

**SCHEME OF INSTRUCTION & EXAMINATION (Semester System)**  
**For**  
***Mechanical Engineering***  
**Effective From the Academic Year 2018-2019 (R18 Regulations)**  
**First Year B.Tech (SEMESTER – I)**

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18MA001	Linear Algebra and Ordinary Differential Equations	4	0	0	4	50	50	100	3
18PH002	Advanced Optics and Material Testing	4	1	0	5	50	50	100	4
18ME103	Engineering Mechanics- I	4	1	0	5	50	50	100	4
18EE001	Basic Electrical/ Electronics Engg	4	0	0	4	50	50	100	3
18CS001	Programming for Problem Solving	4	0	0	4	50	50	100	3
18PHL001	Physics Lab	0	0	3	3	50	50	100	1
18EEL01	Basic Electrical/ Electronics Engg. Lab	0	0	3	3	50	50	100	1
18CSL01	Programming for Problem Solving lab	0	0	3	3	50	50	100	1
	NCC/NSS			3	3				0
	TOTAL	20	2	12	34	400	400	800	20

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

L: Lecture,

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## SCHEME OF INSTRUCTION & EXAMINATION (Semester System)

For

### *Mechanical Engineering*

Effective From the Academic Year 2018-2019 (R18 Regulations)

First Year B.Tech (SEMESTER – II)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18MA002	Numerical Methods and Advanced Calculus	4	0	0	4	50	50	100	3
18CY001	Chemistry	4	0	0	4	50	50	100	3
18ME203	Engineering Mechanics- II	4	1	0	5	50	50	100	4
18CE001	Environmental Studies	3	0	0	3	50	50	100	2
18EL001	Communicative English	3	0	0	3	50	50	100	2
18MEL01	Engineering Graphics	1	0	4	5	50	50	100	3
18CYL01	Chemistry Lab	0	0	3	3	50	50	100	1
18ELL01	English Communication Skills Lab	0	0	3	3	50	50	100	1
18MEL02	Workshop practice	0	0	3	3	50	50	100	1
	NCC/NSS	0	0	3	3				0
	<b>TOTAL</b>	<b>19</b>	<b>1</b>	<b>16</b>	<b>36</b>	<b>450</b>	<b>450</b>	<b>900</b>	<b>20</b>

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### *Mechanical Engineering*

Effective from the Academic Year 2018-2019 (R18 Regulations)

Second Year B.Tech (SEMESTER – III)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18ME301	Strength of Materials-I	4	1	0	5	50	50	100	4
18ME302	Professional Ethics & Human Values	4	0	0	4	50	50	100	3
18ME303	Thermodynamics	4	1	0	5	50	50	100	4
18ME304	Fluid Mechanics & Hydraulic Machines	4	1	0	5	50	50	100	4
18ME305	Basic manufacturing processes	4	0	0	4	50	50	100	3
18ME306	Constitution of India	2	0	0	2	50	50	100	0
18MEL31	Strength of Materials and Fluid Mechanics lab	0	0	3	3	50	50	100	1
18MEL32	Basic Manufacturing Processes lab	0	0	3	3	50	50	100	1
18MEL33	Computer aided drafting and Modelling lab	0	0	3	3	50	50	100	1
	NCC/NSS			3	3				0
	<b>TOTAL</b>	<b>22</b>	<b>3</b>	<b>12</b>	<b>37</b>	<b>450</b>	<b>450</b>	<b>900</b>	<b>21</b>

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## SCHEME OF INSTRUCTION & EXAMINATION (Semester System)

For

### *Mechanical Engineering*

Effective from the Academic Year 2018-2019 (R18 Regulations)

Second Year B.Tech (SEMESTER – IV)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18MA003	Probability and Statistics	4	0	0	4	50	50	100	3
18ME401	Strength of Materials- II	4	1	0	5	50	50	100	4
18ME402	Applied Thermodynamics	4	1	0	5	50	50	100	4
18ME403	Materials Engineering	4	0	0	4	50	50	100	3
18ME404	Kinematics of Machines	4	1	0	5	50	50	100	4
18EL002	Technical English	3	0	0	3	50	50	100	2
18ME405	Essence of Indian Traditional Knowledge	2	0	0	2	50	50	100	0
18MAL01	Probability and Statistics lab	0	0	3	3	50	50	100	1
18MEL41	Pneumatic & Hydraulic drives lab	0	0	3	3	50	50	100	1
	NCC/NSS			3	3				0
	<b>TOTAL</b>	<b>25</b>	<b>3</b>	<b>9</b>	<b>37</b>	<b>450</b>	<b>450</b>	<b>900</b>	<b>22</b>

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Third Year B.Tech (SEMESTER – V)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18ME501	Machine Dynamics	4	1	0	5	50	50	100	4
18ME502	IC Engines & Gas Turbines	4	0	0	4	50	50	100	3
18ME503	Design of Machine Elements-I	4	1	0	5	50	50	100	4
18ME504	Metal Cutting & Machine Tools	4	0	0	4	50	50	100	3
18ME505	Industrial Engineering & Management	4	0	0	4	50	50	100	3
<b>18MED11/12/13</b>	<b>Elective-I</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
18MEL51	CAE lab	0	0	3	3	50	50	100	1
18MEL52	Fuels & IC Engines lab	0	0	3	3	50	50	100	1
	NCC/NSS			3	3				0
	<b>TOTAL</b>	<b>24</b>	<b>2</b>	<b>9</b>	<b>35</b>	<b>400</b>	<b>400</b>	<b>800</b>	<b>22</b>

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### **Elective-I:**

- 1. Operations Research**
- 2. Computational Fluid Dynamics**
- 3. Composite Materials**



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Third Year B.Tech (SEMESTER – VI)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18ME601	Engineering Economics & Accountancy	3	0	0	3	50	50	100	2
18ME602	Heat transfer	4	1	0	5	50	50	100	4
18ME603	Design of Machine Elements – II	4	1	0	5	50	50	100	4
18ME604	Manufacturing Technology	4	0	0	4	50	50	100	3
<b>18MED21/22/23</b>	<b>Elective –II</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
18MEL61	Heat Transfer Lab	0	0	3	3	50	50	100	1
18MEL62	Machine shop practice	0	0	3	3	50	50	100	1
18ELL02	Soft Skills Lab	0	0	3	3	50	50	100	1
	MOOCs			3	3				2
	<b>TOTAL</b>	<b>19</b>	<b>2</b>	<b>12</b>	<b>33</b>	<b>400</b>	<b>400</b>	<b>800</b>	<b>21</b>

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### **Elective –II**

- 1. Finite Element Analysis**
- 2. Power Plant Engineering**
- 3. Mechatronics**



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Effective From the Academic Year 2018-2019 (R18 Regulations)

Fourth Year B.Tech (SEMESTER – VII)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18ME701	Automation in Manufacturing	4	0	0	4	50	50	100	3
18ME702	Operations Management	4	0	0	4	50	50	100	3
18ME703	Instrumentation and Control Systems	4	0	0	4	50	50	100	3
<b>18—I--</b>	<b>Institutional Elective -I</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
<b>18MED31/32/33/34</b>	<b>Elective –III</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
<b>18MED41/42/43</b>	<b>Elective-IV</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
18MEP01	Project-I	0	0	4	4	50	50	100	2
18MEL71	Design & Metrology lab	0	0	3	3	50	50	100	1
18MEL72	Sensorics & PLC lab	0	0	3	3	50	50	100	1
18MEI11	Internship								2
	<b>TOTAL</b>	<b>24</b>	<b>0</b>	<b>10</b>	<b>34</b>	<b>450</b>	<b>450</b>	<b>900</b>	<b>24</b>

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#### Elective –III

1. Fluid Power Systems
2. Computer Aided Design
3. Refrigeration and Air conditioning
4. Project Management

#### Elective – IV

1. Mechanical Vibrations
2. Robotics
3. Supply Chain Management



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**Fourth Year B.Tech (SEMESTER – VIII)**

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
<b>18MED51/52/53/54</b>	<b>Elective –V</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
<b>18—I--</b>	<b>Institutional Elective –II</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>3</b>
18MEP02	Project-II	0	0	12	12	75	75	150	10
18MEL81	CAM lab	0	0	3	3	50	50	100	1
	TOTAL	8	0	15	23	225	225	450	17

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**Elective –V**

- 1. Advanced Manufacturing**
- 2. Total Quality Management**
- 3. Automobile Engineering**
- 4. Entrepreneurship Development**