

KONGU ENGINEERING COLLEGE, PERUNDURAI, ERODE- 638 060

MINUTES OF THE MEETING OF BOARD OF STUDIES IN MECHANICAL ENGINEERING

MEETING No. 21

DATE : 19-06-2021

TIME : 10.00 AM (Online)

Google Meet Id: <https://meet.google.com/zoy-wwau-apy>

The following members were present for the meeting:

1.	Dr. R. Rajasekar Professor and Head Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Chairman
2.	Dr. P. Sathyabalan Professor Department of Mechanical Engineering Kumaraguru College of Technology Athipalayam Road, Chinnavedampatti, Coimbatore - 641049.	University Nominee
3.	Dr. N. Rajini Professor Department of Mechanical Engineering Kalasalingam Academy of Research and Education (Deemed to be University), Krishnankoil-626126.	Academic Council Nominee
4.	Dr. Thundil Karuppa Raj Professor Department of Mechanical Engineering Vellore Institute of Technology, Vellore – 632014.	Academic Council Nominee
5.	Mr. K. Aravindhan Senior Manager Supplier Management – International and Supply Customs, Daimler India Commercial Vehicles, Chennai - 602 105.	Alumni Representative
6.	Mr. D. Gobu General Manager Supplier Development & Integration Brakes India (P) Ltd, Padi, Chennai – 600 050.	Industry Representative
7.	Dr. P. Navaneethakrishnan Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
8.	Dr. P. Senthilvel Murugan Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
9.	Dr. V. Hariharan Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
10.	Dr. P. Sathiamurthi Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member

11.	Mr. A. Somasundaram Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
12.	Dr. K. Dineshkumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
13.	Dr. S. Selvakumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
14.	Dr. A. Sivakumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
15.	Dr. P. Thangavel Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
16.	Dr. K. S. K. Sasikumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
17.	Dr. P. Selvakumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
18.	Dr. T. P. Sathishkumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
19.	Dr. C. Baskar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
20.	Dr. A. Mohankumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
21.	Dr. R. Naveen Kumar Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
22.	Dr. C. Moganapriya Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
23.	Dr.P.Saji Raveendran Associate Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
24.	Mr. T. Ravisankar Assistant Professor (Selection Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
25.	Dr. R. Gukendran Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member

26.	Dr.M.Sambathkumar Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
27.	Mr.K.V.Satheeshkumar Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
28.	Mr.C.Sathishranganathan Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
29.	Dr.P.Prabhakaran Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
30.	Dr.M.Vijayanand Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
31.	Mr.N.Saravanan Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
32.	Mr.B.S.Hari Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
33.	Dr.A.Tamilvanan Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
34.	Dr.M.Harikrishna Kumar Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
35.	Mr.M.Dharmaraj Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
36.	Dr.S.M.Senthil Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
37.	Dr.N.Baaskaran Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
38.	Mr.S.Manikandan Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
39.	Mr.R.Manivannan Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
40.	Mr.A.Saravanan Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member

41.	Mr.S.Karthi Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
42.	Mr.A.Abubakkar Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
43.	Mr.K.Paramasivam Assistant Professor (Senior Grade) Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
44.	Mr.M.Makeshkumar Assistant Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
45.	Mr.R.Karthikeyan Assistant Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
46.	Mr.T.Rajagopal Assistant Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member
47.	Mr.N.Prasanna Assistant Professor Department of Mechanical Engineering Kongu Engineering College Perundurai - 638 060.	Internal Member

The following members were present as special invitees: NIL

The following members have requested for leave of absence: NIL

Meeting of the Mechanical Engineering Board:

Chairman/BoS welcomed the members and briefed on the rules and regulations governing the autonomous scheme and presented the agenda points including the draft syllabi from 3rd semester to final semester under Regulation 2020 of UG Programme.

The board discussed and approved the following points as per the agenda:

Item No. 21.1: Confirmation of Minutes of the previous Board of Studies meeting

Resolved to confirm the minutes of the previous Board of Studies Meeting held on 29.08.2020.

Item No. 21.2: Ratification of the following items under R2014 & R2018 as given in Annexure – I.

- a. Course and Syllabi for PhD Course work - Nil
- b. One credit courses - Nil
- c. On line courses - List attached in Annexure – I
- d. Curriculum and Syllabi amendments under R2014 & R2018 - Nil
- e. Introduction of new electives under R2014 & R2018 - Nil
- f. Credit transfer from Foreign Universities, Change of Regulations for readmitted students, Transferred candidates – Nil
- g. Other items if any - Nil

(The board can list only relevant items to be ratified for the above items a,b,c,d,e,f and g implemented after the last BoS meeting held on 29.08.2020. i.e. items did not get approval in the last BoS meeting and implemented during 2020-21)

It is resolved to ratify the above items a, b, c, d, e, f and g as given in Appendix – I.

Item No. 21.3. Approval of the Syllabi from 3rd semester to 8th semester BE/BTech (Mechanical Engineering Branch) under R2020 as given in Annexure-II

The members discussed the syllabi from third semester to eighth semester BE/BTech (Mechanical Engineering Branch) under R2020 as given in Annexure – II and approved the same.

Item No. 21.4. Approval for one credit courses, on-line courses with syllabi, Transfer of credits from UGC & AICTE approved institutions and Credit transfer from foreign universities under R2018 & R2020 as given in Annexure-III.

The members discussed the one credit courses, on-line courses with syllabi, Transfer of credits from UGC and AICTE approved institutions including NPTEL, SWAYAM, etc., and Credit transfer from foreign universities under R2018 & R2020 (from the year 2021-22 onwards) as given in Annexure – III and approved the same.

Item No. 21.5. Approval of Syllabus for PhD courses under R2020 as given in Annexure-IV.

The members discussed the Syllabus for PhD courses under R2020 (if any from the year 2021-22 onwards) as given in Annexure – IV and approved the same.

Item No. 21.6. To recommend the online examination system to be followed for the April/May 2021 End Semester Examinations as given in Annexure-V.

The members discussed recommend the online examination system to be followed for the April/May 2021 End Semester Examinations as given in Annexure-V

The meeting was concluded with a vote of thanks to the members.

 Name & Signature (Dr.P.Sathyabalan)	 Name & Signature (Dr.N.Rajini)
 Name & Signature (Dr.Thundil Karuppa Raj)	 Name & Signature (Mr.K.Aravindhan)
 Name & Signature (Mr.D.Gobu)	 Name & Signature (Dr.P.Navaneethakrishnan)
 Name & Signature (Dr.P.Senthilvelmurugan)	 Name & Signature (Dr.V.Hariharan)
 Name & Signature (Dr.P.Sathiamurthi)	 Name & Signature (Mr.A.Somasundaram)
 Name & Signature (Dr.K.Dineshkumar)	 Name & Signature (Dr.S.Selvakumar)
 Name & Signature (Dr.A.Sivakumar)	 Name & Signature (Dr.P.Thangavel)
 Name & Signature (Dr.K.S.K.Sasikumar)	 Name & Signature (Dr.P.Selvakumar)

 <p>Name & Signature (Dr.T.P.Sathishkumar)</p>	 <p>Name & Signature (Dr.C.Baskar)</p>
 <p>Name & Signature (Dr.A.Mohankumar)</p>	 <p>Name & Signature (Dr.R.Naveen Kumar)</p>
 <p>Name & Signature (Dr.C.Moganapriya)</p>	 <p>Name & Signature (Dr.P.Saji Raveendran)</p>
 <p>Name & Signature (Mr.T.Ravisankar)</p>	 <p>Name & Signature (Dr.R.Gukendran)</p>
 <p>Name & Signature (Dr.M.Sambathkumar)</p>	 <p>Name & Signature (Mr.K.V.Satheeshkumar)</p>
 <p>Name & Signature (Mr.C.Sathishranganathan)</p>	 <p>Name & Signature (Mr.P.Prabhakaran)</p>
 <p>Name & Signature (Dr.M.Vijayanand)</p>	 <p>Name & Signature (Mr.N.Saravanan)</p>

B.S. Hari
19/6/21

Name & Signature
(Mr.B.S.Hari)

Dr. A. Tamilvanan
19/6/2021

Name & Signature
(Dr.A.Tamilvanan)

Dr. M. Hari Krishna Kumar
19/6/21

Name & Signature
(Dr.M.Harikrishna Kumar)

M. Dharmaraj
19/06/21

Name & Signature
(Mr.M.Dharmaraj)

S.M. A
19/6/21

Name & Signature
(Mr.S.M.Senthil)

Dr. N. Baaskaran
19/6/21

Name & Signature
(Dr.N.Baaskaran)

Mr. S. Manikandan
19/6/2021

Name & Signature
(Mr.S.Manikandan)

Mr. R. Manivannan
19/6/2021

Name & Signature
(Mr.R.Manivannan)

Mr. A. Saravanan
19/6/21

Name & Signature
(Mr.A.Saravanan)

Mr. S. Karthi
19.6.21

Name & Signature
(Mr.S.Karthi)

Mr. A. Abubakkar
19/6/21

Name & Signature
(Mr.A.Abubakkar)

Mr. K. Paramasivam
19/6/21

Name & Signature
(Mr.K.Paramasivam)

M. M. Madeshkumar
19/6/21

Name & Signature
(Mr.M.Makeshkumar)

R. R. Karthikeyan
19/6/21

Name & Signature
(Mr.R.Karthikeyan)

Shrinig T
19/6/2021

Name & Signature
(Mr.T.Rajagopal)

N. N. Prasanna
19/6/2021

Name & Signature
(Mr.N.Prasanna)

Dr. R. Rajasekar
19.6.21

Name & Signature
Dr.R.Rajasekar
Chairman/BoS

Annexure – I

Ratification items under R2014 & R2018 implemented during the last academic year 2020-21

a. Course and Syllabi for PhD Course work - Nil

b. One credit courses - Nil

c. On line courses -

Academic year 2020-21 - EVEN Semester

Sl. No	Name of the Course	NPTEL/GIAN	Hosting Institution	Recommended Credits by the Host Institution	Recommended Credits by the Internal BOS Members
1	Aircraft Design	NPTEL	IIT Kanpur	3	3
2	Water and waste water treatment	NPTEL	IIT Roorkee	3	3
3	Data Base Management System	NPTEL	IIT Kharagpur	2	2
4	Design, Technology and Innovation	NPTEL	IIT Bombay	2	2
5	Failure analysis and Prevention	NPTEL	IIT Roorkee	2	2
6	Processing of Polymers and Polymer Composites	NPTEL	IIT Roorkee	2	2
7	Explosions and Safety	NPTEL	IIT Madras	3	3
8	Muffler Acoustics – Application to Automotive Exhaust Noise Control	NPTEL	IIT Kanpur	3	3
9	Introduction to soft matter	NPTEL	Indian Institute of Science	2	2
10	Vibrations of Structures	NPTEL	IIT Kharagpur	3	3
11	Turbulent Combustion: Theory and Modelling	NPTEL	IIT Kanpur	3	3
12	Introduction to Uncertainty Analysis and Experimentation	NPTEL	IIT DELHI	2	2
13	Traditional and Non-Traditional Optimization Tools	NPTEL	IIT Kharagpur	2	2
14	Smart Materials and Intelligent System Design	NPTEL	IIT Kanpur	1	1
15	Product Design and Manufacturing	NPTEL	IIT Kanpur	3	3
16	Tools in Scientific Computing	NPTEL	IIT Kharagpur	2	2
17	Steel Quality: Role of Secondary Refining & Continuous Casting	NPTEL	IIT Madras	3	3

d. Curriculum and Syllabi amendments under R2014 & R2018 - Nil

e. Introduction of new electives under R2014 & R2018 – Nil

f. Credit transfer from Foreign Universities, Change of Regulations for readmitted students, Transferred candidates - Nil

g. Other items if any - Nil

Annexure - II
Syllabi from 3rd semester to 8th semester BE/BTech (Mechanical Engineering Branch)
under R2020

B.E. MECHANICAL ENGINEERING CURRICULUM – R2020

SEMESTER – III									
Course Code	Course Title	Hours / Week			Credit	Maximum Marks			Cate gory
		L	T	P		CA	ESE	Total	
Theory/Theory with Practical									
3.1	Programming 1	3	0	2	4	50	50	100	ES
3.2	Mathematics 3	3	1	0	4	50	50	100	BS
3.3	Fluid Mechanics and Hydraulic Machines	3	0	2	4	50	50	100	ES
3.4	Engineering Thermodynamics	3	0	0	3	50	50	100	PC
3.5	Engineering Materials and Metallurgy	3	0	2	4	50	50	100	PC
3.6	Material Removal Processes	3	0	0	3	50	50	100	PC
Practical / Employability Enhancement									
3.7	Production Technology Laboratory	0	0	2	1	50	50	100	PC
3.8	Machine Drawing Laboratory	0	0	2	1	50	50	100	PC
3.9	Environmental Science	2	0	0	0	100	0	100	MC
Total Credits to be earned					24				

SEMESTER – IV									
Course Code	Course Title	Hours / Week			Credit	Maximum Marks			Cate gory
		L	T	P		CA	ESE	Total	
Theory/Theory with Practical									
4.1	Programming 2	3	0	2	4	50	50	100	ES
4.2	Mathematics 4	3	1	0	4	50	50	100	BS
4.3	Strength of Materials	3	1	0	4	50	50	100	PC
4.4	Thermal Engineering	3	0	0	3	50	50	100	PC
4.5	Kinematics of Machinery	3	0	0	3	50	50	100	PC
Practical / Employability Enhancement									
4.6	English Communication Lab	0	0	2	1	50	50	100	HS
4.7	Thermal Engineering and Renewable Energy Laboratory	0	0	2	1	50	50	100	PC
4.8	Material Property Testing Laboratory	0	0	2	1	50	50	100	PC
4.9	Universal Human Values	2	0	0	2	100	0	100	HS
Total Credits to be earned					23				

SEMESTER – V									
Course Code	Course Title	Hours / Week			Credit	Maximum Marks			Cate gory
		L	T	P		CA	ESE	Total	
Theory/Theory with Practical									
5.1	Heat and Mass Transfer	3	0	0	3	50	50	100	PC
5.2	Dynamics of Machinery	3	0	0	3	50	50	100	PC
5.3	Design of Machine Elements	3	0	0	3	50	50	100	PC
5.4	Professional Elective - 01	3	0	0	3	50	50	100	PE
5.5	Open Elective – 01	3	0	2	4	50	50	100	OE
Practical / Employability Enhancement									
5.6	Computer Aided Drawing Laboratory	0	0	2	1	50	50	100	PC
5.7	Heat Transfer Laboratory	0	0	2	1	50	50	100	PC
5.8	Dynamics Laboratory	0	0	2	1	50	50	100	PC
5.9	Professional Skills Training 1 / Industrial Training 1	--	--	--	2	100	0	100	EC
Total Credits to be earned					21				

\$ Professional Skills Training / Industrial Training for a total period of about 80 hr during the period of 4th sem end summer holidays and 5th sem.

SEMESTER – VI									
Course Code	Course Title	Hours / Week			Credit	Maximum Marks			Category
		L	T	P		CA	ESE	Total	
Theory/Theory with Practical									
6.1	Finite Element Analysis	3	0	0	3	50	50	100	PC
6.2	Metrology and Measurements	3	0	0	3	50	50	100	PC
6.3	Mechatronics & IoT	3	0	2	4	50	50	100	PC
6.4	Open Elective – 02	3	0	2	4	50	50	100	OE
6.5	Professional Elective - 02	3	0	0	3	50	50	100	PE
Practical / Employability Enhancement									
6.6	Metrology & Measurements and Automobile Engineering Laboratory	0	0	2	1	50	50	100	PC
6.7	CAD/CAM Laboratory	0	0	2	1	100	0	100	PC
6.8	Simulation and Analysis Laboratory	0	0	2	1	100	0	100	PC
6.9	Professional Skills Training 2 / Industrial Training 2 @	---	---	---	2	100	0	100	EC
6.10	Project Work 1 Phase I #	0	0	4	2	100	0	100	EC
Total Credits to be earned					24				

@ Professional Skills Training / Industrial Training for a total period of about 80 hr during 5th sem end summer holidays and 6th sem.

#Project Work 1 Phase I (6th sem) shall be continued further as Project Work 1 Phase II (7th sem).

SEMESTER – VII									
Course Code	Course Title	Hours / Week			Credit	Maximum Marks			Cate gory
		L	T	P		CA	ESE	Total	
Theory/Theory with Practical									
7.1	Engineering Economics and Management	3	0	0	3	50	50	100	HS
7.2	Open Elective – 03	3	0	0	3	50	50	100	OE
7.3	Professional Elective – 03	3	0	0	3	50	50	100	PE
7.4	Professional Elective – 04	3	0	0	3	50	50	100	PE
7.5	Professional Elective – 05	3	0	0	3	50	50	100	PE
Practical / Employability Enhancement									
7.6	Comprehensive Test / Viva	---	---	---	2	100	0	100	EC
7.7	Project Work 1 Phase II	\$ 0	0	8	4	100	0	100	EC
Total Credits to be earned					21				

\$ Project Work 1 Phase II (7th sem) shall be continuation of Project Work 1 Phase I (6th sem).

Courses in Sl. Nos. 7.1, 7.2 and 7.3 shall be completed in the first half of the semester.

Courses in Sl. Nos. 7.4 and 7.5 shall be handled in the second half of the semester. One or both of these two courses can also be completed in 5th semester (fast track). Intern students can study these two courses also through NPTEL/MOOC portals.

SEMESTER – VIII										
Course Code	Course Title	Hours / Week			Credit	Maximum Marks			Category	
		L	T	P		CA	ESE	Total		
Theory/Theory with Practical										
8.1	Open Elective – 04	3	0	0	3	50	50	100	OE	
8.2	Professional Elective -06	3	0	0	3	50	50	100	PE	
Practical / Employability Enhancement										
8.3	Internship / Project work 2	#	---	---	12	6	50	50	100	EC
Total Credits to be earned					12					

Internship / Project work for a total period of about 240 hrs.

One or both of the courses in Sl. Nos. 8.1 and 8.2 can also be completed in 6th semester (fast track).

Intern students can study these two courses also through NPTEL/MOOC portals.

PROFESSIONAL ELECTIVE (PE)									
S. No.	Course Code	Course Name	L	T	P	C	Pre-requisites	Sem	Domain/ Stream
		Elective – I							
1.		Fluid Power System	3	0	0	3	Fluid Mechanics, Hydraulic Machines	V	Design
2.		CAD/CAM/CIM	3	0	0	3	Engineering Drawing, Material Removal Processes	V	Design
3.		Gas Dynamics and Jet Propulsion	3	0	0	3	Engineering Thermodynamics Thermal Engineering	V	Thermal
4.		Refrigeration and Air Conditioning	3	0	0	3	Engineering Thermodynamics Thermal Engineering	V	Thermal
5.		Unconventional Machining Processes	3	0	0	3	Material Removal Processes, Production Technology Laboratory	V	Mfg.
6.		Design for Manufacture and Assembly	3	0	0	3	Manufacturing Technology, Engineering Materials and Metallurgy, Material Removal Processes	V	Mfg.
7.		Operations Research	3	0	0	3	Matrices and Differential Equations Multivariable Calculus and Complex Analysis Statistics and Numerical Methods	V	Ind. Engg.
8.		Production Planning and Control	3	0	0	3	Nil	V	Ind. Engg.
		Elective – II							
9.		Design of Transmission Systems	3	0	0	3	Strength of Materials, Design of Machine Elements	VI	Design
10.		Vibration and Noise Control	3	0	0	3	Matrices and Differential Equations Multivariable Calculus and Complex Analysis	VI	Design

							Dynamics of Machinery, Strength of Materials		
11.		Production Tool Design	3	0	0	3	Materials Removal Processes Production Technology Laboratory	VI	Mfg.
12.		Manufacturing Information System	3	0	0	3	Manufacturing Technology, Production Technology Laboratory	VI	Mfg.
13.		Automobile Engineering	3	0	0	3	Thermal Engineering	VI	Thermal
14.		Climate Change and New Energy Technology	3	0	0	3	Engineering Thermodynamics, Fluid Mechanics and Hydraulics Machinery, Heat and Mass Transfer	VI	Thermal
15.		Supply Chain Management	3	0	0	3	Nil	VI	Ind. Engg.
16.		Lean Six Sigma	3	0	0	3	Nil	VI	Ind. Engg.
		Elective – III							
17.		Fundamentals of Research	3	0	0	3	Nil	VII	General
18.		Piping Design	3	0	0	3	Engineering Materials and Metallurgy Strength of Materials	VII	Design
19.		Design of Jigs, Fixtures and Press Tools	3	0	0	3	Manufacturing Technology, Strength of Materials, Design of Machine Elements	VII	Design
20.		Fuels and Combustion Technology	3	0	0	3	Engineering Thermodynamics	VII	Thermal
21.		Computational Fluid Dynamics	3	0	0	3	Fluid Mechanics and Hydraulic Machines, Heat and Mass Transfer	VII	Thermal
22.		CNC Technology	3	0	0	3	Material Removal Processes	VII	Mfg.
23.		Precision Engineering	3	0	0	3	Material Removal Processes, Metrology and Measurement	VII	Mfg.

							s		
24.		Total Quality Management	3	0	0	3	Nil	VII	Ind. Engg.
25.		Project Management	3	0	0	3	Nil	VII	Ind. Engg.
		Elective – IV							
26..		Mechanics of Composite Materials	3	0	0	3	Engineering Mechanics Engineering Materials and Metallurgy Strength of Materials	VII	Design
27..		Advanced Mechanics of Materials	3	0	0	3	Engineering Mechanics Strength of Materials	VII	Design
28.		Turbomachines	3	0	0	3	Thermal Engineering	VII	Thermal
29.		Design of Heat Exchangers	3	0	0	3	Engineering Thermodynamics, Fluid Mechanics and Hydraulic Machines, Heat and Mass Transfer	VII	Thermal
30.		Additive Manufacturing	3	0	0	3	Manufacturing Technology Engineering Materials and Metallurgy	VII	Mfg.
31.		Welding Technology	3	0	0	3	Manufacturing Technology Engineering Materials and Metallurgy	VII	Mfg.
32.		Quality and Reliability Engineering	3	0	0	3	Nil	VII	Ind. Engg.
33.		Industrial Engineering	3	0	0	3	Nil	VII	Ind. Engg.
		Elective – V							
34.		Introduction to Aircraft Systems	3	0	0	3	Engineering Mechanics Fluid Mechanics and Hydraulic Machines Strength of Materials	VII	Design
35.		Industrial Tribology	3	0	0	3	Fluid Mechanics and Hydraulic Machines Design of Machine Elements	VII	Design
36.		Instrumentation in Thermal Engineering	3	0	0	3	Mechatronics and IoT, Metrology and	VII	Thermal

							Measurements		
37.		Energy Auditing and Management	3	0	0	3	Engineering Thermodynamics, Thermal Engineering, Heat and Mass Transfer	VII	Thermal
38.		Modelling and Analysis of Manufacturing Systems	3	0	0	3	Industrial Engineering	VII	Mfg.
39.		Micro Electro Mechanical Systems	3	0	0	3	Applied Physics, Engineering Mechanics, Mechatronics and IoT	VII	Mfg.
40.		Maintenance Engineering	3	0	0	3	Nil	VII	Ind. Engg.
41.		Industrial Safety Engineering	3	0	0	3	Nil	VII	Ind. Engg.
42.		Hybrid Vehicle Technology	3	0	0	3	Nil	VII	General
		Elective – VI							
43.		Entrepreneurship Development	3	0	0	3	Nil	VIII	Ind. Engg.
44.		Introduction to Aircraft Structures	3	0	0	3	Engineering Mechanics, Strength of Materials, Design of Machine Elements	VIII	Design
45.		Principles of Farm Machineries	3	0	0	3	Automobile Engineering, Manufacturing Technology	VIII	Design
46.		Power Plant Engineering	3	0	0	3	Engineering Thermodynamics Thermal Engineering	VIII	Thermal
47.		Energy Conservation in HVAC System	3	0	0	3	Engineering Thermodynamics, Thermal Engineering	VIII	Thermal
48.		Nanotechnology for Mechanical Engineers	3	0	0	3	Nil	VIII	Mfg.
49.		Non Destructive Evaluation Techniques	3	0	0	3	Engineering Materials and Metallurgy Metrology and Measurements Manufacturing Technology	VIII	Mfg.
50.		Industrial Marketing	3	0	0	3	Nil	VIII	Ind. Engg.
Total Credits to be earned						18			
EMPLOYABILITY ENHANCEMENT COURSES (EC)									

S. No.	Course Code	Course Name	L	T	P	C	Pre-requisites	Sem	Domain/ Stream
1.		Professional Skills Training 1 / Industrial Training 1	0	0	0	2	Nil	V	--
2.		Professional Skills Training 2 / Industrial Training 2	0	0	0	2	Nil	VI	--
3.		Project Work 1 Phase I	0	0	4	2	Nil	VI	Design, Thermal, Mfg. and Ind. Engg.
4.		Comprehensive Test / Viva	0	0	0	2	Nil	VII	--
5.		Project Work 1 Phase II	0	0	8	4	Nil	VII	Design, Thermal, Mfg. and Ind. Engg.
6.		Project Work 2 / Internship	0	0	12	6	Nil	VIII	Design, Thermal, Mfg. and Ind. Engg.
Total Credits to be earned						18			

* Domain/Stream Abbreviations: Mfg – Manufacturing, Ind. Engg. – Industrial Engineering,

OPEN ELECTIVE COURSES OFFERED TO OTHER DEPARTMENTS (OE)									
S. No.	Course Code	Course Name	L	T	P	C	Pre-requisites	Sem	
		Mechanical Engineering Stream							
1.		Renewable Energy Sources	3	0	2	4	Nil	V	
2.		Design of Experiments	3	0	2	4	Nil	VI	
3.		Fundamentals of Ergonomics	3	0	0	3	Nil	VII	
4.		Principles of Management and Industrial Psychology	3	0	0	3	Nil	VII	
5.		Safety Measures for Engineers	3	0	0	3	Nil	VIII	
6.		Energy Conservation in Thermal Equipments	3	0	0	3	Nil	VIII	

The total credits for the BE (Mechanical Engineering Branch) programme is 169 with the following curriculum breakdown structure:

S.No.	Category		Credits	% out of total credits
1.	Humanities and Social Sciences	HS	13	7.69
2.	Basic Sciences	BS	30	17.75
3.	Engineering Sciences	ES	20	11.83
4.	Professional Core	PC	56	33.14
5.	Professional Electives	PE	18	10.65
6.	Open Electives	OE	14	8.28
7.	Employability Enhancement Courses	EC	18	10.65
8.	Mandatory Courses(Induction Programme, Environmental Science)	MC	0	-
	Total :		169	100 %