

ADHIYAMAAN COLLEGE OF ENGINEERING,

(AUTONOMOUS)

HOSUR- 635 130

DEPARTMENT OF MECHANICAL ENGINEERING

B.E. MECHANICAL ENGINEERING

REGULATION: 2018

CURRICULUM

Sl No.	I Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	118ENT01	Technical English	HS	2	0	0	2	40	60	100
2	118MAT02	Engineering Mathematics-I	BS	3	0	0	3	40	60	100
3	118PHT03	Engineering Physics	BS	2	0	0	2	40	60	100
4	118CYT04	Engineering Chemistry	BS	3	0	0	3	40	60	100
5	118EGT05	Engineering Graphics	ES	2	0	4	4	40	60	100
6	118ESE02	Basic Civil Electrical and Electronics Engineering	ES	3	0	0	3	40	60	100
PRACTICAL										
7	118CYP07	Engineering Chemistry Laboratory	BS	0	0	2	1	60	40	100
8	118EPP07	Engineering Practice Laboratory	ES	0	0	3	1	60	40	100
Total Mandatory Credits							19			

Sl No.	II Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	218ENT01	Communicative English	HS	2	0	2	3	40	60	100
2	218MAT02	Engineering Mathematics-II	BS	3	1	0	4	40	60	100
3	218GET03	Environmental Science and Engineering	HS	2	0	0	2	40	60	100
4	218EMT04	Engineering Mechanics	ES	3	0	0	3	40	60	100
5	218PPT05	Problem Solving and Python Programming	ES	3	0	0	3	40	60	100
6	218BSE01	Material Science	BS	2	0	0	2	40	60	100
PRACTICAL										
7	218PHP07	Engineering Physics Laboratory	ES	0	0	2	1	60	40	100
8	218EPP08	Problem Solving and Python Programming Laboratory	ES	0	0	2	1	60	40	100
Total Mandatory Credits							19			

Sl No.	III Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	318MAT01	Engineering Mathematics – III	BS	3	0	0	3	40	60	100
2	318MET02	Engineering Thermodynamics	PC	3	0	0	3	40	60	100
3	318MET03	Fluid Mechanics and Machinery	PC	3	0	0	3	40	60	100
4	318MET04	Composite Materials	PC	3	0	0	3	40	60	100
5	318MET05	Manufacturing Technology-I	PC	3	0	0	3	40	60	100
6	OE1	OPEN ELECTIVE 1	OE	3	0	0	3	40	60	100
PRACTICAL										
7	318MEP07	Fluid Mechanics and Machinery Laboratory	PC	0	0	2	1	60	40	100
8	318MEP08	Manufacturing Technology Laboratory -I	PC	0	0	2	1	60	40	100
9	OE2*	*Related to Open Elective 1.	OE	0	0	2	1	60	40	100
Total Mandatory Credits							21			

Sl No.	IV Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	418MAT01	Statistics and Numerical Methods	BS	3	0	0	3	40	60	100
2	418MET02	Kinematics of Machinery	PC	3	0	0	3	40	60	100
3	418MET03	Thermal Engineering	PC	3	0	0	3	40	60	100
4	418MET04	Strength of Materials	PC	3	0	0	3	40	60	100
5	418MET05	Manufacturing Technology-II	PC	3	0	0	3	40	60	100
6	418MET06	Process Planning and Cost Estimation	PC	3	0	0	3	40	60	100
PRACTICAL										
7	418MEP07	Thermal Engineering Laboratory	PC	0	0	3	1	60	40	100
8	418MEP08	Material Testing and Metallurgy Laboratory	PC	0	0	3	1	60	40	100
9	418MEP09	Manufacturing Technology Laboratory-II	PC	0	0	3	1	60	40	100
Total Mandatory Credits							21			

Note:

- It is mandatory for the students to register courses for 21 credits for Semester III and Semester IV.
- Courses offered in Semester III (17 credits) and Semester IV (21 credits) are mandatory.
- Courses for remaining 4 credits in Semester III can be chosen from Group I and Group II.
- Before commencement of VII semester students should undergo Two - Three weeks In-plant training in reputed industries. They should submit the report to the concern faculty in-charges on the reopening day of VII semester and should present the same during VII semester technical seminar.

**COURSES WHICH CAN BE CHOSEN DURING SEMESTER III
GROUP -I
(OPEN ELECTIVE 1)**

Course Code	Course Name	Category	L	T	P	C
	Electrical Drives and Controls	OE	3	0	0	3
	Data Structures	OE	3	0	0	3
	OOPS and Java Programming	OE	3	0	0	3
	Digital Electronics and System Design	OE	3	0	0	3
	Internet Programming	OE	3	0	0	3
	C# and .NET	OE	3	0	0	3

**COURSES WHICH CAN BE CHOSEN DURING SEMESTER III
GROUP -II
(Related to Open Elective 1)**

Course Code	Course Name	Category	L	T	P	C
	Electrical Drives and Controls Laboratory	OE	0	0	2	1
	Data Structures Laboratory	OE	0	0	2	1
	OOPS and Java Programming Laboratory	OE	0	0	2	1
	Digital Electronics Laboratory	OE	0	0	2	1
	Internet Programming Laboratory	OE	0	0	2	1
	C# and .NET Laboratory	OE	0	0	2	1

Sl No.	V Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	518MET01	Metrology and Instrumentation	PC	3	0	0	3	50	50	100
2	518MET02	Heat and Mass Transfer	PC	3	0	0	3	50	50	100
3	518MET03	Dynamics of Machinery	PC	3	0	0	3	50	50	100
4	518MET04	Design of Machine Elements	PC	3	0	0	3	50	50	100
5	518MET05	Applied Hydraulics and Pneumatics	PC	3	0	0	3	50	50	100
6	PE1	PROFESSIONAL ELECTIVE 1	PE	3	0	0	3	50	50	100
PRACTICAL										
7	518MEP07	Metrology and Instrumentation Laboratory	PC	0	0	2	1	50	50	100
8	518MEP08	Heat Transfer Laboratory	PC	0	0	2	1	50	50	100
9	518MEP09	Dynamics Laboratory	PC	0	0	2	1	50	50	100
Total Mandatory Credits							21			

Sl No.	VI Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	618MET01	Principles of Management and Business Concepts	PC	3	0	0	3	50	50	100
2	618MET02	Gas Dynamics and Jet Propulsion	PC	3	0	0	3	50	50	100
3	618MET03	Design of Transmission Systems	PC	3	0	0	3	50	50	100
4	618MET04	CAD/CAM/CIM	PC	3	0	0	3	50	50	100
5	PE2	PROFESSIONAL ELECTIVE 2	PE	3	0	0	3	50	50	100
6	PE3	PROFESSIONAL ELECTIVE 3	PE	3	0	0	3	50	50	100
PRACTICAL										
7	618MEP07	Computer Aided Machine Drawing	PC	0	0	4	2	50	50	100
8	618MEP08	CAM Laboratory	PC	0	0	2	1	50	50	100
Total Mandatory Credits							21			

Note:

- It is mandatory for the students to register courses for 21 credits for semester V and semester VI.
- Courses offered in Semester V (18 credits) and Semester VI (15 credits) are mandatory.
- Courses for remaining 3 credits in Semester V can be chosen from Group III and 6 credits in Semester VI can be chosen from Group IV and Group V.

**COURSES WHICH CAN BE CHOSEN DURING V SEMESTER
GROUP -III
(PROFESSIONAL ELECTIVE 1)**

Course Code	Course Name	Category	L	T	P	C
518MEE01	Advanced Manufacturing Processes	PE	3	0	0	3
518MEE02	Renewable Energy Sources	PE	3	0	0	3
518MEE03	Introduction to Nanotechnology	PE	3	0	0	3
518MEE04	Non Destructive Testing and Materials	PE	3	0	0	3
518MEE05	Design Concepts in Engineering	PE	3	0	0	3

**COURSES WHICH CAN BE CHOSEN DURING VI SEMESTER
GROUP -IV
(PROFESSIONAL ELECTIVE 2)**

Course Code	Course Name	Category	L	T	P	C
618MEE01	Design of Experiments	PE	3	0	0	3
618MEE02	Professional Ethics and Human Values	PE	3	0	0	3
618MEE03	Internal Combustion Engines	PE	3	0	0	3
618MEE04	Refrigeration and Air Conditioning	PE	3	0	0	3
618MEE05	Industrial Relation and Organizational Development	PE	3	0	0	3

**COURSES WHICH CAN BE CHOSEN DURING VI SEMESTER
GROUP -V
(PROFESSIONAL ELECTIVE 3)**

Course Code	Course Name	Category	L	T	P	C
618MEE06	Design of Jigs and Fixtures	PE	3	0	0	3
618MEE07	Design of Heat Exchanger	PE	3	0	0	3
618MEE08	Metal Forming Techniques	PE	3	0	0	3
618MEE09	Turbomachinery	PE	3	0	0	3
618MEE10	Operation Research	PE	3	0	0	3
618MEE11	Electric Systems for E-Mobility	PE	3	0	0	3

Sl No.	VII Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	718MET01	Automobile Engineering	PC	3	0	0	3	50	50	100
2	718MET02	Mechatronics and Robotics	PC	3	0	0	3	50	50	100
3	718MET03	Finite Element Analysis	PC	3	0	0	3	50	50	100
4	718MET04	Power Plant and Energy Engineering	PC	3	0	0	3	50	50	100
5	PE4	PROFESSIONAL ELECTIVE 4	PE	3	0	0	3	50	50	100
6	OE3	OPEN ELECTIVE 3	OE	3	0	0	3	50	50	100
PRACTICAL										
7	718MEP07	Mechatronics Laboratory	PC	0	0	2	1	50	50	100
8	718MEP08	CAE Laboratory	PC	0	0	2	1	50	50	100
9	718MEP09	Design and Fabrication Project	EEC	0	0	4	2	50	50	100
10	718MEP10	Internship & Technical Seminar	EEC	0	0	3	1	50	50	100
Total Mandatory Credits							23			

Sl No.	VIII Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	818MET01	Total Quality Management	PC	3	0	0	3	50	50	100
2	PE5	PROFESSIONAL ELECTIVE 5	PE	3	0	0	3	50	50	100
3	PE6	PROFESSIONAL ELECTIVE 6	PE	3	0	0	3	50	50	100
PRACTICAL										
4	818MEP04	Project Work	EEC	0	0	20	10	50	50	100
Total Mandatory Credits							19			

Note:

- It is mandatory for the students to register courses for 23 credits for semester VII and 19 credits for semester VIII.
- Courses offered in Semester VII (17 credits) and Semester VIII (13 credits) are mandatory.
- Courses for remaining 6 credits in Semester VII can be chosen from Group VI and Group VII and Semester VIII can be chosen from Group VIII and Group IX.

**COURSES WHICH CAN BE CHOSEN DURING VII SEMESTER
GROUP -VI
(PROFESSIONAL ELECTIVE 4)**

Course Code	Course Name	Category	L	T	P	C
718MEE01	Maintenance Engineering	PE	3	0	0	3
718MEE02	Mechanical Vibration	PE	3	0	0	3
718MEE03	Engineering Economics and Cost Analysis	PE	3	0	0	3
718MEE04	Rapid Prototyping	PE	3	0	0	3
718MEE05	Cryogenics Engineering	PE	3	0	0	3
718MEE06	Design of Thermal Equipments	PE	3	0	0	3

**COURSES WHICH CAN BE CHOSEN DURING VII SEMESTER
GROUP -VII
(OPEN ELECTIVE 3)**

Course Code	Course Name	Category	L	T	P	C
718EOE01	Big Data Analytics	OE	3	0	0	3
718EOE02	Cloud Computing	OE	3	0	0	3
718EOE03	Software Engineering and Quality Assurance	OE	3	0	0	3
718EOE04	Microprocessors and Microcontrollers	OE	3	0	0	3
718EOE05	Facility Location	OE	3	0	0	3
718EOE06	Logistic Management	OE	3	0	0	3
718EOE07	Service Operation Management	OE	3	0	0	3
718EOE08	Software Testing	OE	3	0	0	3
718EOE09	Automotive Instrumentation and Control	OE	3	0	0	3
718EOE10	Power Plant Instrumentation	OE	3	0	0	3
718EOE11	Industrial Safety and Hazard Managements	OE	3	0	0	3
718EOE12	Disaster Management	OE	3	0	0	3
718EOE13	Intellectual Property Rights	OE	3	0	0	3
718EOE14	Engineering Acoustics	OE	3	0	0	3
718EOE15	Human Resource Management	OE	3	0	0	3

**COURSES WHICH CAN BE CHOSEN DURING VIII SEMESTER
GROUP -VIII
(PROFESSIONAL ELECTIVE 5)**

Course Code	Course Name	Category	L	T	P	C
818MEE01	Computational Fluid Dynamics	PE	3	0	0	3
818MEE02	Theory of Elasticity	PE	3	0	0	3
818MEE03	Six Sigma and Lean Manufacturing	PE	3	0	0	3
818MEE04	Introduction to Micro Electro Mechanical Systems	PE	3	0	0	3
818MEE05	Energy Conservation in Industries	PE	3	0	0	3
818MEE06	Fracture Mechanics	PE	3	0	0	3

**COURSES WHICH CAN BE CHOSEN DURING VIII SEMESTER
GROUP -IX
(PROFESSIONAL ELECTIVE 6)**

Course Code	Course Name	Category	L	T	P	C
818MEE07	Entrepreneurship and E-Business	PE	3	0	0	3
818MEE08	Optimization Techniques	PE	3	0	0	3
818MEE09	Tribology	PE	3	0	0	3
818MEE10	Advanced IC Engines	PE	3	0	0	3
818MEE11	Biomass Energy System	PE	3	0	0	3
818MEE12	Design of Materials Handling Equipment	PE	3	0	0	3
818MEE13	Industry 4.0	PE	3	0	0	3

***Student those who are interested they can register Employability Skills Laboratory. The credit earned through this course shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree.**

Course Code	Course Name	Category	L	T	P	C
818MEP05	Employability Skills Laboratory*	PE	0	0	2	1

**B.E. Mechanical Engineering
Regulation 2018
Minimum number of Credits to be earned**

Semester	I	II	III	IV	V	VI	VII	VIII	TOTAL
Credits	19	19	21	21	21	21	23	19	164