

**ADAMAS UNIVERSITY**  
**SCHOOL OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**B. Tech (Mechanical Engineering)**  
**Course Structure**

**Course Structure for B.Tech (Mechanical Engineering) Programme**

**FIRST-YEAR**

<b>SEMESTER I</b>								
<b>S. No</b>	<b>Type</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs/wk</b>	<b>Credits</b>
1	Theory (BSC)	MTH11501	Engineering Mathematics-I	3	1	0	4	4
2	Hybrid (ESC)	PHY13201	Applied Science	2	0	2	4	3
	Theory (ESC)	EVS11112	Environmental Science	3	0	0	3	3
3	Theory (ESC)	CSE11001	Introduction to Programming	2	0	0	2	2
		GEE11001	Electrical and Electronics Technology	2	0	0	2	2
4	Theory (HSSM)	ENG11053	English Communication	1	0	2	3	2
	Theory	GEE11012	Disruptive Technology Innovations	1	0	2	3	
5	Theory (BSC)	BIT11003	Life Sciences	2	0	0	2	2
6	Theory (Mandatory)	DGS11002	Design Thinking & Prototyping	1	0	2	3	3
	Theory (ESC)	MEE11002	Engineering Mechanics	2	1	0	3	3
7	Practical (ESC)	CSE12002	Programming Lab	0	0	4	4	2
		GEE12002	Electrical and Electronics Technology Lab	0	0	4	4	2
8	Practical (ESC)	CEE12001	Engineering Drawing and CAD	0	0	4	4	2
		MEE12001	Engineering Workshop	0	0	4	4	
<b>Total</b>				<b>11/13</b>	<b>1/2</b>	<b>14/8</b>	<b>26/24</b>	<b>20</b>

SEMESTER II								
S. No	Type	Course Code	Course Title	L	T	P	Contact Hrs/wk	Credits
1.	Theory (BSC)	MTH11502	Engineering Mathematics– II	3	1	0	4	4
2.	Theory (ESC)	MEE11002	Engineering Mechanics	2	1	0	3	3
	Theory (Mandatory)	DGS11002	Design Thinking & Prototyping	1	0	2	3	3
3.	Theory (ESC)	EVS11112	Environmental Science	3	0	0	3	3
	Hybrid (ESC)	PHY13201	Applied Science	2	0	2	4	3
4.	Theory (ESC)	GEE11001	Electrical and Electronics Technology	2	1	0	3	3
		CSE11001	Introduction to Programming	2	0	0	2	2
5.	Theory	GEE11012	Disruptive Technology Innovations	1	0	2	3	2
	Theory (HSSM)	ENG11053	English Communication	1	0	2	3	
6.	Theory (Mandatory)	EIC11001	Venture Ideation	2	0	0	2	2
7.	Practical (ESC)	GEE12002	Electrical and Electronics Technology Lab	0	0	2	2	1
		CSE12002	Programming Lab	0	0	4	4	2
8	Practical (ESC)	MEE12001	Engineering Workshop	0	0	4	4	2
		CEE12001	Engineering Drawing and CAD	0	0	4	4	
<b>Total</b>				<b>13/11</b>	<b>3/2</b>	<b>8/14</b>	<b>24/26</b>	<b>20</b>

**SECOND YEAR**

<b>SEMESTER III</b>								
<b>S. No</b>	<b>Type</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs/wk</b>	<b>Credits</b>
1	Theory (BSC)	<b>MTH11529</b>	Engineering Mathematics – III A	3	1	0	4	4
2	Theory (ESC)	<b>MEE11003</b>	Material Engineering & Composites	3	0	0	3	3
3	Theory (PCC)	<b>MEE11009</b>	Prof. Core – I Manufacturing Technology I	3	1	0	4	4
4	Theory (PCC)	<b>MEE11005</b>	Prof. Core – II Fluid Mechanics	3	1	0	4	4
5	Theory (PCC)	<b>MEE11006</b>	Prof. Core – III Engineering Thermodynamics	3	1	0	4	4
6	Practical (Mandatory)	<b>IDP14001</b>	Interdisciplinary Project	0	0	6	6	3
7	Practical (PCC)	<b>MEE12013</b>	Prof. Core Lab – I Manufacturing Technology I Lab	0	0	2	2	1
8	Practical (PCC)	<b>MEE12025</b>	Prof. Core Lab – II Machine Drawing with AUTOCAD	0	0	2	2	1
9	Practical (BSC)	<b>MTH12531</b>	Numerical Techniques Lab	0	0	2	2	1
10	Practical (Mandatory)	<b>SOC14100</b>	# Community Service	-	-	-	-	1
<b>Total</b>				<b>15</b>	<b>4</b>	<b>12</b>	<b>31</b>	<b>26</b>

**# Community Service will be taken up during the summer vacation of II Semester and evaluated in III Semester.**

**SEMESTER-IV**

<b>S. No</b>	<b>Type</b>	<b>Course Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs/wk</b>	<b>Credits</b>
1.	Theory (PCC)	<b>MEE11004</b>	Prof. Core – IV Mechanics of Solids	3	1	0	4	4
2.	Theory (PCC)	<b>MEE11015</b>	Prof. Core – V Manufacturing Technology II	3	1	0	4	4
3.	Theory (PCC)	<b>MEE11014</b>	Prof. Core – VI Thermal Engineering	3	1	0	4	4
4.	Theory (PCC)	<b>MEE11027</b>	Prof. Core – VII Metrology & Measurement	3	1	0	4	4
5.	Theory (Mandatory)	<b>PSG11021</b>	Human Values, Ethics and Psychology	2	0	0	2	2
6.	Practical (PCC)	<b>MEE12007</b>	Prof. Core Lab – III Material Testing Lab	0	0	2	2	1
7.	Practical (PCC)	<b>MEE12035</b>	Prof. Core Lab – IV Metrology & Measurement Lab	0	0	2	2	1
8.	Practical (Sessional) (PCC)	<b>MEE12036</b>	Prof. Core Lab – V Thermal Engineering Lab	0	0	2	2	1
<b>Total</b>				<b>14</b>	<b>4</b>	<b>6</b>	<b>24</b>	<b>21</b>

**THIRD YEAR**

<b>SEMESTER –V</b>								
<b>S. No</b>	<b>Type</b>	<b>Course Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs /week</b>	<b>Credits</b>
1.	Theory (PCC)	<b>MEE11026</b>	Prof. Core – VIII Heat Transfer	3	1	0	4	4
2.	Theory (PCC)	<b>MEE11010</b>	Prof. Core – IX Mechanisms & Machines	3	1	0	4	4
3.	Theory (PCC)	<b>MEE11008</b>	Prof. Core – X Fluid Machinery	3	1	0	4	4
4.	Theory (PEC)	<b>MEE11056</b> <b>MEE11018</b>	<b>Prof. Elective – I</b> 1. Agricultural Engineering 1. Computer Integrated Manufacturing 1. Machine Tool Design	3	0	0	3	3
5.	Theory (PEC)	<b>MEE11048</b> <b>MEE11038</b>	<b>Prof. Elective – II</b> 2. Power Plant Engineering 2. Additive Manufacturing 2. Smart materials	3	0	0	3	3
6.	Practical (PCC)	<b>MEE12034</b>	Prof. Core Lab – VI Heat Transfer Lab	0	0	2	2	1
7.	Practical (PCC)	<b>MEE12012</b>	Prof. Core Lab – VII Fluid mechanics & Hydraulics Lab	0	0	2	2	1
8.	Practical (PCC)	<b>MEE12023</b>	Prof. Core Lab – VIII Manufacturing Technology - II Lab	0	0	2	2	1
9.	Practical (PSI)	<b>MEE15062</b>	Technical Seminar	0	0	2	2	1
<b>Total</b>				<b>15</b>	<b>3</b>	<b>8</b>	<b>26</b>	<b>22</b>

SEMESTER –VI								
S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/wk	Credits
1.	Theory (PCC)		Prof. Core – XI Automatic Controls	3	1	0	4	4
2.	Theory (PCC)	<b>MEE11011</b>	Design of Mechanical Systems	3	0	0	3	3
3.	Theory (PCC)	<b>MEE11028</b>	Prof. Core – XII IC Engines & Gas Turbines	3	0	0	3	3
4.	Theory (PEC)	MEE11054/  <b>MEE11062</b> /  <b>MEE11036</b>	<b>Prof. Elective – III</b> Computational Fluid Dynamics/ Data Science & AI in Mechanical Engineering/ Mechanical Vibration and Control	3	0	0	3	3
5.	Theory (PEC)	<b>MEE11063</b> /          <b>/MEE11030</b>	<b>Prof. Elective – IV</b> Refrigeration and Air Conditioning/ Industrial Automation/ Computer Aided Design & Simulation	3	0	0	3	3
6.	Theory (OEC)		<b>Open Elective – I</b>	3	0	0	3	3
7.	Theory (HSSM)	<b>ECO11505</b>	Economics for Engineers	3	0	0	3	3
8.	Practical (PCC)	<b>MEE12024</b>	Prof. Core Lab – IX Mechanisms & Machines Lab	0	0	2	2	1
9.	Practical (PEC)	<b>MEE12031</b>	<b>Prof. Elective-IV Lab</b> Refrigeration and Air Conditioning Lab/ Industrial Automation Lab/ Computer Aided Design & Simulation Lab	0	0	2	2	1
10.	Practical (PCC)	<b>MEE12029</b>	Prof. Core Lab – XII Internal Combustion Engines Lab	0	0	0	2	1
<b>Total</b>				<b>21</b>	<b>2</b>	<b>4</b>	<b>28</b>	<b>25</b>

**FOURTH YEAR**

<b>SEMESTER-VII</b>								
<b>S. No</b>	<b>Type</b>	<b>Course CODE</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Contact Hrs/week</b>	<b>Credits</b>
1.	Theory (HSSM)	<b>MGT11402</b>	Industrial Management	3	0	0	3	3
2.	Theory (PCC)	<b>MEE11069</b>	Prof. Core – XIII Automobile Engineering	3	1	0	4	4
3.	Theory (PEC)	<b>MEE11066/ MEE11037/ MEE11040</b>	<b>Prof. Elective – V</b> Alternative Fuels/ Robotics/ Biomedical Design	3	0	0	3	3
4.	Theory (OEC)		<b>Open Elective – II</b>	3	0	0	3	3
5.	Theory (OEC)		<b>Open Elective – III</b>	3	0	0	3	3
7.	Practical (PEC)	<b>MEE12055/</b>	<b>Prof. Elective Lab</b> Computational Fluid Dynamics Lab/ Data Science & AI Lab/ Vibration & Control Lab	0	0	2	2	1
8.	Practical (PCC)	MEE14056	Summer Internship <sup>#</sup>	0	0	4	4	2
9.	Practical (PCC)	MEE14057	Minor Project	0	0	3	3	3
<b>Total</b>				<b>15</b>	<b>0</b>	<b>6</b>	<b>21</b>	<b>22</b>

**# Summer Internship for 30 days will be taken at the end of 6<sup>th</sup> semester and will be evaluated in the 7<sup>th</sup> semester.**





**MEE11073**

Computer aided simulation and analysis  
Energy Conversion and Power Plant Technologies  
Wearable Robotics