


B.Tech (ME)		2018-22 SCHEME OF STUDIES												SOET-ME										
VE	SN	UC	ODD SEMESTER				EVEN SEMESTER				TOTAL													
			COURSE CODE	COURSE TITLE	L	T	P	C	COURSE CODE	COURSE TITLE	L	T	P	C										
FIRST	1	SD	SE	ETMA105	Applied Mathematics-I	3	1	0	4	1	SD	SE	ETMA104	Applied Mathematics-II	3	1	0	4						
	2	SD	SE	ETPH109	Applied Physics-I	3	1	0	4	2	SD	SE	ETPH108	Applied Physics-II	3	1	0	4						
	3	SD	SE	EETEC119	Electrical Science	3	1	0	4	3	OE	OE		Open Elective	-	-	-	6						
	4	EMP	CC	ETME106	Engineering Mechanics	3	0	0	3	4	SD	CC	ETME107	Manufacturing Processes	3	0	0	3						
	5	SD	SE	ETCS103	Introduction To Computer System and Programming	3	1	0	4	5	OE	SE	ETCS112	Object Oriented Programming	3	1	0	4						
	6	SD	SE	EETEL101	Communication Skills	4	0	0	4	6	SD	SE	ETCH125	Environmental Studies	3	0	0	3						
	7	SD	SE	ETPH151	Applied Physics-I Lab	0	0	2	1	7	SD	SE	ETPH152	Applied Physics-II Lab	0	0	2	1						
	8	SD	SE	EETEL171	Communication Skills Lab	0	0	2	1	8	EMP	CC	ETME157	Workshop Practice	0	0	3	1.5						
	9	SD	SE	EETEC161	Electrical Science Lab	0	0	2	1	9	OE	SE	ETCS166	Object Oriented Programming Lab	0	0	2	1						
	10	SD	SE	ETCS153	Programming Lab	0	0	2	1	10	EMP	CC	ETME155	Engineering Graphics Lab	0	0	3	1.5						
	11	SD	CC	ETME154	Engineering Mechanics Lab	0	0	2	1															
TOTAL						19	4	10	28	TOTAL						15	3	10	29					
SECOND	Semester - III												Semester - IV											
	1	SD	SE	ETMA201	Applied Mathematics - III	3	1	-	4	1	EMP	CC	ETME 210	Fluid Machines	3	1	-	4						
	2	OE	SE	EETEC 203	Basics of Electronics	3	1	-	4	2	EMP	CC	ETME 204	Kinematics of Machines	3	1	-	4						
	3	EMP	CC	ETME 205	Thermodynamics	3	1	-	4	3	EMP	CC	ETME 214	Turbomachines	3	1	-	4						
	4	EMP	CC	ETME 207	Strength of Materials	3	1	-	4	4	EMP	CC	ETMA 210	Applied Numerical Techniques & Computing	3	1	-	4						
	5	EMP	CC	ETME 209	Fluid Mechanics	3	1	-	4	5	EMP	SE	ETMC226	Fundamentals of Management	3	-	-	3						
	6	EMP	CC	ETME 211	Material Science & Metallurgy	4	-	-	4	6	EMP	DE	ETME 216	Computational Fluid Dynamics	3	1	-	4						
	7	EMP	CC	EETEC 259	Basics of Electronics Lab	-	-	2	1	7	EMP	CC	ETME 252	Fluid Machines Lab	-	-	2	1						
	8	EMP	CC	ETME 253	Strength of Materials Lab	-	-	2	1	8	EMP	CC	ETME 254	Kinematics of Machine Lab	-	-	2	1						
	9	EMP	CC	ETME 255	Fluid Mechanics Lab	-	-	2	1	9	EMP	CC	ETMA 256	Applied Numerical Techniques & Computing	-	-	2	1						
	10	EMP	CC	ETME 257	Computer Aided Machine Drawing Lab	-	-	2	1															
TOTAL						19	5	8	28	TOTAL						19	4	6	26					
Note: Practical training will be for minimum of four weeks duration at the end of fourth Semester during summer break and evaluation will be done at the end of fifth Semester.																								
THIRD	Semester - V												Semester - VI											
	1	EMP	CC	ETME 301	Dynamics of Machines	3	1	-	4	1	EMP	CC	ETME 302	Heat Transfer	3	1	-	4						
	2	EMP	CC	ETME 303	Machine Design-I	3	1	-	4	2	EMP	CC	ETME 304	Machine Design-II	3	1	-	4						
	3	EMP	SE	EETEC 308	Control Systems	3	1	-	4	3	EMP	CC	ETME 306	Robotics & Automation	4	-	-	4						
	4	EMP	CC	ETME 307	Computer Aided Design	4	-	-	4	4	EMP	CC	ETME 320	Automobile Engineering	4	-	-	4						
	5	EMP	CC	ETME 309	Manufacturing Technology	4	-	-	4	5	EMP	CC	ETME 314	Production and Operations Management	4	-	-	4						
	6	EMP	CC	ETME 311	Internal Combustion Engine & Gas Turbines	4	-	-	4	6	EMP	CC	ETME 312	Non-Conventional Energy Resources	4	-	-	4						
	7	EMP	CC	ETME 351	Dynamics of Machine Lab	-	-	2	1	7	EMP	CC	ETME 352	Heat Transfer Lab	-	-	2	1						
	8	EMP	CC	ETME 353	Computer Aided Design Lab	-	-	2	1	8	EMP	CC	ETME 354	Robotics & Automation Lab	-	-	2	1						
	9	EMP	CC	ETME 355	Internal Combustion Engine & Gas Turbines Lab	-	-	2	1	9	EMP	CC	ETME 356	Automobile Engineering Lab	-	-	2	1						
	10	EMP	CC	ETME 357	Manufacturing Technology Lab	-	-	2	1															
	11	EMP	CC	ETME 381	Practical Training I	-	-	-	1															
	12	SD	SE		Value Added Course	2	-	-	-															
TOTAL						23	3	8	29	TOTAL						22	2	6	27					
Note: Practical training will be for minimum of four weeks duration at the end of Sixth Semester during summer break and evaluation will be done at the end of Seventh Semester.																								
FOURTH	Semester - VII												Semester - VIII											
	1	EMP	CC	ETME 401	Refrigeration and Air-Conditioning	3	1	-	4	1	EMP	CC	ETME 402	Mechanical Vibrations	3	1	-	4						
	2	EMP	SE	ETMA 403	Operations Research	3	1	-	4	2	EMP	CC	ETME 406	Mechatronics	4	-	-	4						
	3	EMP	CC	ETME 405	Power Plant Engineering	4	-	-	4	3	DE	DE	ETME 412	Industrial Engineering	4	-	-	4						
	4		DE	ETME 417	Solar Energy	4	-	-	4	4	EMP	CC	ETME 454	Major Project	-	-	-	6						
	5	EMP	CC	ETME 409	Measurement & Metrology	3	-	-	3	5	OE	OE		Disaster Management (Open Elective)	3	-	-	3						
	6	EMP	CC	ETME 451	Refrigeration And Air-Conditioning Lab	-	-	2	1	TOTAL						15	1	0	21					
	7	EMP	CC	ETME 453	Measurement & Metrology Lab	-	-	2	1	TOTAL						15	3	10	21					
	8	EMP	CC	ETME 481	Practical Training II	-	-	-	1	TOTAL						15	1	0	21					
	9	EMP	CC	ETME 457	Minor Project	-	-	-	2	TOTAL						15	1	0	21					
TOTAL						17	2	4	24	TOTAL						15	3	10	21					
Total Credits [C]																		212						

DEPARTMENTAL ELECTIVES					L	T	P	C
1		CC	ETME 410	Inspections and Quality Control	4	-	-	4
2		CC	ETME 413	Waste Heat Recovery Systems	4	-	-	4
3		CC	ETME 415	Industrial Designs and Product Development	4	-	-	4
4		CC	ETME 412	Industrial Engineering	4	-	-	4
5		CC	ETME 408	Computer Aided Manufacturing	4	-	-	4
6		CC	ETME 417	Solar Energy	4	-	-	4
7		CC	ETME 216	Computational Fluid Dynamics	3	1	-	4
8		CC	ETME 212	Flexible Manufacturing System	4	-	-	4


 Registrar
 K.R. Mangalam University
 Sohna Road, Gurugram, (Haryana)

SOLT		Subject Code		Title		L		T		P		C					
Year	SNo	UC	Subject Code	Title	L	T	P	C	SNo	UC	Subject Code	Title	L	T	P	C	
2019-2023 (Scheme of Studies as per Choice-Based Credit System)																	
Semester - I																	
1	SD	SE	ETMA105A	Applied Mathematics-I	3	1	0	4	1	SD	SE	ETMA104A	Applied Mathematics-II	3	1	0	4
2	SD	SE	ETPH109A	Engineering Physics	3	1	0	4	2	OE	SE	ETEC101A	Basics of Electrical & Electronics Engineering	3	1	0	4
3	SD	SE	ETCH125A	Environmental Studies	3	0	0	3	3	OE	SE	ETCS112A	Object Oriented Programming	3	1	0	4
4	SD	SE	ETCS103A	Programming For Problem Solving	3	1	0	4	4	SD	SE	ETEL101A	Communication Skills	4	0	0	4
5	EMP	CC	ETME101A	Basics of Mechanical Engineering	3	1	0	4	5	SD	OE		Open Elective - II (ETCE 101A-Dissaster Management)	-	-	-	4
6	SD	OE		Open Elective-I(IIIIT104A-understanding the power of data)	-	-	-	4	6	EMP	CC	ETME155A	Engineering Graphics Lab	0	0	3	1.5
7	SD	SE	ETPH151A	Engineering Physics Lab	0	0	2	1	7	OE	SE	ETEC151A	Basics of Electrical & Electronics Engineering Lab	0	0	2	1
8	SD	SE	ETCS153A	Programming For Problem Solving Lab	0	0	2	1	8	OE	SE	ETCS166A	Object Oriented Programming Lab	0	0	2	1
9	EMP	CC	ETME151A	Basics of Mechanical Engineering Lab	0	0	2	1	9	SD	SE	ETEL171A	Communication Skills Lab	0	0	2	1
TOTAL					15	4	6	126	TOTAL					13	3	12	1.5
Semester - III																	
1	SD	SE	ETMA201A	Applied Mathematics -III	3	1	-	4	1	EMP	CC	ETME210A	Fluid Machines	3	1	-	4
2	OE	SE	ETEE201A	Electromechanical Energy Conversion	3	1	-	4	2	EMP	CC	ETME204A	Kinematics of Machines	3	1	-	4
3	SD	SE	ETDM301A	Dissaster Management	3	-	-	3	3	EMP	CC	ETME214A	Turbomachines	3	1	-	4
3	EMP	CC	ETME205A	Thermodynamics	3	1	-	4	4	EMP	CC	ETME218A	Manufacturing Technology-1	3	1	-	4
4	EMP	CC	ETME207A	Strength of Materials	3	1	-	4	5	EMP	SE	ETME226A	Fundamentals of Management	3	-	-	3
5	EMP	CC	ETME209A	Fluid Mechanics	3	1	-	4	6	EMP	CC	ETME220A	Engineering Mechanics	4	-	-	4
6	EMP	CC	ETME211A	Material Science & Metallurgy	3	-	-	3	7	EMP	CC	ETME252A	Fluid Machines Lab	-	-	-	2
7	EMP	CC	ETME257A	Computer Aided Machine Drawing Lab	-	-	-	2	8	EMP	CC	ETME254A	Kinematics of Machine Lab	-	-	-	2
8	EMP	CC	ETME253A	Strength of Materials Lab	-	-	-	2	9	EMP	CC	ETME256A	Mini Project	-	-	-	4
9	EMP	CC	ETME255A	Fluid Mechanics Lab	-	-	-	2	TOTAL					19	4	8	27
TOTAL					22	5	6	29	TOTAL					13	3	12	1.5
Semester - V																	
Semester - VII																	
1	EMP	CC	ETME301A	Dynamics of Machines	3	1	-	4	1	EMP	CC	ETME302A	Heat Transfer	3	1	-	4
2	EMP	CC	ETME303A	Machine Design-I	3	1	-	4	2	EMP	CC	ETME304A	Machine Design-II	3	1	-	4
3	EMP	SE	ETEC308A	Control Systems	3	1	-	4	3	EMP	CC	ETME306A	Robotics & Automation	4	-	-	4
4	EMP	CC	ETME313A	Manufacturing Technology II	4	-	-	4	4	EMP	CC	ETME320A	Automobile Engineering	4	-	-	4
5	EMP	CC	ETME311A	Internal Combustion Engine & Gas Turbines	4	-	-	4	5	EMP	CC	ETME307A	Computer Aided Design	4	-	-	4
6	EMP	CC	ETME351A	Dynamics of Machine Lab	-	-	-	2	6	EMP	CC	ETME312A	Non-Conventional Energy Resources	3	-	-	3
7	EMP	CC	ETME355A	Internal Combustion Engine & Gas Turbines Lab	-	-	-	2	7	EMP	CC	ETME352A	Heat Transfer Lab	-	-	-	2
8	EMP	CC	ETME357A	Manufacturing Technology Lab	-	-	-	2	8	EMP	CC	ETME354A	Robotics & Automation Lab	-	-	-	2
9	EMP	CC	ETME381A	Practical Training-I	-	-	-	2	9	EMP	CC	ETME356A	Automobile Engineering Lab	-	-	-	2
TOTAL					17	3	8	24	TOTAL					22	2	8	27
Semester - VI																	
Semester - VIII																	
1	EMP	CC	ETMA401A	Refrigeration and Air-Conditioning	3	1	-	4	1	EMP	CC	ETME402A	Mechanical Vibrations	3	1	-	4
2	EMP	CC	ETMA403A	Operations Research	3	1	-	4	2	EMP	CC	ETME404A	Additive Manufacturing	3	-	-	3
3	EMP	CC	ETME405A	Power Plant Engineering	4	-	-	4	3	EMP	CC	ETME412A	Industrial Engineering	3	-	-	3
4	EMP	CC	ETME417A	Solar Energy	3	-	-	3	4	EMP	CC	ETME454A	Major Project	-	-	-	6
5	EMP	CC	ETME409A	Measurement & Metrology	3	-	-	3	TOTAL					13	1	12	16
6	EMP	CC	ETME451A	Refrigeration And Air-Conditioning Lab	-	-	-	2	TOTAL					13	1	12	16
7	EMP	CC	ETME453A	Measurement & Metrology Lab	-	-	-	2	TOTAL					13	1	12	16
8	EMP	CC	ETME481A	Practical Training-II	-	-	-	2	TOTAL					13	1	12	16
9	EMP	CC	ETME457A	Minor Project	-	-	-	4	TOTAL					13	1	12	16
TOTAL					16	2	10	23	TOTAL					13	1	12	16
DEPARTMENTAL ELECTIVES																	
1	EMP		ETME410A	Inspections and Quality Control	3	-	-	3	7	EMP		ETME413A	Waste Heat Recovery Systems	3	-	-	3
2	EMP		ETME412A	Industrial Engineering	3	-	-	3	8	EMP		ETME415A	Industrial Designs and Product Development	3	-	-	3
3	EMP		ETME408A	Computer Aided Manufacturing	3	-	-	3	9	EMP		ETME417A	Solar Energy	3	-	-	3
4	EMP		ETME406A	Mechatronics	3	-	-	3	10	EMP		ETME216A	Computational Fluid Dynamics	3	-	-	3
5	EMP		ETME212A	Flexible Manufacturing System	3	-	-	3	11	EMP		ETME414A	Composite Materials	3	-	-	3
6	EMP		ETME411A	Artificial Intelligence	3	-	-	3	12	EMP		ETME416A	Electrical Vehicles	3	-	-	3
TOTAL					17	3	8	24	TOTAL					13	1	12	16
Total Credits (C)																	
198																	

Note: Practical training will be for minimum of four weeks duration at the end of Sixth Semester during summer break and evaluation will be done the end of Seventh Semester.

[Signature]

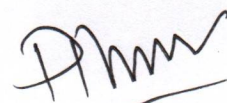
Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

ETME454	MAJOR PROJECT	L	T	P	C
		0	0	12	6

Students are expected to prepare major projects on topics of general importance using new concept and technology. Students will also prepare a project report along with implementation and present it for the final evaluation.



Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)



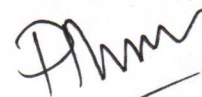
Dean
School of Learning & Technology (SOET)
K.R. Mangalam University
Sohna road, Gurugram
Haryana 122103
Verified by Dean-SOET

ETME454	MAJOR PROJECT	L	T	P	C
		0	0	12	6

Students are expected to prepare major projects on topics of general importance using new concept and technology. Students will also prepare a project report along with implementation and present it for the final evaluation.



Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)



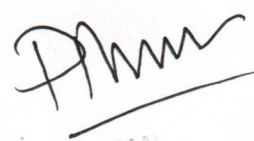
LEAN
School of Engineering & Technology (SOET)
K.R. Mangalam University
Sohna road, Gurugram
122105
Verified by Dean-SOET

ETME 454	MAJOR PROJECT	L	T	P	C
		0	0	12	6

Students are expected to prepare Major projects on topics of general importance using new concept and technology. Students will also prepare a project report along with implementation and present it for the final evaluation.



Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)



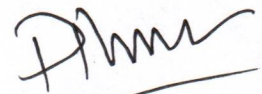
DEAN
School of Engineering & Technology (SOET)
K.R. Mangalam University
Sohna Road, Gurugram
Haryana - 122002
Verified by Dean-SOET

ETME454	MAJOR PROJECT	L	T	P	C
		0	0	12	6

Students are expected to prepare Major projects on topics of general importance using new concept and technology. Students will also prepare a project report along with implementation and present it for the final evaluation.



Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)



DEAN
School of Engineering & Technology (SOET)
K.R. Mangalam University
Sohna Road, Gurugram
Verified by Dean-SOET

ETME454A	MAJOR PROJECT	L	T	P	C
		0	0	12	6

COURSE OVERVIEW


The student will submit a synopsis at the beginning of the semester for approval from the departmental committee in a specified format. The student will have to present the progress of the work through seminars and progress reports.

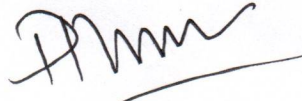
COURSE OBJECTIVE

The objective of Project Work II & Dissertation is to enable the student to extend further the investigative study, either fully theoretical/practical or involving both theoretical and practical work, under the guidance of a Supervisor from the Department alone or jointly with a Supervisor drawn from R&D laboratory/Industry. This is expected to provide a good training for the student(s) in R&D work and technical leadership.

COURSE OUTCOMES

- In depth study of the topic assigned in the light of the Report prepared under minor project.
- Review and finalization of the Approach to the Problem relating to the assigned topic;
- Preparing an Action Plan for conducting the investigation, including team work;
- Detailed Analysis/Modelling/Simulation/Design/Problem Solving/Experiment as needed;
- Final development of product/process, testing, results, conclusions and future directions;
- Preparing a paper for Conference presentation/Publication in Journals, if possible;
- Preparing a Dissertation in the standard format for being evaluated by the Department.
- Final Seminar Presentation before a Departmental Committee.


Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)


Dean
School of Engineering & Technology (SOET)
K.R. Mangalam University
Sohna road, Gurugram
Verified by Dean-SOET