

**Course Structure of  
B. Tech (Honors) Mechanical Engineering Programme**

**Honors in 3D Printing Technology**

S. No	Course Category	Course Code	Course Title	L	T	S/P	Credit
1	Engineering Course	MEL DE301	Product Design & Development	3	1	0	4
2	Engineering Course	MEL DE313	Materials and characterization techniques	3	1	0	4
3	Engineering Course	MEL DE326	3D Printing: Introductions and Processes	3	1	0	4
4	Engineering Course	MEL DE302	Biomaterials	3	1	0	4
5	Engineering Course	MEM DE316	Finite Element Analysis	3	0	2	4
6	Engineering Course	MEL DE401	Computational Fluid Dynamics	3	1	0	4
7	Engineering Course	MEM MA 401	Skill Based Lab – Digital Fabrication	2	0	4	4
			<b>Total Credits</b>	<b>20</b>	<b>5</b>	<b>6</b>	<b>28</b>

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**Honors in Robotics and Automation**

S. No	Course Category	Course Code	Course Title	L	T	S/P	Credit
1	Engineering Course	MEL DE303	Industrial Robotics	3	1	0	4
2	Engineering Course	MEL DE315	Mechatronics	3	0	2	4
3	Engineering Course	MEL MA 301	Introduction to Automation	3	1	0	4
4	Engineering Course	MEL DE304	Mechanics of Robots	3	1	0	4
5	Engineering Course	MEL DE318	Computer Integrated Manufacturing System	3	1	0	4
6	Engineering Course	MEL MA 403	Robo-Dynamics	3	1	0	4

7	Engineering Course	MEL MA 405	IOT and Automation	3	1	0	4
<b>Total Credits</b>				<b>21</b>	<b>6</b>	<b>2</b>	<b>28</b>

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#### Honors in Biomechanical Systems

S. No	Course Category	Course Code	Course Title	L	T	S/P	Credit
1	Engineering Course	BTL BS 102	Biology for Engineers	3	0	2	4
2	Engineering Course	MEL DE305	Introduction to Bio Mechanics	3	1	2	4
3	Engineering Course	MEL DE317	Introduction to Biomedical Engineering	3	1	0	4
4	Engineering Course	MEL MA 303	Bio Tribology	3	1	0	4
5	Engineering Course	MEL DE302	Biomaterials	3	1	0	4
6	Engineering Course	MEL DE316	Finite Element Analysis	3	0	2	4
7	Engineering Course	MEM MA 407	Additive Manufacturing	3	0	2	4
<b>Total Credits</b>				<b>21</b>	<b>4</b>	<b>8</b>	<b>28</b>

### Course Structure of B. Tech (Honors) Mechanical Engineering Programme

#### Honors in Sustainable Energy Engineering

S. No	Course Category	Course Code	Course Title	L	T	S/P	Credit
1	Engineering Course	MEL DE307	Energy and its Resources	3	1	0	4
2	Engineering Course	MEL DE319	Energy storage for Renewables	3	1	0	4

3	Engineering Course	MEL MA 305	Wind Energy and Resources	3	1	0	4
4	Engineering Course	MEL DE306	Solar thermal power Engineering	3	1	0	4
5	Engineering Course	MEL DE320	Power Plant Engineering	3	1	0	4
6	Engineering Course	MEL MA 409	Energy Management	3	1	0	4
7	Engineering Course	MEL MA 411	Solar Energy Technologies and System Design	3	1	0	4
			<b>Total Credits</b>	<b>21</b>	<b>7</b>	<b>0</b>	<b>28</b>