

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
(AICTE Model Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. III and IV Semester

of

Four Year Degree Programme

in

Mechanical Engineering

(With effect from the academic year 2019- 2020)
(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

25/06/2019

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DEAN
Mechanical Engineering Department
Mulakham Jah College of Engineering & Technology
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SCHEME OF INSTRUCTION & EXAMINATION
B.E. (Mechanical Engineering) III – SEMESTER

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	MC111PO	Indian Constitution	2	-	-	2	30	70	3	-
2	HS201EG	Effective Technical Communication in English	3	-	-	3	30	70	3	3
3	HS202CM	Finance and Accounting	3	-	-	3	30	70	3	3
4	BS205MT	Mathematics-III (PDE, Probability & Statistics)	3	-	-	3	30	70	3	3
5	ES211CE	Engineering Mechanics	2	1	-	3	30	70	3	3
6	ES214EC	Basic Electronics	3	-	-	3	30	70	3	3
7	PC221ME	Metallurgy and Material Science	3	-	-	3	30	70	3	3
8	PC222ME	Thermodynamics	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
9	PC251ME	Metallurgy and Material Testing Lab	-	-	2	2	25	50	3	1
10	PC252ME	Machine Drawing and Modelling Lab	-	-	2	2	25	50	3	1
			22	01	04	27	290	660		23

HS: Humanities and Social Sciences BS: Basic Science ES: Engineering Science
 MC: Mandatory Course PC: Professional Core
 L: Lecture T: Tutorial P: Practical D: Drawing
 CIE: Continuous Internal Evaluation SEE: Semester End Evaluation (Univ. Exam)
 PO: Political Science, EG: English, CM: Commerce, MT: Mathematics, CE: Civil Engineering,
 EC: Electronics and Communication Engineering, ME: Mechanical Engineering.

Note:

- Each contact hour is a clock hour.
- The duration of the practical class is two hours, however it can be extended wherever necessary, to enable the student to complete the experiment.
- All the mentioned **Mandatory Courses** should be offered either in I-Semester or II-Semester only from the academic year 2019-2020.
- For those of the students admitted during the academic year 2018-2019, since the Mandatory Courses were not offered during the I-Semester or II-Semester, they should be offered either in III-Semester or IV-Semester of the academic year 2019-2020.

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SCHEME OF INSTRUCTION & EXAMINATION
B.E. (Mechanical Engineering) IV – SEMESTER

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	MC112CE	Environmental Science	2	-	-	2	30	70	3	-
2	MC113PY	Essence of Indian Traditional Knowledge	2	-	-	2	30	70	3	-
3	HS213MP	Industrial Psychology	3	-	-	3	30	70	3	3
4	BS206BZ	Biology for Engineers	3	-	-	3	30	70	3	3
5	ES213ME	Energy Sciences and Engineering	2	-	-	2	30	70	3	2
6	PC231ME	Mechanics of Materials	3	-	-	3	30	70	3	3
7	PC232ME	Applied Thermodynamics	3	-	-	3	30	70	3	3
8	PC233ME	Kinematics of Machinery	3	-	-	3	30	70	3	3
9	PC234ME	Manufacturing Processes	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
10	PC261ME	Thermal Engineering Lab – I	-	-	2	2	25	50	3	1
11	PC262ME	Manufacturing Processes Lab	-	-	2	2	25	50	3	1
			24	-	04	28	320	730		22

HS: Humanities and Social Sciences BS: Basic Science ES: Engineering Science
 MC: Mandatory Course PC: Professional Core
 L: Lecture T: Tutorial P: Practical D: Drawing
 CIE: Continuous Internal Evaluation SEE: Semester End Evaluation (Univ. Exam)
 PY: Philosophy, BZ: Biology/ Life Sciences, CE: Civil Engineering
 MP: Mechanical / Production Engineering, ME: Mechanical Engineering.

Note:

- Each contact hour is a clock hour
- The duration of the practical class is two hours, however it can be extended wherever necessary, to enable the student to complete the experiment.
- All the mentioned **Mandatory Courses** should be offered either in I-Semester or II-Semester only from the academic year 2019-2020.
- For those of the students admitted during the academic year 2018-2019, since the Mandatory Courses were not offered during the I-Semester or II-Semester, they should be offered either in III-Semester or IV-Semester of the academic year 2019-2020.
- The students have to undergo a Summer Internship of two-week duration after IV – Semester and credits will be awarded in V – Semester after evaluation.

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FACULTY OF ENGINEERING
Scheme of Instruction & Examination

and

Syllabi

B.E. V and VI Semesters

of

Four Year Degree Programme

in

MECHANICAL ENGINEERING

(With effect from the Academic Year 2018-2019)
(As approved in the Faculty Meeting held on 26th June 2018)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad 500 007
2018

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SCHEME OF INSTRUCTION & EXAMINATION
B.E. V - Semester
(MECHANICAL ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hr/Wk	CIE	SEE	Duration in Hours	
Theory Courses										
1.	PC501ME	Dynamics of Machines	4	-	-	4	30	70	3	4
2.	PC502ME	Manufacturing Processes	3	-	-	3	30	70	3	3
3.	PC503ME	Machine Design	4	-	-	4	30	70	3	4
4.	PC504ME	Heat Transfer	3	1	-	4	30	70	3	3
5.	PC505ME	Operations Research	3	-	-	3	30	70	3	3
6.	PC506ME	CAD/CAM	3	-	-	3	30	70	3	3
7.	MC901EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical / Laboratory Courses										
8.	PC551ME	Computer Aided Production Drawing & CAM Lab	-	-	2	2	25	50	3	1
9.	PC552ME	Manufacturing Processes Lab	-	-	2	2	25	50	3	1
10.	PC553ME	Dynamics Lab	-	-	2	2	25	50	3	1
Total			23	1	6	30	285	640		23

PC: Professional Course

MC: Mandatory Course

L: Lecture

T: Tutorial

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

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SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(MECHANICAL ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hr/Wk	CIE	SEE	Duration In Hours	
Theory Courses										
1.	PC601ME	Metal Cutting & Machine Tools	3	-	-	3	30	70	3	3
2.	PC602ME	Refrigeration & Air Conditioning	4	-	-	4	30	70	3	4
3.	PC603ME	Hydraulic Machinery & Systems	4	-	-	4	30	70	3	4
4.	PC604ME	Metrology & Instrumentation	3	-	-	3	30	70	3	3
5.	PC605ME	Automobile Engineering	3	-	-	3	30	70	3	3
6.	PE - I	Professional Elective-I	3	-	-	3	30	70	3	3
7.	OE - I	Open Elective - I	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
7.	PC651ME	Metrology & Machine Tools Lab			2	2	25	50	3	1
8.	PC652ME	Hydraulic Machinery Lab			2	2	25	50	3	1
9.	MC	Mandatory Course	-	-	3	3	50	-	3	0
10.	SI 671ME	Summer Internship*								
Total			23		7	30	310	590		25

PE: Professional Elective MC: Mandatory Course OE: Open Elective SI: Summer Internship
 L: Lecture T: Tutorial P: Practical D: Drawing
 CIE: Continuous Internal Evaluation SKE: Semester End Examination (Univ. Exam)

Note -1:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note-2:

- * The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.
- ** Subject is not offered to the students of Mechanical Engineering, Production Engineering and Automobile Engineering Department.

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FACULTY OF ENGINEERING
Scheme of Instruction & Examination
(CBCS Curriculum for the Academic Year 2019-2020)

and
Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Mechanical Engineering

(With effect from the academic year 2019-2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

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2019

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SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(MECHANICAL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration In Hrs	
Theory Courses										
1	PC 701 ME	Thermal Turbo Machines	3	1	-	4	30	70	3	3
2	PC 702 ME	Finite Element Analysis	3	1	-	4	30	70	3	3
3	PC 703 ME	Industrial Engineering	3	-	-	3	30	70	3	3
4	PC 704 ME	Production And Operations Management	3	-	-	3	30	70	3	3
5	HS 901 MB	Managerial Economics and Accountancy	3	-	-	3	30	70	3	3
6		Open Elective-II								
7		Open Elective-III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
8	PC 751 ME	Thermal Engineering Lab	-	-	2	2	25	50	3	1
9	PC 752 ME	CAE Lab	-	-	2	2	25	50	3	1
10	PW 761 ME	Project Work - I	-	-	4	4	50	-	-	2
11	SI 762 ME	Summer Internship	-	-	-	-	50	-	-	2
			21	02	08	31	360	590		27

Open Elective - II			Open Elective - III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS	Data Science Using R Programming	2	OE 782 IT	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME**	Entrepreneurship	5	OE 785 ME**	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation


SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Mechanical Engineering Department.


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**SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(MECHANICAL ENGINEERING)**

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1		Professional Elective – II	3	-	-	3	30	70	3	3
2		Professional Elective – III	3	-	-	3	30	70	3	3
3		Professional Elective – IV	3	-	-	3	30	70	3	3
4		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PW 961 ME	Project Work – II	-	-	16	16	50	100	-	8
			12	-	16	28	170	380		20

Professional Elective – II			Professional Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 ME	Design of Solar Energy System	1	PE 826 ME	Power Plant Engineering
2	PE 822 ME	Mechanical Vibrations	2	PE 827 ME	Robotic Engineering
3	PE 823 ME	Composite Materials	3	PE 828 ME	Tool Design
4	PE 824 ME	Non-Destructive Testing	4	PE 829 ME	Product Design And Process Planning
Professional Elective – IV			Professional Elective – V		
1	PE 831 ME	Intellectual Property Rights	1	PE 841 ME	Energy Conservation and Management
2	PE 832 ME	Additive Manufacturing Technology	2	PE 842 ME	Advanced Propulsion and Space Science
3	PE 833 ME	Machine Tool Engineering and Design	3	PE 843 ME	Waste Heat Recovery and Co-Generation
4	PE 834 ME	Entrepreneurship Development	4	PE 844 ME	Aerodynamic Design of Thermal Turbines

PC: Professional Course

L: Lectures

T: Tutorials

CIE: Continuous Internal Evaluation

PE: Professional Elective

P: Practical

D: Drawing

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

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