



# PAAVAI ENGINEERING COLLEGE

(Autonomous)

NH 44, PACHAL, NAMAKKAL-637018

## DEPARTMENT OF MECHANICAL ENGINEERING

### ACTION TAKEN REPORT – STAKEHOLDERS FEED BACK ON CURRICULUM & SYLLABUS

Academic Year 2022-2023

Date: 08.08.2022

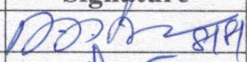
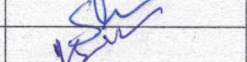
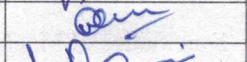


1. Feedback was collected.
2. The feedback was analysed and reviewed through Internal Committee.
3. The Proposed draft of syllabus was put forth to DAC. The Constructive suggestions were taken from the Stakeholders.
4. After detailed deliberation and discussion, feedback the proposed draft of syllabus with modification was presented to BoS for final Approval.
5. After BoS recommendations, the curriculum and syllabus came into implementation.

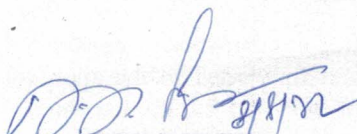
Feedback was requested from following Stakeholders

S.No.	StakeHolders	No of feedback form received
1.	Students	210
2.	Teachers	21
3.	Alumni	15
4.	Employer	10

Name of the course	Recommended by	Recommendation	Action Taken
<b>Students Feedback</b>			
Foundry Technology	Mouli prasad.C	A individual course for foundry operation may be included for III year	Recommendation considered and forwarded to the approval of BOS.
	Sridharprasad.R.K	III year consist of more analytical papers, any one of them may move to IV year	Recommendation considered and forwarded to the approval of BOS
Kinematics of Machinery	Ranjith kumar V	Course had more content, some of them may be removed.	Recommendation considered and forwarded to the approval of BOS
<b>Faculty Feedback</b>			
Finite Element Analysis	Thangavel T	Heat transfer problems may be included in Unit II	Recommendation considered and forwarded to the approval of BOS and it is implemented.

Finite Element Analysis	N.Manigandan	boundary condition problems has to be added in unit III	Recommendation considered and forwarded to the approval of BOS and it is implemented.
Welding Technology	K.Anand	Dissimilar metal joints may be included in Unit IV	Recommendation considered and forwarded to the approval of BOS and it is implemented
<b>Alumni Feedback</b>			
Simulation and Analysis Laboratory	D.Sandhiya	MATLAB exercises to be modified to the relevant topics	Recommended and forwarded to BOS.
Computational Fluid Dynamics	Samshad Shahzada	Case Studies has to be included	Recommended and forwarded to BOS
<b>Employer Feedback</b>			
Value Added Courses	Dinesh S	Hands on training to be given.	Recommended and it may be adopted in future.
Welding Technology	Mathan Kumar S	Baldev Raj – Welding technology for Engineers, ASM Book should be added	Recommended and forwarded to BOS.
Design of Jigs, Fixtures and Press Tools	Padmaraj Aravindan	Drawing and deep drawing' processes may be added:	Recommendation considered and approved by BOS and it is implemented.

S.No	Name of the Member	Designation	Role	Signature
1	Dr.A. P.Sivasubramaniam	HOD	Chairman/BOS	
2	Dr.K.Sundara murthy	Dean/Academics	Member	
3	Dr.V.Subburam	Prof	Member	
4	Dr.M.Makesh	Prof	Member	
5	Dr.S.Maniraj	ASP	Member	

  
HOD/MECH

  
PRINCIPAL

**PAAVAI ENGINEERING COLLEGE (Autonomous)**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**Minutes of the 8<sup>th</sup> Board of Studies Meeting**

**Venue: Department of Mechanical Engineering**

**Date and Time: 12.08.2022, 11.30 AM**

**Members Present**

S.NO	NAME	POSITION IN THE COMMITTEE	COLLEGE / UNIVERSITY / INDUSTRY
1.	Dr.A.P.Sivasubramaniam, HoD & Prof/Mechanical	Chairman	Paavai Engineering College.
2.	Dr. K. Shanmuga Sundaram, Prof/Mechanical	University Nominee	Department of Mechanical Engineering, Anna University, Chennai-600 025.
3.	Dr.K.Jayabal, ASP/Mech	Academic Expert	Department of Mechanical Engineering, IIITDM, Kancheepuram-600127.
4.	Dr.A.Vinoth Jebaraj, ASP/Mech	Academic Expert	School of Mechanical Engineering, Design & Automation, VIT University, Vellore-632014.
5.	Dr.M.Premkumar, Principal	Members	Paavai Engineering College
6.	Dr.K.K.Ramasamy, Prof/ Mech		
7.	Dr.K.Sundara Murthy, Dean - Academics		
8.	Dr.V.Subburam, Prof/ Mech		
9.	Dr.M.Makesh, Prof/ Mech		
10.	Dr.S.Maniraj, ASP/Mech		
11.	Dr.K.Muruga Bhoopathy, General Manager	Industry Expert	SAIL, Salem.
12.	Mr.R.Kavin Sakkaravarthy, Plant Manager	Alumni	Ammega Belting India Private Ltd., Chennai



**Minutes of the Board of Studies Meeting**

**Venue: Department of Mechanical Engineering**

**Date and Time: 12.08.2022, 11.30 AM**

1. Chairman / BoS welcomed all the members to the 8<sup>th</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members to the Board of Studies.
3. Chairman / BoS briefed the members about the **agenda**.

The Board of Studies of Mechanical Engineering department -Passing of the following details:

**B.E Mechanical Engineering:**

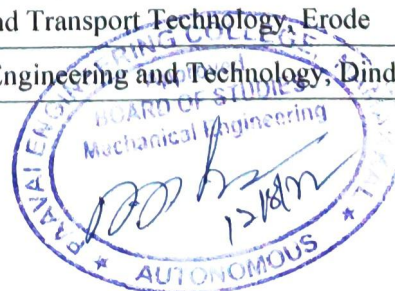
- Curriculum and Syllabi of Seventh and Eighth semester for the batch of students admitted in 2019– 2020 under Regulations 2019.
- One credit courses
- Value added courses
- Amendments
  - Environmental Science and Engineering for Lateral Entry Students in VI Semester.
  - Examination pattern, degree classification and grading for 2021-2022 admitted students.

**Panel of Examiners:**

S.No	Name of the Examiners	College Name
1.	Prof.P.MURUGANANDHAM	Mahendra Institute of Technology, Tiruchengode
2.	Prof.A.RVENKATARAMANAN	Sona College of Technology, Salem
3.	Dr.V.M.MADHAVAN	Sona College of Technology, Salem
4.	Prof.S.KARTHIK	PSNA College of Engineering and Technology, Dindigul
5.	Prof.T.RAMAKRISHNAN	PSNA College of Engineering and Technology, Dindigul
6.	Dr.R.BOOPATHI	Mahendra Engineering College, Tiruchengode
7.	Prof .H.VINOTHKUMAR	M.Kumarasamy College of Engineering, Karur
8.	Dr.S.DHANABALAN	M.Kumarasamy College of Engineering, Karur
9.	Prof.L.EMMANUVEL	M.Kumarasamy College of Engineering, Karur
10.	Dr.R.PRAKASH	Velalar College of Engineering and Technology, Erode
11.	Dr.S.JAYAPRAKASAM	K.S.Rangasamy College of Technology, Tiruchengode
12.	Prof.G.BALAJI	PSNA College of Engineering and Technology, Dindigul
13.	Dr.R.SENTHILRAJA	Institute of Road and Transport Technology, Erode
14.	Dr.M.PALPANDI	PSNA College of Engineering and Technology, Dindigul

**M.E Engineering Design:**

- Special Electives for Research Scholars



## **B.E – Safety and Fire Engineering:**

- Curriculum and Syllabi of First and Second semester for the batch of students to be admitted in 2022– 2023 under Regulations 2019.

The following are the suggestions given by the members of Board of Studies:

### **7<sup>th</sup> & 8<sup>th</sup> Semester Courses:**

#### **1. ME19702 - FINITE ELEMENT ANALYSIS**

- Unit 2 – In 1D, ‘Elements’ should be mentioned and ‘heat transfer problems’ after ‘post-processing’ should be added
- Unit 3 – ‘Application to thermal and assembly/mechanical problems’ and also ‘boundary condition problems’ should be added.
- Unit 3 – Add ‘co-ordinate element’ also.
- Books - S.S. Rao book new edition should be added. Also ‘Seshu’ (author) book should be added as second in text book and move ‘Logan’ to reference books.

#### **2. ME19354 - COMPUTATIONAL FLUID DYNAMICS**

- Unit 5 – At the end of 5<sup>th</sup> unit ‘Case Studies’ should be added. Also at the end of the unit add solutions, case studies after ‘Advanced Boundary Conditions’.

#### **3. ME19452 - ADDITIVE MANUFACTURING PROCESSES**

- Unit 4 – Before EBM add “Selective Laser Melting” or “Laser based Powder Melting” should be added.

#### **4. ME19553 - DESIGN OF JIGS, FIXTURES AND PRESS TOOLS**

- Unit 4 – Change the unit topic as “ DESIGN OF PRESS TOOLS”
- Unit 5 – ‘Drawing and deep drawing’ should be added.

#### **5. ME19652 - PRODUCTIVITY MANAGEMENT AND RE-ENGINEERING**

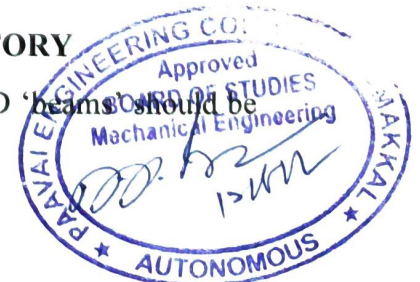
- Unit 2 – Unit 2 should be modified by reducing the contents to 4 to 5 lines.

#### **6. ME19653 - WELDING TECHNOLOGY**

- Unit 4 – ‘Dissimilar metal joints’ should be added before ‘automation’.
- Unit 5 – Instead of mentioning Aluminum, copper, stainless steel give as ‘Steel, Aluminum alloys, Copper alloys and other non-ferrous metals’.
- Books - Baldev Raj – Welding technology for Engineers, ASM Book should be added.

#### **7. ME19704 - SIMULATION AND ANALYSIS LABORATORY**

- No ‘beams’ topic in FEA theory, so after trusses in 1D ‘beams’ should be added.
- Modify MATLAB exercises relevant to the topics.



- In Part II, exercise 6, remove 'simple treatment only'.
8. **One Credit Course – FUSION 360**
- Fusion 360 is Company name, instead the course name should be given as 'DRAFTING AND MODELLING'.
  - The name of the first module should be changed as 'Drawing Standards'.
9. **Value Added Courses**
- Hands on training should be given.
- The members of the Board of Studies also approved changing the Subject codes of 5<sup>th</sup> and 6<sup>th</sup> semesters to Regulations 2019.

### **SPECIAL ELECTIVES FOR RESEARCH SCHOLARS**

- All the 5 Elective courses for research scholars have been approved by the members of the Board of Studies.

### **LIST OF NEW COURSES**

➤ **B.E MECHANICAL ENGINEERING**

- Automation in Manufacturing
- Internet of Things (IoT)
- Artificial Intelligence (AI)
- Additive Manufacturing processes
- Solar Energy System

➤ **SPECIAL ELECTIVES FOR RESEARCH SCHOLARS**

- Energy Management in Thermal systems
- Energy Resources
- Advanced Power Plant Engineering
- Energy Conservation in Industrial Utilities
- Environmental benefits of Energy Management

➤ **B.E. SAFETY AND FIRE ENGINEERING**

- ME22101 - Engineering Graphics
- ME22201 - Engineering Mechanics
- GE22101 - Engineering Practices Laboratory

### **LIST OF VALUE ADDED COURSES**

- Introduction to Machine Learning
- Green Energy Resources
- Surface coating
- New Product Development
- Occupational Health and Safety Assessment series
- Synthesis & Application of Nano Materials
- Modern Microscopes and MEMS



- Advanced Materials Processing and Characterization
- L&T Online Courses
- Google Online Courses
- NPTEL Courses

### LIST OF ONE CREDIT COURSES

- Non-Destructive Testing
- 3D CAD Design
- CNC Milling
- Solid Modeling
- Industrial Robotics
- Industrial Automation
- Fluid Simulation
- Computer Aided Reverse Engineering
- Drafting and Modelling

### B.E. SAFETY AND FIRE ENGINEERING

1. ME22101 - Engineering Graphics
2. ME22201 - Engineering Mechanics
3. GE22101 - Engineering Practices Laboratory

- All the above 3 Courses have been approved by the members of the Board of Studies for 1<sup>st</sup> and 2<sup>nd</sup> Semesters of B.E. SAFETY AND FIRE ENGINEERING department.

The members of the Board of Studies also approved changing the Subject codes of 5<sup>th</sup> and 6<sup>th</sup> semesters to Regulations 2019.



**Dr. A.P. Sivasubramaniam**

HoD/ MECH – BoS (Chairman)

Position in the committee	University Nominee	Academic Expert	Academic Expert	Industry Expert	Alumni
<b>Name &amp; Designation</b>	Dr. K. Shanmuga Sundaram, Prof/ Mech	Dr.K.Jayabal, ASP/ Mech	Dr.A.Vinoth Jebaraj, ASP/ Mech	Dr.K.Muruga Bhoopathy, General Manager	Mr.R.Kavin Sakkaravarthy, Plant Manager
<b>e-Signature</b>					

**Re: PAAVAI ENGINEERING COLLEGE / Mechanical, 8th BOS Minutes Approval**

K Jayabal <jayabal@iiitdm.ac.in>

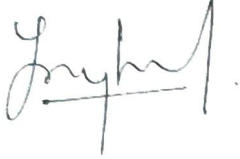
Mon 22-08-2022 19:02

To: PEC MECH Hod <pecmechhod@paavai.edu.in>

Dear Professor,

Approved from my end. Also attached is my electronic signature as requested.

Each time before the signature is employed, you are requested to notify me and send the documents where it is placed, for my reference. Thank you.



Regards,

Jayabal

-----  
Dr. Jayabal K

Associate Professor and Head of Mechanical Engineering Department

Indian Institute of Information Technology Design and Manufacturing Kancheepuram

(An Institute of National Importance established by Govt. of India)

Chennai - 600 127, India, Phone: +91 44 2747 6362

<http://iiitdm.ac.in/People/displayProfileFaculty.php?jayabal@iiitdm.ac.in>

On Mon, 22 Aug 2022 at 15:29, PEC MECH Hod <pecmechhod@paavai.edu.in> wrote:

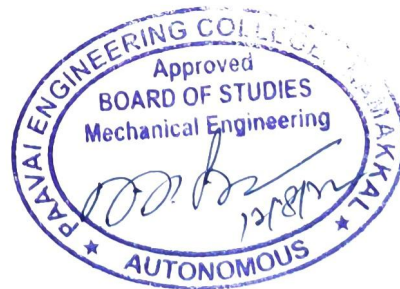
Respected Sir,

Here with I have attached the 8th BoS , Minutes of meeting details for your kind perusal. Kindly go through it and approve the same. If any more suggestions share with me and also send your E-Signature.

Thank you,

With Regards

**Dr. A.P.Sivasubramaniam.,M.E., Ph.D.**  
**Head of the Department,**  
**Department of Mechanical Engineering,**  
**Paavai Engineering College,**  
**Ph.No: 9842070288**





**Re: PAAVAI ENGINEERING COLLEGE / Mechanical, 8th BOS Minutes Approval**

muruga bhoopathy kaliaperumal <kmbhoopathy@gmail.com>

Mon 22-08-2022 16:54

To: PEC MECH Hod <pecmechhod@paavai.edu.in>

Dear sir,

I have gone through the 8th BoS , Minutes of meeting details and MOM is approved from my side.

Note: Please find the attached signature.

Thank you,

Regards

Dr K Muruga Bhoopathy  
GM, SAIL, Salem Steel Plant

On Mon, Aug 22, 2022 at 3:29 PM PEC MECH Hod <pecmechhod@paavai.edu.in> wrote:

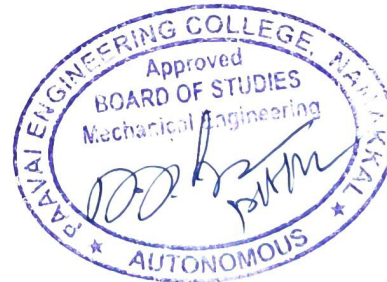
Respected Sir,

Here with I have attached the 8th BoS , Minutes of meeting details for your kind perusal. Kindly go through it and approve the same. If any more suggestions share with me and also send your E-Signature.

Thank you,

With Regards

**Dr. A.P.Sivasubramaniam.,M.E., Ph.D.**  
**Head of the Department,**  
**Department of Mechanical Engineering,**  
**Paavai Engineering College,**  
**Ph.No: 9842070288**



**Re: PAAVAI ENGINEERING COLLEGE / Mechanical, 8th BOS Minutes Approval**

KAVIN SAKKARAVARTHY <kavinmech41@gmail.com>

Tue 23-08-2022 00:05

To: PEC MECH Hod <pecmechhod@paavai.edu.in>

Dear Sir,

I have gone through the attachment. I am approving the points and syllabus from my side.

Thanks & Regards,  
R.Kavin Sakkaravarthy M.E.,  
Plant Manager,  
Ammega Belting India Pvt Ltd,  
Chennai - 56

On Mon, 22 Aug 2022, 3:29 pm PEC MECH Hod, <pecmechhod@paavai.edu.in> wrote:

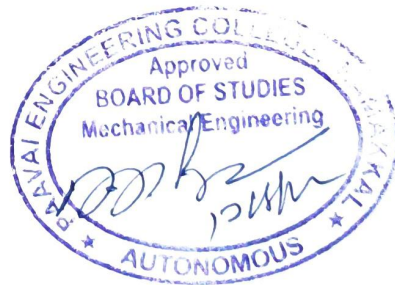
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Thank you,

With Regards

**Dr. A.P.Sivasubramaniam.,M.E., Ph.D.**  
**Head of the Department,**  
**Department of Mechanical Engineering,**  
**Paavai Engineering College,**  
**Ph.No: 9842070288**



**Fwd: Document from K Shanmuga Sundaram**

K.Shanmuga Sundaram <drkshanmugasundaram@gmail.com>

Wed 24-08-2022 12:13

To: PEC MECH Hod <pecmechhod@paavai.edu.in>

1 attachments (281 KB)

DOC-20220823-WA0033;

Dear Sir,

PFA the approved minutes of the BOS. You shall pursue further, please.

Bank Details are:

Name: K. Shanmuga Sundaram  
Account Number: 10497039797  
Bank: SBI Branch, Anna University  
IFSC Code: SBIN0006463

Kind Regards,

Shan

Dr.K.Shanmuga Sundaram,  
Professor in Mechanical Engineering,  
Engineering Design Division, CEG Campus  
&  
Director, AU-FRG Institute for CAD/CAM  
Anna University, Chennai.  
Phone: 044 - 22358051, 22357654  
Fax: 044 22357744  
Mobile: +91 9940155773



8th BOS Minutes.pdf



Re: PAAVAI ENGINEERING COLLEGE / Mechanical, 8th BOS Minutes Approval

A Vinoth Jebaraj <vjebbaraj@gmail.com>

Mon 22-08-2022 16:07

To: PEC MECH Hod <pecmechhod@paavai.edu.in>

Dear Sir, I have given my approval for the minutes of the meeting of 8th BOS. Please find the attachment. Thanks & Regards.

On Mon, 22 Aug 2022 at 15:29, PEC MECH Hod <pecmechhod@paavai.edu.in> wrote:  
Respected Sir,

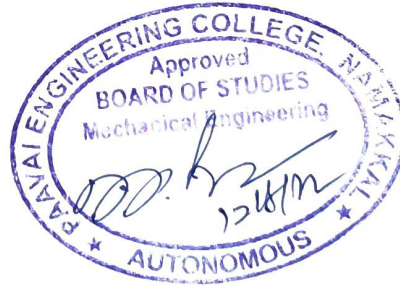
Here with I have attached the 8th BoS , Minutes of meeting details for your kind perusal. Kindly go through it and approve the same. If any more suggestions share with me and also send your E-Signature.

Thank you,

With Regards

Dr. A.P.Sivasubramaniam.,M.E., Ph.D.  
Head of the Department,  
Department of Mechanical Engineering,  
Paavai Engineering College,  
Ph.No: 9842070288

Dr.A.Vinoth Jebaraj  
Associate Professor  
School of Mechanical Engineering  
VIT University.  
Vellore.



**PAAVAI ENGINEERING COLLEGE (Autonomous)**

**DEPARTMENT OF MECHANICAL ENGINEERING**

Action taken Report of 8<sup>th</sup> BoS

**BOS SUGGESTIONS AND IMPLEMENTATION**

Academic Year 2022-2023

Semester /Year	Course Code / Title	Suggestion by BoS Members	Status of Implementation
VII / Fourth	ME19702 - Finite Element Analysis	<ul style="list-style-type: none"> <li>Unit 2 – In 1D, ‘Elements’ should be mentioned and ‘heat transfer problems’ after ‘post-processing’ should be added</li> <li>Unit 3 – ‘Application to thermal and assembly/mechanical problems’ and also ‘boundary condition problems’ should be added.</li> <li>Unit 3 – Add ‘co-ordinate element’ also.</li> <li>Books - S.S. Rao book new edition should be added. Also ‘Seshu’ (author) book should be added as second in text book and move ‘Logan’ to reference books.</li> </ul>	IMPLEMENTED
VII / Fourth	ME19354 - Computational Fluid Dynamics	<ul style="list-style-type: none"> <li>Unit 5 – At the end of 5th unit ‘Case Studies’ should be added. Also at the end of the unit add solutions, case studies after ‘Advanced Boundary Conditions’.</li> </ul>	IMPLEMENTED
VII / Fourth	ME19452 - Additive Manufacturing Processes	<ul style="list-style-type: none"> <li>Unit 4 – Before EBM add “Selective Laser Melting” or “Laser based Powder Melting” should be added.</li> </ul>	IMPLEMENTED
VIII / Fourth	ME19553 - Design of Jigs, Fixtures and Press Tools	<ul style="list-style-type: none"> <li>Unit 4 – Change the unit topic as “ DESIGN OF PRESS TOOLS”</li> <li>Unit 5 – ‘Drawing and deep drawing’ should be added.</li> </ul>	IMPLEMENTED
VIII / Fourth	ME19652 - Productivity Management and Re-Engineering	<ul style="list-style-type: none"> <li>Unit 2 – Unit 2 should be modified by reducing the contents to 4 to 5 lines.</li> </ul>	IMPLEMENTED
VIII / Fourth	ME19653 - Welding Technology	<ul style="list-style-type: none"> <li>Unit 4 – ‘Dissimilar metal joints’ should be added before ‘automation’.</li> <li>Unit 5 – Instead of mentioning Aluminum, copper, stainless steel give as ‘Steel, Aluminum alloys, Copper alloys and other non-ferrous metals’.</li> <li>Books - Baldev Raj – Welding technology for Engineers, ASM Book should be added.</li> </ul>	IMPLEMENTED
VII / Fourth	ME19704 - Simulation and Analysis Laboratory	<ul style="list-style-type: none"> <li>No ‘beams’ topic in FEA theory, so after trusses in 1D ‘beams’ should be added.</li> <li>Modify MATLAB exercises relevant to the topics.</li> <li>In Part II, exercise 6, remove ‘simple treatment only’.</li> </ul>	IMPLEMENTED
	One Credit Course – FUSION 360	<ul style="list-style-type: none"> <li>Fusion 360 is Company name, instead the course name should be given as ‘DRAFTING AND MODELLING’.</li> <li>The name of the first module should be changed as ‘Drawing Standards’.</li> </ul>	IMPLEMENTED

