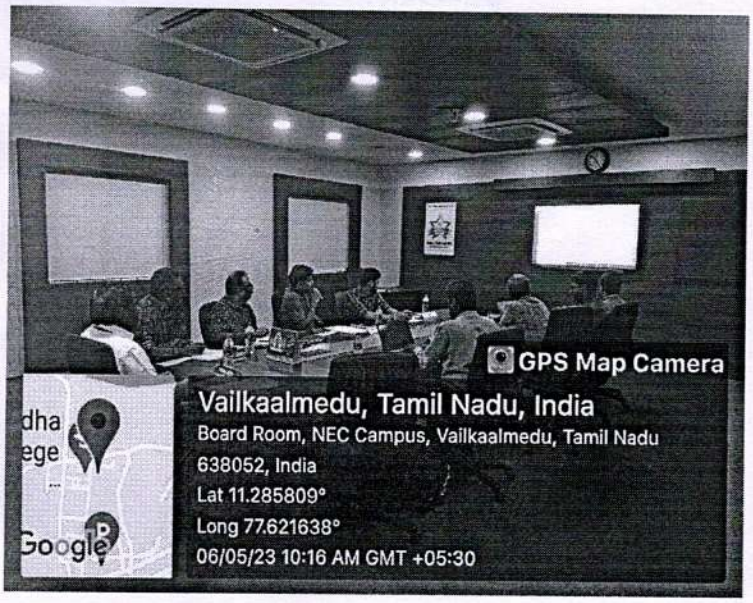
SUBJECT CODE	Total Students Appeared	PASS	ABSENT	FAIL	OVERALL PASS %	TARGET CO	CO1	CO2	CO3	CO4	CO5
17MEC20	119	116	6	3	97.48	70	42.66	73.99	58.66	57.99	58.66
17MEC21	119	109	6	10	91.57	65	49.28	64.8	68.96	49.33	65.39
17MEC22	119	113	6	6	94.91	70	72.8	72.8	73.1	79.2	65.1
17GEA03	66	64	5	2	96.97	75	57.65	38.18	56.74	57.97	39.4
17CHZ01	22	20	0	2	90.91	70	74.91	74.79	79.39	75.03	75.03
17CEZ05	38	37	0	1	97.37	70	64	64	52	48	56
17CSZ03	22	21	0	1	95.45	75	89	89	97.33	89.33	97.66
17EEZ01	19	19	0	0	100	70	73	74	82	82	81
17ITZ04	3	3	0	0	100	70	73.19	63.4	70	65.43	68.94
17PYZ01	8	8	0	0	100	70	73.33	57.33	57.66	97.33	82
17CYZ02	3	3	0	0	100	70	96.66	96.66	89.33	96.66	97.33
17EYX05	8	8	0	0	100	70	74	57	70	81	73
17CYZ02	125	125	0	0	100	75	97.07	96.87	96.73	97.27	97.53
17MEP11	125	125	0	0	100	75	97.49	96.91	96.91	97.65	97.6
17MED01	125	125	0	0	100	70	83	83.13	82.73	82.6	83.13

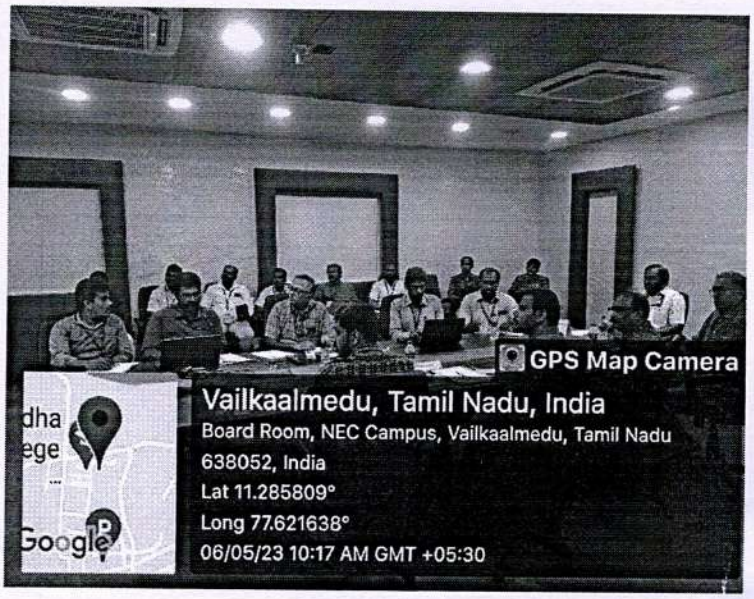
- BoS members appreciated the performance of students based on the pass percentage futher, observed that the CO attainments were low in few courses and suggested to take remedial measures to improve the attainment.
- Dr. Vijay, Dr. Arulmozhil selvan NIT clarified about process of fixing CO targets.
- Dr. Vijay asked the details about action taken for low CO attainment case.

Resolution	Resolved to record.

Item 11.10	Approval of Panel of Examiners (UG & PG)
Discussion	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.
Resolution	Resolved to approve the panel of Examiners for question paper setting, valuation and laboratory examinations
Item 11.11	Any other matter – Nil

Finally, Dr. S. Magibalan - BoS Coordinator thanked all the members for their active participation.





Date: 06.05.2023

06/5/23

Dr. M. Easwaramoorthi

(Chairman, BoS - Mechanical Engineering)

HEAD OF THE DEPARTMENT
DEPARTMENT OF MECHANICAL ENGINEERING
MAHENDHA ENGINEERING COLLEGE
ERODE -638 052

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Annexure - II

Action Taken Report (ATR) – BoS XI – MECH

No.	Description	Action Taken
1	**Semester -3** **Course-5: Computer Aided Machine Drawing** ➢ Dr. S.J. Vijay and Mr. Karthikeyan suggested to included the title as 3D modeling , assembly and drafting followed by the name of experiments.	✓ Included
2	**Semester -4** **Course-1: Thermal Engineering Systems** ➢ Dr. Pradeep Chandrasekar suggested ✓ To include contents related to Refrigeration and Air Conditioning in unit 5. ✓ To swap following books Ganesan V, Internal Combustion Engines, 4 th Edition, McGraw-Hill companies, 2017 : reference to text book.	✓ Included ✓ Included
3	**Semester -4** **Course-2: Subtractive Manufacturing Processes** ➢ Dr. S.J. Vijay and Mr.Karthikeyan alumini opined to keep two text books out of 5, such as on text book ✓ Kalpakjian. S, "Manufacturing Engineering and Technology", Pearson Education India,7th Edition, 2018. ✓ Richard R Kibbe, John E Neely, Roland O Meyer and Warren T White, "Machine Tool Practices", Prentice Hall of India, New Delhi, 10th Revised edition, 2014.	✓ Modified and Updated
4	**Course-4: Theory of Machines (Theory + Lab)** ➢ Dr. S.J. Vijay suggested to add the text book named, "Kinematics and dynamics of machinery" by Norton, R.L.	✓ Included
5	**Course- 8: Engineering Mechanics For Biomedical Engineers** ➢ Dr. S. J. Vijay, Dr. V. Arul Mozhi Selvan, Mr. Pradeep Chandrasekaran, Mr. Karthikeyan Rajamanickam have suggested to include applications related to Biomedical concept in 5th Unit.	✓ Included

2/8/23

Dr. M. Easwaramoorthi

(Chairman, BoS - Mechanical Engineering)