SEMESTER VII / VIII*

S.	COURSE	COURSE TITLE	CATE		ERIOD R WE		TOTAL CONTACT	CREDITS				
NO.	CODE	OOOROL IIILL	GORY	L	. T P		PERIODS	CILLIIO				
THEORY												
1.	ME3791	Mechatronics and IoT	PCC	3	0	0	3	3				
2.	ME3792	Computer Integrated Manufacturing	PCC	3	0	0	3	3				
3.	GE3791	Human Values and Ethics	HSMC	2	0	0	2	2				
4.	GE3792	Industrial Management	HSMC	3	0	0	3	3				
5.		Open Elective – II**	OEC	3	0	0	3	3				
6.		Open Elective – III***	OEC	3	0	0	3	3				
7.		Open Elective – IV***	OEC	3	0	0	3	3				
PRACTICALS												
8.	ME3781	Mechatronics and IoT Laboratory	PCC	0	0	4	4	2				
9.	ME3711	Summer Internship#	EEC	0	0	0	0	1				
			TOTAL	20	0	4	24	23				

#Two weeks Summer Internship carries one credit and it will be done during VI semester summer vacation and same will be evaluated in VII semester.

SEMESTER VIII /VII*

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK L T P		TOTAL CONTACT PERIODS	CREDITS	
PRAC	CTICALS							
1.	ME3811	Project Work / Internship	EEC	0	0	20	20	10
		1511 0 0 1111 0 0	TOTAL	0	0	20	20	10

^{*}If students undergo internship in Semester VII, then the courses offered during semester VII will be offered during semester VIII.

TOTAL CREDITS:167

Attested

DIRECTOR
Centre for Academic Courses
Anna University, Chennai-500 025

binils.com Anna University, Polytechnic & Schools

^{*}If students undergo internship in Semester VII, then the courses offered during semester VIII will be offered during semester VIII.

^{**}Open Elective – II shall be chosen from the emerging technologies.

^{***}Open Elective III and IV (Shall be chosen from the list of open electives offered by other Programmes).

0 0 20 10

COURSE OBJECTIVE:

The objective of this course is to help the students to develop the ability to solve a specific problem right from its identification and literature review till the successful solution of the same, and to train the students in preparing project reports and to face reviews and viva voce examination.

The students in a group of 3 to 4 works on a topic approved by the head of the department under the guidance of a faculty member and prepares a comprehensive project report after completing the work to the satisfaction of the supervisor. The progress of the project is evaluated based on a minimum of three reviews. The review committee may be constituted by the Head of the Department. A project report is required at the end of the semester. The project work is evaluated based on oral presentation and the project report jointly by external and internal examiners constituted by the Head of the Department.

TOTAL: 300 PERIODS

COURSE OUTCOME:

At the end of this course, students will be able to

1. Take up any challenging practical problems and find solution by formulating proper methodology.

CO	PO											PSO			
CO	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
1	1	1	1	1	1	1	11	1	1	1	1	1	1	1	1
Avg.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



CME331

AUTOMOTIVE MATERIALS, COMPONENTS, DESIGN AND TESTING

PROGRESS THROUGH KNOW

L T 2 0 C

COURSE OBJECTIVES

- 1. To study the functional requirements of engine components and suitable materials
- 2. To learn to design of cylinder and piston components
- 3. To learn to design of connecting rod and crank shaft
- 4. To learn to design of flywheel and valve train
- 5. To study the Engine Testing cycles, Emission measurement technologies

UNIT – I FUNCTIONAL REQUIREMENTS OF ENGINE COMPONENTS AND 6 SUITABLE MATERIALS

Functional requirements of engine components – Piston, piston pin, cylinder liner, connecting rod, crank shaft, valves, spring, engine block, cylinder head, and flywheel. Suitable materials for engine components.

UNIT – II DESIGN OF CYLINDER AND PISTON COMPONENTS

6

Design of cylinder, cylinder head, piston, piston rings and piston pin – more details in necessary

UNIT – III DESIGN OF CONNECTING ROD AND CRANK SHAFT

6

Design of connecting rod – Shank design – small end design – big end design – bolts design. Design of overhang crank shaft under bending and twisting – Crank pin design – Crank web design – Shaft design.

UNIT - IV

DESIGN OF FLYWHEEL AND VALVE TRAIN binils.com
Anna University, Polytechnic & Schools

DIRECTOR
Centre for Academic Courses
Anna University, Chennai-600 025