

**St. PETER'S INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

(Deemed to be University U/S 3 of the UGC Act, 1956)  
AVADI, CHENNAI - 600 054.

MINUTES OF THE 22<sup>nd</sup> MEETING OF THE BOARD OF STUDIES IN  
**MECHANICAL ENGINEERING**

Held on 24.02.2021

**Members Present**

1.	Dr. N. Rajeswari	Chairperson
2.	Dr. P. Periyasamy	Member
3.	Dr. D. Chandramohan	Member
4.	Dr. K. Gurusami	Member
5.	Dr. M. Dhanashekar	Member
6.	Mrs. K. Sunitha	Member
7.	Mr. S. Dinesh Kumar	Member
8.	Mr. S. Rangarajan	Member
9.	Mr. M. Kamal	Member
10.	Dr. M. Rajmohan	Academic Expert Member
11.	Dr. Rajarasalnath Selvaraj	Industry Expert Member

**Chairman**



**22.1** Considered the minutes of the 21<sup>st</sup> meeting of Board of Studies in Mechanical Engineering held on 21.02.2020.

**RESOLVED** that the minutes of the 21<sup>st</sup> meeting of Board of Studies in Mechanical Engineering held on 21.02.2020 be confirmed.

**22.2** Reviewed the Syllabi of VII & VIII semester of B.E. (Mechanical Engineering) under the Regulations 2018 with Choice Based Credit System (CBCS).

**RESOLVED** that the Syllabi of VII & VIII semester of B.E. (Mechanical Engineering) under the Regulations 2018 with Choice Based Credit System (CBCS) from the batch of students to be admitted from 2018-19 to be approved.(Appendix – I)

**22.3** Considered the new regulation and syllabi of M.E. (Advanced Manufacturing Technology) for the batch of students admitted from 2021 - 22 under the Regulation 2021.

**RESOLVED** that the new regulation and syllabi of M.E. (Advanced Manufacturing Technology) for the batch of students admitted from 2021 - 22 under the Regulation 2021 be approved.

**22.4** Reviewed the Syllabus of III & IV semester of B.E. (Mechanical Engineering) under the Regulations 2020.

**RESOLVED** that the Syllabi of III & IV semester of B.E. (Mechanical Engineering) under the Regulations 2020 with Choice Based Credit System (CBCS) from the batch of students to be admitted from 2018-19 to be approved. (Appendix – II)

**22.5** Considered the new Regulation and syllabi of I & II semesters of M.E (Advanced Manufacturing Technology) programme from the batch of students to be admitted from 2021-22 under the Regulations 2021 with Choice Based Credit System (CBCS).

**RESOLVED** that the new Regulation and syllabi of I & II semesters of M.E. (Advanced Manufacturing Technology) programme from the batch of students to be admitted from 2021-22 under the Regulations 2021 with Choice Based Credit System (CBCS) be approved. (Appendix – III)



  
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**22.6** Considered to include courses having focus on employability/ entrepreneurship /skill development in the syllabi of B.E (Mechanical Engineering) under the Regulations 2018 & Regulation 2020 and M.E (Advanced Manufacturing Technology) under the Regulations 2021.

**RESOLVED** that the courses having focus on employability/ entrepreneurship /skill development year wise in the syllabi of B.E (Mechanical Engineering) under the Regulations 2018 & Regulation 2020 and M.E (Advanced Manufacturing Technology) under the Regulations 2021 to be approved.

**22.7** Reviewed the curricula developed having relevance to the local/national/regional/global developmental needs with learning objectives including programme outcomes, program specific outcomes and course outcomes of all the programmes.

**RESOLVED** that the syllabi of B.E (Mechanical Engineering) programme under the Regulations 2018 & 2020 and M.E (Advanced Manufacturing Technology) under the Regulations 2021 developed having relevance to the local/national/regional/global developmental needs with learning objectives including programme outcomes, program specific outcomes and course outcomes of all the programmes be approved.


**22.8** Reviewed and considered the curriculum feedback analysis and action taken report based on the suggestions given by the stake holders.

**Resolved** that the curriculum feedback analysis and action taken report based on the suggestions given by the stake holders to be approved. (Appendix - IV).

**Date: 24.02.2021**



**Chairman**



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## Appendix – I

### B.E (Mechanical Engineering) Regulation -2018 CHOICE BASED CREDIT SYSTEM

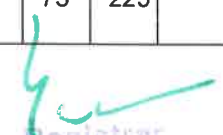
#### VII Semester

Code No.	Course Title	Cat.	L	T	P	Credit	Marks		
							CA	EA	Total Marks
<b>THEORY</b>									
718MET01	Hydraulics and pneumatics	Engg.	3	0	0	3	25	75	100
718MET02	Power Plant Engineering	Engg.	3	0	0	3	25	75	100
718MET03	Production Planning and Control	Engg.	3	0	0	3	25	75	100
	<b>Programme Elective IV</b>	Engg.	3	0	0	3	25	75	100
	<b>Programme Elective V</b>	Engg.	3	0	0	3	25	75	100
	<b>Institute Elective I</b>	Engg.	3	0	0	3	25	75	100
<b>PRACTICAL</b>									
718MEP01	Computer Aided Simulation Analysis Laboratory	Engg.	0	0	4	2	25	75	100
718MEP02	Project Phase I	Engg.	0	0	4	2	25	75	100
<b>Total</b>			<b>18</b>	<b>0</b>	<b>8</b>	<b>22</b>	<b>200</b>	<b>600</b>	<b>800</b>

#### VIII Semester

Code No.	Course Title	Cat.	L	T	P	Total Credit	Marks		
							CA	EA	Total Marks
<b>THEORY</b>									
	<b>Programme Elective –VI</b>	Engg.	3	0	0	3	25	75	100
	<b>Institute Elective –II</b>	Engg.	3	0	0	3	25	75	100
<b>PRACTICAL</b>									
818MEP01	Project Phase -II	Engg.	0	0	0	7	25	75	100
<b>Total</b>			<b>6</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>75</b>	<b>225</b>	<b>300</b>



  
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Programme Elective IV (Sem VII)				
1.	718MET04	Applied Finite Element Analysis	3	Design
2.	718MET05	Design of Jigs, Fixtures and Press Tools	3	Design
3.	718MET06	Enterprise Resource Planning	3	Manf.
4.	718MET07	Process Planning and Cost Estimation	3	Manf.
5.	718MET08	Energy Conservation in Industries	3	Thermal
6.	718MET09	MEMS and Microsystems	3	Engg. Mtl
7.	718MET10	Creep and Fatigue Behavior of Materials	3	Engg. Mtl
Programme Elective V (Sem VII)				
1.	718MET11	Product Design and Development	3	Design
2.	718MET12	Tribology In Design	3	Design
3.	718MET13	Precision Manufacturing	3	Manf.
4.	718MET14	Energy Efficient Mechanical Systems for Buildings	3	Thermal
5.	718MET15	Nanotechnology for Energy Systems	3	Engg. Mtl
6.	718MET16	Fracture Mechanics and Failure	3	Engg. Mtl
Programme Elective VI (Sem VIII)				
1.	818MET01	Mechanical Vibrations and Noise Control	3	Design
2.	818MET02	Modern Concepts of Engineering	3	Design
3.	818MET03	Quality and Reliability Engineering	3	Manf.
4.	818MET04	Lean Six Sigma	3	Manf.
5.	818MET05	Marine Propellers and Propulsion	3	Thermal
6.	818MET06	Modern Manufacturing Techniques	3	Engg. Mtl
7.	818MET07	Characterization of Materials	3	Engg. Mtl

### Institute Elective Courses

S.No.	Course Code	Course Title	Credits	Pre Requisite
1	818MET08	Waste management	3	----
2	818MET09	Computer Workstation Ergonomics	3	----
3	818MET10	Structure and Properties of Materials	3	Engineering Materials and Metallurgy
4	818MET11	Total Quality Management	3	---
5	818MET12	Supply Chain Management	3	----
6	818MET13	Industrial Automation	3	----

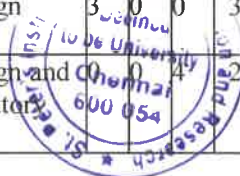


## Appendix – II

### B.E (Mechanical Engineering) Regulation -2020 CHOICE BASED CREDIT SYSTEM

SEMESTER III									
Sl. No.	Course Code	Course Title	L	T	P	C	CA	EA	TOTAL
1.	AMAT2103	Transforms and Partial Differential Equations	3	1	0	4	40	60	100
2.	AMET2103	Strength of Materials	3	1	0	4	40	60	100
3.	AMET2104	Fluid Mechanics and Machinery	3	1	0	4	40	60	100
4.	AMET2105	Engineering Thermodynamics	3	0	0	3	40	60	100
5.	AMET2106	Manufacturing Technology-I	3	0	0	3	40	60	100
6.	AMET2107	Engineering Materials and Metallurgy	3	0	0	3	40	60	100
7.	AMEL2102	Strength of Materials and Fluid Machinery Laboratory	0	0	4	2	40	60	100
8.	ASSL2102	Soft Skill Laboratory- II	0	0	2	1	100	--	100
		TOTAL	18	3	6	24	380	420	800

SEMESTER IV									
Sl. No.	Course Code	Course Title	L	T	P	C	CA	EA	TOTAL
1.	AMET2108	Kinematics of Machinery	3	1	0	4	40	60	100
2.	AMET2109	Thermal Engineering	3	0	0	3	40	60	100
3.	AMET2110	Manufacturing Technology-II	3	0	0	3	40	60	100
4.	AMET2111	Metrology and Measurements	3	0	0	3	40	60	100
5.	AMET2112	Computer Aided Design	3	0	0	3	40	60	100
6.	AMEL2103	Computer Aided Design and Manufacturing Laboratory	0	0	4	2	40	60	100



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7.	AMEL2104	Machine Drawing	0	0	4	2	40	60	100
8.	AMEL2105	Manufacturing Technology Laboratory	0	0	4	2	40	60	100
9.	ASSL2103	Soft Skill Lab III	0	0	2	1	100	-	100
10.	AMEI2101	Internship I	0	0	0	2	100	-	100
TOTAL			15	1	14	25	520	480	1000



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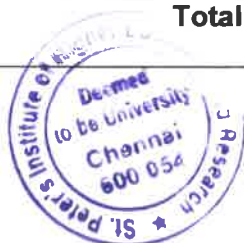
**Appendix – III**  
**M.E (Advanced Manufacturing Technology)**  
**Regulation -2021**  
**CHOICE BASED CREDIT SYSTEM**

**I Semester**

Code No.	Course Title	L	T	P	Credit	Marks		
						CA	EA	Total
<b>Theory&amp; Practical</b>								
AMAPT1101	Applied Probability and Statistics	3	1	0	4	40	60	100
AMEPT1101	Modern Manufacturing Process	3	0	0	3	40	60	100
AMEPT1102	Advanced Materials Engineering	3	0	0	3	40	60	100
AMEPT1103	Metal Cutting Theory and ToolDesign	3	0	0	3	40	60	100
AMEPT1104	Mechatronics in Manufacturing Systems	3	0	0	3	40	60	100
	Programme Elective-1	3	0	0	3	40	60	100
AMEPL1101	CIM and Mechatronics Laboratory	0	0	4	2	40	60	100
	<b>Total</b>	<b>18</b>	<b>1</b>	<b>4</b>	<b>21</b>	<b>280</b>	<b>420</b>	<b>700</b>

**II Semester**

Code No.	Course Title	L	T	P	Credit	Marks		
						CA	EA	Total
<b>Theory&amp; Practical</b>								
AMEPT1105	Optimization Techniques in Manufacturing	3	1	0	4	40	60	100
AMEPT1106	Production Automation and Trends in Manufacturing	3	0	0	3	40	60	100
AMEPT1107	Design for Manufacture and Assembly	3	0	0	3	40	60	100
AMEPT1108	Modelling and Analysis of Manufacturing Systems	3	0	0	3	40	60	100
	Programme Elective-2	3	0	0	3	40	60	100
	Programme Elective-3	3	0	0	3	40	60	100
AMEPL1102	Simulation and Welding Laboratories	0	0	4	2	40	60	100
	Comprehensive Viva	-	-	-	-	-	-	-
	<b>Total</b>	<b>18</b>	<b>1</b>	<b>4</b>	<b>21</b>	<b>280</b>	<b>420</b>	<b>700</b>



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**Appendix – IV**

**ACTION TAKEN REPORT ON STAKEHOLDERS FEEDBACK  
DEPARTMENT OF MECHANICAL ENGINEERING**

**2020-2021**

<b>Program</b>	<b>Stakeholder</b>	<b>Feedback</b>	<b>Recommendation</b>	<b>Action taken</b>
B.E. MECH	Student	Depth of the course content needs to be increased for achieving the expected Course Outcomes	Addressing the issue of attainment of COs &Pos, faculty were informed to keep check on the attainment of course outcomes.	Teachers made students familiar with ideas of POs and COs and their expected outcomes.
	Teacher	Case study approach may be introduced. Group assignments and projects to be given.	Group assignments and projects were given. Interdepartmental projects were carried out.	Case study assignments were given to the students. This helped them to acquire problem solving skills.
	Alumni	Focus more on practical aspects. Projects should be given more weightage as evaluation component. Industrial experts must be invited to give guest lectures.	Students were encouraged to take up research based on application projects.	Entrepreneurial skills of the students were give guest lectures. Lectures were encouraged.



  
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	Parents	Focus more on research based teaching. Learning strategies to expose the students the latest developments In research.	Departments organized talks by industrial experts and alumni.	Industrial and research exposure in various research institutions were provided.
	Employer	The recruiters from IT companies and other industries suggested that the students need to be more participative and work with teams more effectively	students need to be more participative	The soft skill training focused more on participative games and team building.



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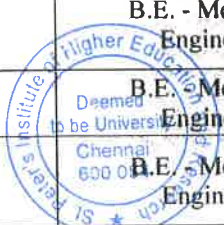
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### NEW COURSES FOR THE ACADEMIC YEAR 2020-2021

#### B.E. – MECHANICAL ENGINEERING

S.No	Programme Code	Programme Name	Course Code	Name of the Course
1	MEU	B.E. - Mechanical Engineering	AMET1102	ENGINEERING MECHANICS
2	MEU	B.E. - Mechanical Engineering	318MET01	ENGINEERING THERMODYNAMICS
3	MEU	B.E. - Mechanical Engineering	318MET07	STRENGTH OF MATERIALS
4	MEU	B.E. - Mechanical Engineering	318MET08	FLUID MECHANICS AND MACHINERY
5	MEU	B.E. - Mechanical Engineering	318MET09	MANUFACTURING TECHNOLOGY-I
6	MEU	B.E. - Mechanical Engineering	318MET10	ENGINEERING MATERIALS AND METALLURGY
7	MEU	B.E. - Mechanical Engineering	318MEP04	SOLID AND FLUID MECHANICS LAB
8	MEU	B.E. - Mechanical Engineering	318MEP05	SOFT SKILL LABORATORY - I
9	MEU	B.E. - Mechanical Engineering	418MET07	MANUFACTURING TECHNOLOGY- II
10	MEU	B.E. - Mechanical Engineering	418MET08	COMPUTER AIDED DESIGN
11	MEU	B.E. - Mechanical Engineering	418MEP04	COMPUTER AIDED DESIGN AND MANUFACTURING LABORATORY
12	MEU	B.E. - Mechanical Engineering	418MEP05	MACHINE DRAWING
13	MEU	B.E. - Mechanical Engineering	418MEP06	INTERNSHIP I
14	MEU	B.E. - Mechanical Engineering	518MET01	DESIGN OF MACHINE ELEMENTS
15	MEU	B.E. - Mechanical Engineering	518MET02	DYNAMICS OF MACHINES
16	MEU	B.E. - Mechanical Engineering	518MET03	GAS DYNAMICS AND JET PROPULSION
17	MEU	B.E. - Mechanical Engineering	518MET05	AUTOMOBILE ENGINEERING AND NEW GENERATION VEHICLES
18	MEU	B.E. - Mechanical Engineering	518MET08	CASTING AND WELDING PROCESSES (PRG. ELECTIVE I)
19	MEU	B.E. - Mechanical Engineering	518MET09	UNCONVENTIONAL MACHINING TECHNIQUES (PRG. ELECTIVE I)



20	MEU	B.E. - Mechanical Engineering	518MEP01	THERMAL LABORATORY- I
21	MEU	B.E. - Mechanical Engineering	518MEP02	DYNAMICS AND METROLOGY LABORATORY
22	MEU	B.E. - Mechanical Engineering	518MEP03	SOFT SKILL LABORATORY - II
23	MEU	B.E. - Mechanical Engineering	618MET01	DESIGN OF TRANSMISSION SYSTEMS
24	MEU	B.E. - Mechanical Engineering	618MET02	HEAT AND MASS TRANSFER
25	MEU	B.E. - Mechanical Engineering	618MET03	MECHATRONICS
26	MEU	B.E. - Mechanical Engineering	618MET06	COMPUTER INTEGRATED MANUFACTURING (PRG. ELECTIVE II)
27	MEU	B.E. - Mechanical Engineering	618MET07	REFRIGERATION AND AIR CONDITIONING (PRG. ELECTIVE II)
28	MEU	B.E. - Mechanical Engineering	618MET12	PRODUCTION AND OPERATIONS MANAGEMENT (PRG. ELECTIVE III)
29	MEU	B.E. - Mechanical Engineering	618MET15	COMPOSITE MATERIALS AND MECHANICS (PRG. ELECTIVE III)
30	MEU	B.E. - Mechanical Engineering	618MEP01	THERMAL ENGINEERING LABORATORY- II
31	MEU	B.E. - Mechanical Engineering	618MEP02	INTERNSHIP - II

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