PERIYAR MANIAMMAI INSTITUTE OF SCIENCE & TECHNOLOGY

PERIYAR MANIAMMAI
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University)
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited
think • innovate • transform

Criterion 1 – Curricular Aspects

Key Indicator	1.2	**Academic Flexibility**
Metric	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

DEPARTMENT OF MECHANICAL ENGINEERING
STRUCTURE OF THE PROGRAM CLEARLY INDICATING COURSES, CREDITS/ELECTIVES

Programmes

1. B.Tech Mechanical Engineering – Full Time
2. M,Tech Renewable Energy – Full time.
3. M,Tech Renewable Energy – Part Time.

1. B.TECH MECHANICAL ENGINEERING -(FULL TIME)

SEMESTER-WISE STRUCTURE OF CURRICULUM

REGULATIONS – 2021

(Applicable to the students admitted the Academic year 2021-22)

SEMESTER I

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XMA101	BSC	Calculus and Linear Algebra	3	1	0	4	3	1	0	4
2.	XCP102	ESC	Programming for Problem Solving	3	0	0	3	3	0	0	3
3.	XAC103	BSC	Applied Chemistry for Engineers	3	1	0	4	3	1	0	4
4.	XEG104	ESC	Engineering Graphics and Design	1	0	2	3	1	0	4	5
5.	XGS105	HSMC	Speech Communication	0	1	2	3	0	1	4	5
6.	XUM106	MC	Constitution of India	0	0	0	0	3	0	0	3
7.	XCP107	ESC	Programming for Problem Solving Laboratory	0	0	1	1	0	0	2	2
8.	XAC108	BSC	Applied Chemistry Laboratory for Engineers	0	0	1	1	0	0	2	2
			Total				**19**				**28**

SEMESTER II

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XMA201	BSC	Calculus, Ordinary Differential Equations and Complex Variables	3	1	0	4	3	1	0	4
2.	XBE202	ESC	Electrical and Electronic Engineering Systems	3	1	0	4	3	1	0	4
3.	XAP203	BSC	Applied Physics for Engineers	3	1	0	4	3	1	0	4
4.	XGS204	HSMC	Technical Communication	2	0	0	2	2	0	0	2
5.	XWP205	ESC	Workshop Practices	1	0	2	3	1	0	4	5
6.	XEM206	ESC	Engineering Mechanics	3	0	0	3	3	0	0	3
7.	XBE207	ESC	Electrical and Electronic Engineering Systems Laboratory	0	0	1	1	0	0	2	2
8.	XAP208	BSC	Applied Physics for Engineers Laboratory	0	0	1	1	0	0	2	2
			Total				**22**				**26**

SEMESTER III

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XMA301	BSC	Transforms and Partial Differential Equations	3	0	0	3	3	0	0	3
2.	XME302	PCC	Thermodynamics	3	1	0	4	3	1	0	4
3.	XME303	PCC	Strength of Materials	3	1	0	4	3	1	0	4
4.	XME304	PCC	Materials Engineering	3	0	0	3	3	0	0	3
5.	XME305	PCC	Machine Drawing	1	0	1	2	1	0	2	3
6.	XUM306	HSMC	Entrepreneurship Development	2	0	0	2	2	0	0	2
7.	XUM307	MC (HSMC)	Universal Human Values 2 : Understanding Harmony and gender	3	0	0	3	3	0	0	3
8.	XME308	PCC	Strength of Materials Laboratory	0	0	1	1	0	0	2	2
9.	XME309	PCC	Computer Aided Drafting Laboratory	0	0	1	1	0	0	2	2
10.	XME310	PROJ	In-plant Training - I	-	-	-	1	-	-	-	-
			Total				**24**				**26**

SEMESTER IV

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XMA401	BSC	Probability and Statistics	3	0	0	3	3	0	0	3
2.	XME402	PCC	Applied Thermodynamics	3	1	0	4	3	1	0	4
3.	XME403	PCC	Fluid Mechanics and Fluid Machines	3	1	0	4	3	1	0	4
4.	XME404	PCC	Instrumentation and Control	3	0	0	3	3	0	0	3
5.	XUM405	HSMC	Economics for Engineers	3	0	0	3	3	0	0	3
6.	XUM406	MC	Disaster Management	0	0	0	0	3	0	0	3
7.	XME407	PCC	Thermal Engineering Laboratory	0	0	1	1	0	0	2	2
8.	XME408	PCC	Fluid Machanics and Fluid Machines Laboratory	0	0	1	1	0	0	2	2
			Total				**19**				**24**

SEMESTER V

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XME501	PCC	Heat Transfer	3	1	0	4	3	1	0	4
2.	XME502	PCC	Solid Mechanics	3	1	0	4	3	1	0	4
3.	XME503	PCC	Manufacturing Processes	3	0	0	3	3	0	0	3
4.	XME504	PCC	Kinematics and Theory of Machines	3	1	0	4	3	1	0	4
5.	XME505	PEC	Professional Elective Course – I	3	0	0	3	3	0	0	3
6.		OE	Open Elective Course – I	3	0	0	3	3	0	0	3
7.	XME507	PCC	Heat Transfer and Refrigeration Laboratory	0	0	1	1	0	0	2	2
8.	XME508	PCC	Kinematics and Theory of Machines Laboratory	0	0	1	1	0	0	2	2

9.	XME509	PROJ	In-plant Training – II	-	-	-	1	-	-	-	-
			Total				**24**				**25**

SEMESTER VI

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XME601	PCC	Manufacturing Technology	4	0	0	4	4	0	0	4
2.	XME602	PCC	Design of Machine Elements	3	1	0	4	3	1	0	4
3.	XME603	PEC	Professional Elective Courses – II	3	0	0	3	3	0	0	3
4.		OE	Open Elective Courses – II	3	0	0	3	3	0	0	3
5.	XGS605	HSMC	Professional Skills	1	0	2	3	1	0	4	5
6.	XUM606	MC	Cyber Security	0	0	0	0	3	0	0	3
7.	XME607	PCC	Machine Tools and Metrology Laboratory	0	0	1	1	0	0	2	2
8.	XME608	PCC	Tool Design and Drawing Laboratory	0	0	1	1	0	0	2	2
			Total				**19**				**26**

SEMESTER VII

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XME701	PCC	Automation in Manufacturing	3	0	0	3	3	0	0	3
2.	XME702	PCC	Automobile Engineering and E-Vehicles	3	0	0	3	3	0	0	3
3.	XME703	PEC	Professional Elective Courses – III	3	0	0	3	3	0	0	3
4.		OE	Open Elective Courses – III	3	0	0	3	3	0	0	3
5.	XES705	MC	Environmental Studies	0	0	0	0	3	0	0	3
6.	XME706	PCC	CAD/CAM Laboratory	0	0	1	1	0	0	2	2
7.	XME707	PCC	Fluid Power Control and Mechatronics Laboratory	0	0	1	1	0	0	2	2
8.	XME708	PROJ	Project Work (Phase - I)	0	0	2	2	0	0	4	4
9.	XME709	PROJ	In-plant Training – III	-	-	-	2	-	-	-	-
			Total				**18**				**23**

SEMESTER VIII

S.No.	Course. Code	Cate-gory	Courses	Credits				Hours			
				L	T	P	Total	L	T	P	Total
1.	XME801	PEC	Professional Elective courses – IV	3	0	0	3	3	0	0	3
2.		OE	Open Elective Courses – IV	3	0	0	3	3	0	0	3
3.		OE	Open Elective Courses – V	3	0	0	3	3	0	0	3
4.	XME804	PROJ	Project Work (Phase - II)	0	0	9	9	0	0	18	18
			Total				**18**				**27**

OPEN ELECTIVE COURSES

(OFFERED BY MECHANICAL ENGINEERING DEPARTMENT)

CODE. No	Course Title	Credits			
		L	T	P	C
XMEOE1	Product Design and Development	3	0	0	3
XMEOE2	Renewable Energy Sources	3	0	0	3
XMEOE3	Microelectromechanical Systems	3	0	0	3

PROFESSIONAL ELECTIVE COURSES

TRACK – I (Thermal Stream)

Course Code No	Course Title	Credits			
		L	T	P	C
XMEE01	Gas Dynamics and Shock Waves	3	0	0	3
XMEE02	Computational Fluid Dynamics	3	0	0	3
XMEE03	Refrigeration and Air conditioning	3	0	0	3
XMEE04	Renewable Energy Sources	3	0	0	3
XMEE05	Advanced I.C Engines	3	0	0	3
XMEE06	Power Plant Engineering	3	0	0	3
TRACK – II (Design Stream)					
XMEE07	Finite Element Analysis	3	0	0	3
XMEE08	Design of Transmission Systems	3	0	0	3
XMEE09	Mechanical Vibrations	3	0	0	3
XMEE10	Design of Jigs and Fixtures and press tools	3	0	0	3
XMEE11	Computer Aided Design	3	0	0	3
XMEE12	Product Design and Development	3	0	0	3
TRACK – III (Manufacturing Stream)					
XMEE13	Industrial Safety	3	0	0	3
XMEE14	Computer Integrated Manufacturing	3	0	0	3
XMEE15	Composite Materials	3	0	0	3
XMEE16	Reliability Engineering	3	0	0	3
XMEE17	Advanced Welding Technology	3	0	0	3
XMEE18	Process Planning and Cost Estimation	3	0	0	3
TRACK – IV (General Stream)					
XMEE19	Microelectromechanical Systems	3	0	0	3
XMEE20	Industrial Robotics	3	0	0	3

XMEE21	Automotive Electronics	3	0	0	3
XMEE22	Total Quality Management	3	0	0	3
XMEE23	Internet of Things and Smart Manufacturing	3	0	0	3
XMEE24	Mathematical Modeling and Analysis	3	0	0	3
XMEE25	Energy Conservation and Management	3	0	0	3

2. M.TECH RENEWABLE ENERGY (FULL TIME)

CURRICULUM – FULL TIME

REGULATIONS – 2021

(Applicable to the students admitted from the Academic year 2021-22)

SEMESTER I

Code No.	Course Title	L	T	P	C	HRS
YRE101	Solar Energy Systems	3	0	0	3	3
YRE102	Wind energy, Tidal energy and OTEC	3	0	0	3	3
YRE103	Process Modelling and Simulation in Energy Systems	3	0	0	3	3
YRE104***	Elective – I	3	0	0	3	3
YRE105***	Elective – II	3	0	0	3	3
YRE106	Solar Energy Lab	0	0	1	1	2
YRM107*-(MC)	Research Methodology and IPR	2	0	0	0	2
YEGOE1**-(MC-Audit)	Audit courses (Student's Choice)-English for Research Paper Writing	2	0	0	0	2
YRE109	MAT and SCI Lab	0	0	1	1	2
Total		**19**	**0**	**2**	**17**	**23**

SEMESTER II

Code No.	Course Title	L	T	P	C	HRS
YRE201	Bio Energy Systems	3	0	0	3	3
YRE202	Computational Fluid Dynamics	3	0	0	3	3
YRE203	Electrical Energy Technology	3	0	0	3	3
YRE204***	Elective – III	3	0	0	3	3
YRE205***	Elective – IV	3	0	0	3	3
YRE206	Bio Energy and CFD Lab	0	0	1	1	2
YRE207	Mini Project	0	0	2	2	4
YPSOE1** (MC-Audit)	Audit courses (Student's Choice)-Constitution of India	2	0	0	0	2
Total		**17**	**0**	**3**	**18**	**23**

SEMESTER III

Code No.	Course Title	L	T	P	C	HRS
YRE301	Project Phase – I	0	0	10	10	20
YRE302***	Elective - V	3	0	0	3	3
YREOE****	Open Elective Course(Student's Choice)	3	0	0	3	3
Total		**6**	**0**	**10**	**16**	**26**

SEMESTER IV

Code No.	Course Title	L	T	P	C	HRS
YRE401	Project Phase – II	0	0	16	16	32
Total		**0**	**0**	**16**	**16**	**32**

Total Credits - 67

* - Mandatory Course
**- Mandatory Course - Audit
***- Elective Course
****- Open Elective Course

Mandatory Courses – Audit (**)

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills.

LIST OF ELECTIVES (***)

ELECTIVE GROUP - I:

Code No.	Course Title	L	T	P	C	HRS
YRE104A	Fluid Dynamics and Heat Transfer	3	0	0	3	3
YRE104B	Energy Conservation in HVAC	3	0	0	3	3
YRE104C	Fuels and Combustion Technology	3	0	0	3	3

ELECTIVE GROUP - II:

Code No.	Course Title	L	T	P	C	HRS
YRE105A	Environmental Engineering	3	0	0	3	3
YRE105B	Carbon Sequestration And Trading	3	0	0	3	3
YRE105C	Waste Management and Energy Recovery	3	0	0	3	3

ELECTIVE GROUP - III:

Code No.	Course Title	L	T	P	C	HRS
YRE204A	Optimum Utilization of Heat and Power	3	0	0	3	3
YRE204B	Statistical Tools for a Data analysis	3	0	0	3	3
YRE204C	Sustainable Development	3	0	0	3	3

ELECTIVE GROUP - IV:

Code No.	Course Title	L	T	P	C	HRS
YRE205A	Instrumentation Technology for Energy Systems	3	0	0	3	3
YRE205B	Hydrogen and Nuclear energy	3	0	0	3	3
YRE205C	Energy Modeling, Economics and Project Management	3	0	0	3	3

ELECTIVE GROUP - V:

Code No.	Course Title	L	T	P	C	HRS
YRE302A	Energy Audit and Management	3	0	0	3	3
YRE302B	Unit Operations in Industries	3	0	0	3	3
YRE302C	CAD/CAM and Simulation of Renewable Energy Systems	3	0	0	3	3

LIST OF OPEN ELECTIVE COURSES (****)

Code No.	Course Title	L	T	P	C	HRS
YREOE1	Hydro Power Technology	3	0	0	3	3
YREOE2	Energy Efficient Building	3	0	0	3	3

3.M.TECH RENEWABLE ENERGY (PART TIME)

CURRICULUM AND SYLLABUS

M.TECH RENEWABLE ENERGY (PART TIME)

REGULATION 2021

SEMESTER I

Code No.	Course Title	L	T	P	C	HRS
QRE101	Solar Energy Systems	3	0	0	3	4
QRE102	Wind Energy, Tidal Energy and OTEC	3	0	0	3	4
QRE103***	Elective – I	3	0	0	3	4
QRE104	Solar Energy Lab	0	0	4	2	3
		9	**0**	**4**	**11**	**15**

SEMESTER II

Code No.	Course Title	L	T	P	C	HRS
QRE201	Bio-Energy Systems	3	0	0	3	4
QRE202*	Research Methodology and IPR	2	0	0	2	3
QRE203***	Elective – II	3	0	0	3	4
QRE204	Bio and Thermal Energy Lab	0	0	4	2	3
		8	**0**	**4**	**10**	**14**

SEMESTER III

Code No.	Course Title	L	T	P	C	HRS
QRE301	Computational Fluid dynamics	3	0	0	3	4
QREOE****	Open Elective Course – I	3	0	0	3	4
QRE303***	Elective – III	3	0	0	3	4
QRE304	Computational Fluid Dynamics Lab	0	0	4	2	3
		9	**0**	**4**	**11**	**15**

SEMESTER IV

Code No.	Course Title	L	T	P	C	HRS
QRE401***	Elective – IV	3	0	0	3	4
QRE402***	Elective – V	3	0	0	3	4
QREOE****	Open Elective Course – II	3	0	0	3	4
QRE404	MAT and SCI Lab	0	0	4	2	3
		9	**0**	**4**	**11**	**15**

SEMESTER V

Code No.	Course Title	L	T	P	C	HRS
QRE501	Project Phase – I	0	0	20	9	20
		0	**0**	**20**	**9**	**20**

SEMESTER VI

Code No.	Course Title	L	T	P	C	HRS
QRE601	Project Phase – II	0	0	32	16	30
		0	**0**	**32**	**16**	**30**

OVER ALL CREDITS = 68

* - Mandatory Course
**- Mandatory Course - Audit
***- Elective Course
****- Open Elective Course

LIST OF ELECTIVES (***)

ELECTIVE GROUP - I:

Code No.	Course Title	L	T	P	C	HRS
QRE103A	Fuels and combustion technology	3	0	0	3	4
QRE103B	Waste Management and Energy Recovery	3	0	0	3	4
QRE103C	Fluid Dynamics and Heat Transfer	3	0	0	3	4

ELECTIVE GROUP - II:

Code No.	Course Title	L	T	P	C	HRS
QRE203A	Hydro Power Technology	3	0	0	3	4
QRE203B	Optimum Utilization of heat and power	3	0	0	3	4
QRE203C	Environmental Engineering	3	0	0	3	4

ELECTIVE GROUP - III:

Code No.	Course Title	L	T	P	C	HRS
QRE303A	Electrical Energy Technology	3	0	0	3	4
QRE303B	Energy Conservation in HVAC	3	0	0	3	4
QRE303C	Sustainable Development	3	0	0	3	4

ELECTIVE GROUP - IV:

Code No.	Course Title	L	T	P	C	HRS
QRE401A	Hydrogen and Nuclear Energy	3	0	0	3	4
QRE401B	Instrumentation Technology for Energy Systems	3	0	0	3	4

QRE401C	Energy Modeling, Economics and Project Management	3	0	0	3	4

ELECTIVE GROUP - V:

Code No.	Course Title	L	T	P	C	HRS
QRE402A	Statistical tools for a Data analysis	3	0	0	3	4
QRE402B	Unit Operations in Industries	3	0	0	3	4
QRE402C	CAD/CAM and Simulation of Renewable Energy systems	3	0	0	3	4

LIST OF OPEN ELECTIVE COURSES (****)

Open Elective Group - I

Code No.	Course Title	L	T	P	C	HRS
QREOE1A	Energy Audit and Management	3	0	0	3	4
QREOE1B	Carbon Sequestration And Trading	3	0	0	3	4

Open Elective Group - II

Code No.	Course Title	L	T	P	C	HRS
QREOE2A	Process Modeling and Simulation in energy systems	3	0	0	3	4
QREOE2B	Energy Efficient building	3	0	0	3	4

MINUTES OF BOARD OF STUDIES

B.TECH MECHANICAL – 2021 – FULL TIME AND PART TIME

DEPARTMENT OF MECHANICAL ENGINEERING

BOARD OF STUDIES MEETING

MINUTES OF MEETING

Date : 16.08.2021 **Time : 3.00 – 4.30 PM**

Mode : Online / GOOGLE MEET

The Board of Studies meeting was held in virtual mode on 16.08.2021 with the following agenda and minutes of the discussion is given below.

Meeting Agenda:

1. Implementation of actions taken against feedback received on curricular aspects from Stake holders for B.Tech. Mechanical Engineering Regulation 2021 and Regulation 2018 Revision I.
2. Presentation of Curriculum and Syllabi for B.Tech. Mechanical Engineering Regulation 2021 (Full time and Part time).
3. Presentation of revised Laboratory courses for B.Tech. Mechanical Engineering Regulation 2018 Revision I (Full time)
4. Discussion on programme articulation matrix (PO coverage by all COs)
5. Discussion on Attainment of outcomes (PO, CO).
6. Presentation of Value-Added courses.

Members Present:

S.No.	Name of the Member	Designation	Signature
1.	Dr. P. K. Srividhya	Professor / Mechanical Engineering, Dean (Academics) & Registrar i/c	
2.	Dr. M. Udayakumar	Professor HAG, Department of Mechanical Engineering, National Institute of Technology, Trichy.	
3.	Dr. T. Sriharsha	Deputy Manager, Nanotechnology Research and Development, Bharat Heavy Electricals Limited, Trichy.	

4.	Dr. J. Thiagarajan	Assistant Professor & HOD / Mechanical Engineering.	
5.	Dr. D. Jeyasimman	Associate Professor & Academic Coordinator / Mechanical Engineering	
6.	Mr. A. Pugazhenthi	Assistant Professor / Mechanical Engineering	
7.	Mr. N. Shivakumar	Assistant Professor / Mechanical Engineering	
8.	Mr. S. P. Manikandan	Assistant Professor / Mechanical Engineering	
9.	Mr.J.Kesavan	Assistant Professor / Mechanical Engineering	
10.	Mr.P.Srinivasan	Assistant Professor / Mechanical Engineering	
11.	Mr.R.Thiyagarajan	Assistant Professor / Mechanical Engineering	
12.	Mr. R.Udhayasankar	Assistant Professor / Mechanical Engineering	
13.	Mr. C. M. Vivek	Assistant Professor / Mechanical Engineering	
14.	Mr.V.Pandiaraj	Assistant Professor / Mechanical Engineering	
15.	Ms. Anumandra G (Reg.No – 117011305032)	Alumni/Mechanical Engineering. (Regulation: 2017-21)	Virtual mode
16.	Mr.D.Venkatesan (Reg.No – 119012301015)	Final year / M.Tech Renewable Energy (Regulation: 2019-21)	Virtual mode
17.	Mr. Jayapraveen R (Reg.No – 180120151367)	Final year / B.Tech. Mechanical Engineering (Regulation: 2018-22)	Virtual mode

A. FEEDBACK ON CURICULLAR ASPECTS

The feedback collected and analyzed during 2018-19, 2019-20 and 2020-21 from the following stake holders were presented

1. Teachers
2. Employers
3. Alumni students
4. Students

In addition, feedbacks obtained from Academic Expert, Industry Expert, Teachers, Alumni and students who participated in Department Advisory Committee Meeting **(DAC)** were also presented. The action taken for the feedbacks are given as "Remarks" column in the Table II.

B. CURICULLUM INTERVENTION BASED ON CO ATTAINMENT

The CO attainment and PO attainment for the courses were presented to the members. No course was found to have CO attainment consistently below the target values.

C. PRESENTATION OF CURICULLUM AND SYLLABUS

All the courses which are framed by the department of Mechanical Engineering are presented individually. The deletion, addition and introduction of new courses related details are tabulated for all courses in the following table.

D. PRESENTATION OF CURICULLUM AND SYLLABUS

All new courses framed by the department of Mechanical Engineering were presented individually. The deletion, addition and introduction of new courses are tabulated for all courses in the following table.

Table II: Discussions on courses with actions as remarks

B.Tech. Mechanical Engineering Full time Programme

S.No	Semester	Course Name	Course content Deletion / Addition / New	Percentage of change	Remarks
1	I	Calculus and Linear Algebra	Course designed by Mathematics department	No change	-
2	I	Programming for Problem Solving	No Change. Course designed by CSE department	No Change	-
3	I	Applied Chemistry for Engineers	Course designed by Chemistry department	No Change	-
4	I	Engineering Graphics and Design	No Change	No Change	-
5	I	Speech Communication	Added as New Course. Course designed by English Department	100%	-
6	I	Constitution of India	Designed by Political Science department	No Change	-
7	I	Programming for Problem Solving Laboratory	Experiments added. Course designed by CSE department	Revision. 10%	-
8	I	Applied Chemistry for	Course designed by	No	-

		Engineers Laboratory	Chemistry department	Change	
9	II	Calculus, Ordinary Differential Equations and Complex Variables	Course designed by Mathematics department	No change	-
10	II	Electrical and Electronic Engineering Systems	Course designed by EEE department	Revision 10%	-
11	II	Applied Physics for Engineers	Course designed by Physics department	No Change	-
12	II	Technical Communication	Added as New course. Course designed by English department	Revision 100%	-
13	II	Workshop Practices	No Change	No Change	-
14	II	Engineering Mechanics	Course designed by Civil department	No Change	-
15	II	Electrical and Electronic Engineering Systems Laboratory	Course designed by EEE department	No Change	-
16	II	Applied Physics for Engineers Laboratory	Course designed by Physics department	No Change	-
17	III	Transforms and Partial Differential Equations	Added as a New course. Course designed by Mathematics department	No Change	-
18	III	Thermodynamics	No Change	No Change	CO attainment is checked for this course after intervention during 2018 Revision. There is an improvement and no further intervention
19	III	Strength of Materials	No Change	No Change	-
20	III	Materials Engineering	No Change	No Change	-
21	III	Machine Drawing	No Change Moved to Core slot from Elective	No Change	-
22	III	Entrepreneurship Development	Course designed by Management of Studies department	Revision 70%	-
23	III	Universal Human Values 2 : Understanding Harmony and gender	Added as a New Course	100%	University Mandatory Course

24	III	Strength of Materials Laboratory	Experiments added	Revision 40%	-
25	III	Computer Aided Drafting Laboratory	Added as a New course	100%	Feedback given by the faculty
26	III	In-plant Training - I	-	-	-
27	IV	Probability and Statistics	No Change Course designed by Mathematics department	No Change	-
28	IV	Applied Thermodynamics	No Change	No Change	
29	IV	Fluid Mechanics and Fluid Machines	No Change	No Change	CO attainment is checked for this course after intervention during 2018 Revision. There is an improvement and no further intervention
30	IV	Instrumentation and Control	No Change	No Change	-
31	IV	Economics for Engineers	Course designed by Commerce Department	No Change	-
32	IV	Disaster Management	Course designed by Civil Engineering Department	No Change	-
33	IV	Thermal Engineering Laboratory	No Change	No Change	-
34	IV	Fluid Mechanics and Fluid Machines Laboratory	No Change	No Change	-
35	V	Heat Transfer	No Change	No Change	CO attainment is checked for this course after intervention during 2018 Revision. There is an improvement and no further intervention
36	V	Solid Mechanics	No Change	No Change	CO attainment is checked for this course after intervention during 2018 Revision. There is an improvement and no further intervention

37	V	Manufacturing Processes	Few Topics have been added	Revision 5%	
38	V	Kinematics and Theory of Machines	No Change	No Change	CO attainment is checked for this course after intervention during 2018 Revision. There is an improvement and no further intervention
39	V	Heat Transfer and Refrigeration Laboratory	Added as a New course	Revision 90%	Feedback given by the faculty
40	V	Kinematics and Theory of Machines Laboratory	Experiments added	Revision 20%	-
41	V	In-plant Training - II	-	-	-
42	VI	Manufacturing Technology	No Change	No Change	-
43	VI	Design of Machine Elements	No Change	No Change	CO attainment is checked for this course after intervention during 2018 Revision. There is an improvement and no further intervention
44	VI	Professional Skills	Added as New Course. Course designed by English department	Revision 100%	-
45	VI	Cyber Security	Content has been changed	Revision 25%	-
46	VI	Machine Tools and Metrology Laboratory	No Change	No Change	-
47	VI	Tool Design and Drawing Laboratory	Added as a New course	Revision 100%	Feedback given by the faculty
48	VII	Automation in Manufacturing	No Change	No Change	-
49	VII	Automobile and E-Vehicles Engineering	Content has been changed for 2 Units	Revision 40%	Suggested by Industry Expert
50	VII	Environmental Studies	Course designed by Civil Engineering department	No Change	-
51	VII	CAD/CAM Laboratory	Added as a New course	Revision 100%	Feedback given by the faculty

52	VII	Fluid Power Control and Mechatronics Laboratory	Added as a New course	Revision 100%	Feedback given by the faculty
53	VII	Project Work (Phase - I)	-	-	-
54	VII	In-plant Training - III	-	-	-
55	VIII	Project Work (Phase - II)			
Semester V : Professional Elective Courses – I / Semester VI : Professional Elective Courses – II / Semester VII : Professional Elective Courses – III / Semester VIII : Professional Elective Courses – IV					
56		Gas Dynamics and Shock Waves	No Change	No Change	-
57		Renewable Energy Sources	Topics have been changed	Revision 5%	-
58		Refrigeration and Air conditioning	No Change	No Change	-
59		Advanced I.C Engines	No Change	No Change	-
60		Computational Fluid Dynamics	No Change	No Change	-
61		Power Plant Engineering	No Change	No Change	-
62		Energy Conservation and Management	No Change	No Change	-
63		Finite Element Analysis	No Change	No Change	-
64		Design of Transmission Systems	No Change	No Change	-
65		Mechanical Vibrations	No Change	No Change	-
66		Design of Jigs and Fixtures and Press tools	No Change	No Change	-
67		Computer Aided Design	No Change	No Change	-
68		Product Design and Development	No Change	No Change	-
69		Computer Integrated Manufacturing	No Change	No Change	-
70		Process Planning and Cost Estimation	No Change	No Change	-
71		Composite Materials	No Change	No Change	-
72		Industrial Safety	No Change	No Change	-
73		Reliability Engineering	No Change	No Change	-
74		Advanced Welding Technology	Added as a New course	Revision 100%	Suggested by Industry Expert

75		Internet of Things and Smart Manufacturing	Added as a New course	Revision 100%	Suggested by Industry Expert
76		Miocroelectromechanical Systems	No Change	No Change	-
		Industrial Robotics	No Change	No Change	-
77		Total Quality Management	No Change	No Change	-
78		Mathematical Modeling and Analysis	No Change	No Change	-
79		Automotive Electronics	No Change	No Change	-

B.Tech. Mechanical Engineering Part time Programme

S.No	Semester	Course Name	Course content Deletion / Addition / New	Percentage of change	Remarks
1	I	Transforms and Partial Differential Equations	Added as a New course. Course designed by Mathematics department	No Change	-
2	I	Thermodynamics	No Change	No Change	-
3	I	Strength of Materials	No Change	No Change	-
4	I	Strength of Materials Laboratory	Experiments added	Revision 40%	-
5	I	Computer Aided Drafting Laboratory	Added as a New course	100%	Feedback given by the faculty
6	II	Applied Thermodynamics	No Change	No Change	-
7	II	Fluid Mechanics and Fluid Machines	No Change	No Change	-
8	II	Instrumentation and Control	No Change	No Change	-
9	II	Thermal Engineering Laboratory	No Change	No Change	-
10	II	Fluid Mechanics and Fluid Machines Laboratory	No Change	No Change	-
11	III	Probability and Statistics	No Change Course designed by Mathematics department	No Change	-
12	III	Materials Engineering	No Change	No Change	-
13	III	Manufacturing Processes	Few Topics have been	Revision	-

			added	5%	
14	III	Kinematics and Theory of Machines	No Change	No Change	-
15	III	Kinematics and Theory of Machines Laboratory	Experiments added	Revision 20%	-
16	IV	Heat Transfer	No Change	No Change	-
17	IV	Solid Mechanics	No Change	No Change	-
18	IV	Entrepreneurship Development	Course designed by Management of Studies department	Revision 70%	-
19	IV	Heat Transfer and Refrigeration Laboratory	Added as a New course	Revision 90%	Feedback given by the faculty
20	V	Manufacturing Technology	No Change	No Change	-
21	V	Design of Machine Elements	No Change	No Change	-
22	V	Machine Tools and Metrology Laboratory	No Change	No Change	-
23	V	Tool Design and Drawing Laboratory	Added as a New course	Revision 100%	Feedback given by the faculty
24	VI	Automation in Manufacturing	No Change	No Change	-
25	VI	Automobile and E-Vehicles Engineering	Content has been changed for 2 Units	Revision 40%	Suggested by Industry Expert
26	VI	CAD/CAM Laboratory	Added as a New course	Revision 100%	Feedback given by the faculty
27	VI	Fluid Power Control and Mechatronics Laboratory	Added as a New course	Revision 100%	Feedback given by the faculty
28	VI	Project Work (Phase - I)	-	-	-
29	VII	Project Work (Phase - II)	-	-	-
Semester IV : Professional Elective Courses – I / Semester V : Professional Elective Courses – II / Semester VI : Professional Elective Courses – III / Semester VII : Professional Elective Courses – IV					
30		Gas Dynamics and Shock Waves	No Change	No Change	-
31		Renewable Energy Sources	Topics have been changed	Revision 5%	-
32		Refrigeration and Air conditioning	No Change	No Change	-
33		Advanced I.C Engines	No Change	No Change	-

34		Computational Fluid Dynamics	No Change	No Change	-
35		Power Plant Engineering	No Change	No Change	-
36		Energy Conservation and Management	No Change	No Change	-
37		Finite Element Analysis	No Change	No Change	-
38		Design of Transmission Systems	No Change	No Change	-
39		Mechanical Vibrations	No Change	No Change	-
40		Design of Jigs and Fixtures and Press tools	No Change	No Change	-
41		Computer Aided Design	No Change	No Change	-
42		Product Design and Development	No Change	No Change	-
43		Computer Integrated Manufacturing	No Change	No Change	-
44		Process Planning and Cost Estimation	No Change	No Change	-
45		Composite Materials	No Change	No Change	-
46		Industrial Safety	No Change	No Change	-
47		Reliability Engineering	No Change	No Change	-
48		Advanced Welding Technology	Added as a New course	Revision 100%	Suggested by Industry Expert
49		Internet of Things and Smart Manufacturing	Added as a New course	Revision 100%	Suggested by Industry Expert
50		Miocroelectromechanical Systems	No Change	No Change	-
51		Industrial Robotics	No Change	No Change	-
52		Total Quality Management	No Change	No Change	-
53		Mathematical Modeling and Analysis	No Change	No Change	-
54		Automotive Electronics	No Change	No Change	-

Changes in B.Tech. Mechanical Engineering Full Time Programme Regulation 2018 Rev-I

The Curriculum and Syllabus of Regulations 2018 Rev I are changed from III Semester to VII Semester. The changes are tabulated below. The three Laboratory courses of each 2 credits offered in V, VI and VII Semesters are split into six Laboratory courses of each 1 credit and offered in III to VIII Semesters as follows.

Existing Lab courses (Regulation 2018 Rev 1)

Course Code	Category	Name of the Course	L	T	P	C
XME507	Professional Core courses	Mechanical Engineering Laboratory I (Thermal)	0	0	2	2
XME606	Professional Core courses	Mechanical Engineering Laboratory II (Design)	0	0	2	2
XME707	Professional Core courses	Mechanical Engineering Laboratory III (Manufacturing)	0	0	2	2

Revised Lab courses (Regulation 2018 Rev 2)

Course Code	Category	Name of the Course	L	T	P	C
XME307	Professional Core courses	Mechanical Engineering Laboratory I (Manufacturing Technology)	0	0	1	1
XME407	Professional Core courses	Mechanical Engineering Laboratory II (Thermal Engineering and Fluid Mechanics)	0	0	1	1
XME507	Professional Core courses	Mechanical Engineering Laboratory III (Strength of Materials)	0	0	1	1
XME508	Professional Core courses	Mechanical Engineering Laboratory IV (Kinematics and Dynamics of Machinery)	0	0	1	1
XME606	Professional Core courses	Mechanical Engineering Laboratory V (Heat Transfer)	0	0	1	1
XME707	Professional Core courses	Mechanical Engineering Laboratory VI (Special Machines)	0	0	1	1

Changes in course codes (Regulation 2018 Rev 2)

Course Code		Name of the Course	L	T	P	C
Existing	New					
XME307	XME308	Inplant Training – I (15 days)	-	-	-	0
XME508	XME509	Inplant Training – II (21 days)	-	-	-	0

E. LIST OF NEWLY INTRODUCED COURSES IN REGULATION 2021

B.Tech. Mechanical Engineering Full time Programme

1. Speech Communication
2. Technical Communication
3. Electrical and Electronic Engineering Systems Laboratory
4. Transforms and Partial Differential Equations
5. Universal Human Values 2 : Understanding Harmony and Gender
6. Computer Aided Drafting Laboratory
7. Entrepreneurship Development
8. Heat Transfer and Refrigeration Laboratory
9. Professional Skills
10. Tool Design and Drawing Laboratory
11. CAD/CAM Laboratory
12. Fluid Power Control and Mechatronics Laboratory
13. Advanced Welding Technology
14. Internet of Things and Smart Manufacturing

B.Tech. Mechanical Engineering Part time Programme

1. Transforms and Partial Differential Equations
2. Computer Aided Design
3. Computer Integrated Manufacturing
4. Gas Dynamics and Jet Propulsion
5. Advanced Welding Technology
6. Internet of Things and Smart Manufacturing
7. Computer Aided Drafting Laboratory
8. Heat Transfer and Refrigeration Laboratory
9. Tool Design and Drawing Laboratory
10. CAD/CAM Laboratory
11. Fluid Power Control and Mechatronics Laboratory

F. LIST OF COURSES REMOVED

Table III : Table of courses removed with remarks

B.Tech. Mechanical Engineering Full time Programme

S.No	Course Code and Title	Remarks
1	CAD/CAM (3 credits)	This core course has been removed because: • Essential introductory concepts of CAD and CAM are given in the core course – Automation in Manufacturing; • Two exclusive courses – Computer Aided Design and Computer Integrated Manufacturing are offered as electives.
2	English (3 credits)	This HSMC course has been removed as recommended by the respective BOS.

Almost all major topics covered under the elective course - Unconventional Manufacturing Technology are given in core course - Manufacturing Processes. Hence, this elective course has been removed from the curriculum.

B.Tech. Mechanical Engineering Part time Programme

S.No	Course Code and Title	Remarks
1	Mathematics – I (Calculus & Linear Algebra) (3 credits)	• The BOS and DAC members have suggested to have only 2 BSC courses, 1 HSMC courses in the curriculum. Remaining courses shall be only related to PCC, PEC and Proj. • The BOS and DAC members and staff of department felt that some of these courses are already studied by students in their Diploma Programme
2	Mathematics – II (ODE & Complex Variables) (3 credits)	
3	Professional Ethics and Human Values (3 credits)	
4	Open Elective-III – Operations Research (3 credits)	
5	English (3 credits)	
6	Environmental Science	
7	Constitution of India	
8	Essence of Indian Traditional Knowledge	

G. PERCENTAGE CHANGE IN THE SYLLABUS

B.Tech. Mechanical Engineering Full time Programme
Number of new courses added = 14 with 28 credits
Number of courses removed = 2 with 6 credits
% change = (34/163) x 100 = 20.85 %

B.Tech. Mechanical Engineering Part time Programme
Number of new courses added = 11 with 8 credits
Number of courses removed = 8 with 15 credits
% change = (23/92) x 100 = 25 %

H. NOTES ON BENCHMARKING WITH AICTE MODEL CURRICULUM

The AICTE model syllabus was also presented in the BoS. The members compared the designed curriculum and discussed the following

a. The credits of the two curriculum are found to be same.
b. The courses in the AICTE curriculum are present in the designed curriculum either as combined course or as part of other courses.
c. The designed curriculum is found to have extra coverage of the programme of study.

I. NOTES ON CREDIT DISTRIBUTION AND COMPARISION WITH AICTE GUIDELINES

Table IV: Credit distribution

B.Tech. Mechanical Engineering Full time Programme

AICTE Course Types	I	II	III	IV	V	VI	VII	VIII	PMIST Total	AICTE recommendation	Deviation
HSMC	3	2	2	3		3			13	12	1
BSC	9	9	3	3					24	25	-1
ESC	7	11							18	24	-6
PCC			15	13	17	10	8		63	48	15
PEC					3	3	3	3	12	18	-6
OE					3	3	3	6	15	18	-3
PROJ			1		1		4	9	15	15	0
MC	0		3	0		0	0		3	3	0
	19	22	24	19	24	19	18	18	163	163	

B.Tech. Mechanical Engineering Part time Programme

AICTE Course Types	I	II	III	IV	V	VI	VII	PMIST Total
HSMC				2				2
BSC	3		3					6
PCC	10	13	11	9	10	8		61
PEC				3	3	3	3	12
PROJ						2	9	11
	13	13	14	14	13	13	12	92

J. COURSES ON EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT

The curriculum for B.Tech. Mechanical Engineering Full time Programme focus of including **92.59 %** of courses with either / and employability / entrepreneurship / skill development. The curriculum B.Tech. Mechanical Engineering Part time Programme focus of including **100 %** of courses with either / and employability / entrepreneurship / skill development. The courses are given below.

Table V Categorization of courses

B.Tech. Mechanical Engineering Full time Programme

S. No	Semester	Code	Category	Percentage of change	Category
1	I	MA-I	BSC	Calculus and Linear Algebra	Skill Development
2	I	PPS-T	ESC	Programming for Problem Solving	Employability
3	I	C	BSC	Applied Chemistry for Engineers	Skill Development
4	I	EG	ESC	Engineering Graphics and Design	Skill Development
5	I	SC	HSMC	Speech Communication	Skill Development
6	I	UMAN-I	MC (HSMC)	Constitution of India	Skill Development
7	I	PPS-L	ESC	Programming for Problem Solving Laboratory	Employability
8	I	CL	BSC	Applied Chemistry for Engineers Laboratory	Skill Development
9	II	MA-I	BSC	Calculus, Ordinary Differential	Skill Development

				Equations and Complex Variables	
10	II	BE	ESC	Electrical and Electronic Engineering Systems	Skill Development
11	II	PT	BSC	Applied Physics for Engineers	Skill Development
12	II	TC	HSMC	Technical Communication	Skill Development
13	II	Works	ESC	Workshop Practices	Skill Development
14	II	EM	ESC	Engineering Mechanics	Skill Development
15	II	BEL	ESC	Electrical and Electronic Engineering Systems Laboratory	Skill Development
16	II	PL	BSC	Applied Physics for Engineers Laboratory	Skill Development
17	III	MA-III	BSC	Transforms and Partial Differential Equations	Skill Development
18	III	PCC-T	PCC	Thermodynamics	Skill Development
19	III	PCC-T	PCC	Strength of Materials	Skill Development
20	III	PCC-T	PCC	Materials Engineering	Skill Development
21	III	PCC-T	PCC	Machine Drawing	Skill Development
22	III	MNGT-I	HSMC	Entrepreneurship Development	Entrepreneurship
23	III	UMAN-I	MC (HSMC)	Universal Human Values 2 : Understanding Harmony and gender	
24	III	PCC-L	PCC	Strength of Materials Laboratory	Skill Development
25	III	PCC-L	PCC	Computer Aided Drafting Laboratory	
26	III	IPT I	PROJ	In-plant Training - I	Skill Development
27	IV	MA-IV	BSC	Probability and Statistics	Skill Development
28	IV	PCC-T	PCC	Applied Thermodynamics	Skill Development
29	IV	PCC-T	PCC	Fluid Mechanics and Fluid Machines	Skill Development
30	IV	PCC-T	PCC	Instrumentation and Control	Skill Development
31	IV	MNGT-II	HSMC	Economics for Engineers	Skill Development
32	IV	UMAN-III	MC	Disaster Management	Skill Development
33	IV	PCC-T	PCC	Thermal Engineering Laboratory	Skill Development
34	IV	PCC-T	PCC	Fluid Mechanics and Fluid Machines Laboratory	Skill Development
35	V	PCC-T	PCC	Heat Transfer	Skill Development
36	V	PCC-T	PCC	Solid Mechanics	Skill Development
37	V	PCC-T	PCC	Manufacturing Processes	Skill Development

38	V	PCC-T	PCC	Kinematics and Theory of Machines	Skill Development
39	V	PEC-I	PEC	Professional Elective courses	Employability
40	V	OE-I	OE	Open Elective Courses	*****
41	V	PCC-L	PCC	Heat Transfer and Refrigeration Laboratory	Skill Development
42	V	PCC-L	PCC	Kinematics and Theory of Machines Laboratory	Skill Development
43	V	IPT II	PROJ	In-plant Training - II	Skill Development
44	VI	PCC-T	PCC	Manufacturing Technology	Employability
45	VI	PCC-T	PCC	Design of Machine Elements	Employability
46	VI	PEC-II	PEC	Professional Elective courses	Employability
47	VI	OE-II	OE	Open Elective Courses	*****
48	VI	ELS	HSMC	Professional Skills	Skill Development
49	VI	UMAN-IV	MC	Cyber Security	Employability
50	VI	PCC-L	PCC	Machine Tools and Metrology Laboratory	Employability
51	VI	PCC-L	PCC	Tool Design and Drawing Laboratory	Employability
52	VII	PCC T	PCC	Automation in Manufacturing	Employability
53	VII	PCC T	PCC	Automobile and E-Vehicles Engineering	Employability
54	VII	PEC-III	PEC	Professional Elective courses	Employability
55	VII	OE-III	OE	Open Elective Courses	*****
56	VII	UMAN-V	MC	Environmental Studies	Skill Development
57	VII	PCC-L	PCC	CAD/CAM Laboratory	Employability
58	VII	PCC-L	PCC	Fluid Power Control and Mechatronics Laboratory	Employability
59	VII	Proj I	PROJ	Project Work (Phase - I)	Skill Development
60	VII	IPT III	PROJ	In-plant Training - III	Skill Development
61	VIII	PEC-IV	PEC	Professional Elective courses	Employability
62	VIII	OE-IV	OE	Open Elective Courses	*****
63	VIII	OE-V	OE	Open Elective Courses	*****
64	VIII	Proj II	PROJ	Project Work (Phase - II)	Skill Development

B.Tech. Mechanical Engineering Part time Programme

S. No	Semester	Code	Category	Percentage of change	Category
1	I	MA-III	BSC	Transforms and Partial Differential Equations	Skill Development
2	I	PCC-T	PCC	Thermodynamics	Skill Development
3	I	PCC-T	PCC	Strength of Materials	Skill Development
4	I	PCC-L	PCC	Strength of Materials Laboratory	Skill Development
5	I	PCC-L	PCC	Computer Aided Drafting Laboratory	Employability
6	II	PCC-T	PCC	Applied Thermodynamics	Skill Development
7	II	PCC-T	PCC	Fluid Mechanics and Fluid Machines	Skill Development
8	II	PCC-T	PCC	Instrumentation and Control	Skill Development
9	II	PCC-T	PCC	Thermal Engineering Laboratory	Skill Development
10	II	PCC-T	PCC	Fluid Mechanics and Fluid Machines Laboratory	Skill Development
11	III	MA-IV	BSC	Probability and Statistics	Skill Development
12	III	PCC-T	PCC	Materials Engineering	Skill Development
13	III	PCC-T	PCC	Manufacturing Processes	Skill Development
14	III	PCC-T	PCC	Kinematics and Theory of Machines	Skill Development
15	III	PCC-L	PCC	Kinematics and Theory of Machines Laboratory	Skill Development
16	IV	PCC-T	PCC	Heat Transfer	Skill Development
17	IV	PCC-T	PCC	Solid Mechanics	Skill Development
18	IV	PEC-I	PEC	Professional Elective courses	Employability
19	IV	MNGT-I	HSMC	Entrepreneurship Development	Entrepreneurship
20	IV	PCC-L	PCC	Heat Transfer and Refrigeration Laboratory	Skill Development
21	V	PCC-T	PCC	Manufacturing Technology	Employability
22	V	PCC-T	PCC	Design of Machine Elements	Employability
23	V	PEC-II	PEC	Professional Elective courses	Employability
24	V	PCC-L	PCC	Machine Tools and Metrology Laboratory	Employability
25	V	PCC-L	PCC	Tool Design and Drawing Laboratory	Employability

26	VI	PCC T	PCC	Automation in Manufacturing	Employability
27	VI	PCC T	PCC	Automobile and E-Vehicles Engineering	Employability
28	VI	PEC-III	PEC	Professional Elective courses	Employability
29	VI	PCC-L	PCC	CAD/CAM Laboratory	Employability
30	VI	PCC-L	PCC	Fluid Power Control and Mechatronics Laboratory	Employability
31	VI	Proj I	PROJ	Project Work (Phase - I)	Skill Development
32	VII	PEC-IV	PEC	Professional Elective courses	Employability
33	VII	Proj II	PROJ	Project Work (Phase - II)	Skill Development

K. DISCUSSION ON PROGRAMME ARTICULATION MATRIX (PO COVERAGE BY ALL COS)

The existing POs and PSO were presented. The members agreed that there need not be any changes in the PSO and PO.

B.Tech. Mechanical Engineering Full time Programme

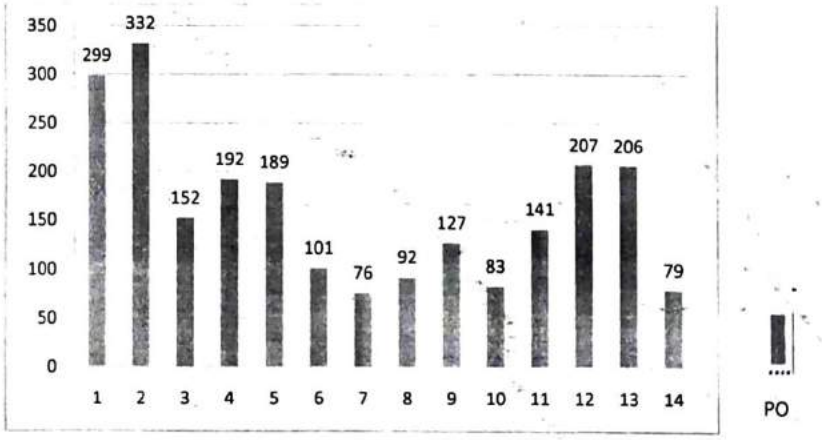

Figure I : PO coverage by various courses

It is found that PO7 which is ability to communicate effectively is covered by courses such as Speech Communication, Technical Communication and Professional Skills. Other than that the curriculum covers all POs with small deviations.

L. VALUE ADDED COURSES PROVIDED

B.Tech. Mechanical Engineering Full time Programme

Value added courses with more than 30 hours are given to the students by the department. The value added courses are given in Table VI. The syllabus of the same is given in Annexure I.

Table VI Value added courses

S.No.	Course Name	Remarks
1.	Non Destructive Testing	Old
2.	Pneumatics and Hydraulics	Old
3.	MEP Engineering Design –Mechanical, Electrical and Plumbing design Software	Old
4.	AutoCAD Drafting	Old
5.	CREO / CATIA – CAD Modeling	Old
6.	Robotics - Intermediate Level	New
7.	ANSYS Software	Old

The BOS members recommended to submit the outcome of this meeting in the forthcoming 38th Academic council meeting for approval.

HoD/Mechanical Engineering
(Dr. J. Thiagarajan)

Dean (FET)
(Dr. S. Senthamil Kumar)

Dean (Academic)
(Dr. P.K Srividhya)