ADAMAS UNIVERSITY

SCHOOL OF ENGINEERING & TECHNOLOGY

B.Tech. Mechanical Engineering
(Regular)-MEE3401

Course Structure & Syllabus

(2026-27)

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

Course Structure for B.Tech (Mechanical Engineering)-MEE3401 Program

FIRST YEAR

SEMESTER I								
S. No	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/wk**	**Credits**
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	CSE11082	Principles and Applications of AI	2	0	0	2	
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	
			Total	**11/14**	**1/2**	**14/8**	**26/24**	**20**

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	CSE11082	Principles and Applications of AI	2	0	0	2	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	
9	Theory (Mandatory)	CLL11101	Soft Skills and Aptitude-I	1	0	0	1	1
Total				**15/11**	**3/2**	**6/14**	**24/26**	**21**

SECOND YEAR

SEMESTER III								
S. No	**Type**	**Course Code**	**Course Title**	**L**	**T**	**P**	**Contact Hrs/wk**	**Credits**
1	Theory (BSC)	**MTH11529**	Engineering Mathematics – III A	3	1	0	4	4
2	Theory (ESC)	**MEE11003**	Material Engineering & Composites	3	0	0	3	3
3	Theory (PCC)	**MEE11009**	Prof. Core – I Manufacturing Technology I	3	1	0	4	4
4	Theory (PCC)	**MEE11005**	Prof. Core – II Fluid Mechanics	3	1	0	4	4
5	Theory (PCC)	**MEE11006**	Prof. Core – III Engineering Thermodynamics	3	0	0	3	3
6	Practical (Mandatory)	**IDP14001**	Interdisciplinary Project	0	0	6	6	3
7	Practical (PCC)	**MEE12013**	Prof. Core Lab – I Manufacturing Technology I Lab	0	0	2	2	1
8	Practical (PCC)	**MEE12025**	Prof. Core Lab – II Machine Drawing with CAD	0	0	2	2	1
9	Practical (BSC)	**MTH12531**	Numerical Techniques Lab	0	0	2	2	1
10	Practical (Mandatory)	**SOC14100**	# Community Service	-	-	-	-	1
11	Theory (Mandatory)	CLL11102	Soft Skills and Aptitude-II	1	0	0	1	1
			Total	**16**	**3**	**12**	**31**	**26**

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

SEMESTER-IV								
S. No	**Type**	**Course Code**	**Subject Name**	**L**	**T**	**P**	**Contact Hrs/wk**	**Credits**
1.	Theory (PCC)	**MEE11004**	Prof. Core – IV Mechanics of Solids	3	1	0	4	4
2.	Theory (PCC)	**MEE11015**	Prof. Core – V Manufacturing Technology II	3	0	0	3	3
3.	Theory (PCC)	**MEE11014**	Prof. Core – VI Thermal Engineering	3	1	0	4	4
4.	Theory (PCC)	**MEE11027**	Prof. Core – VII Metrology & Measurement	3	0	0	3	3
5.	Theory (PCC)	**MEE11010**	Prof. Core – VII Mechanisms & Machine	3	0	0	3	3
6.	Theory (Mandatory)	**PSG11021**	Human Values, Ethics and Psychology	2	0	0	2	2
7.	Practical (PCC)	**MEE12007**	Prof. Core Lab – III Material Testing Lab	0	0	2	2	1
8.	Practical (PCC)	**MEE12035**	Prof. Core Lab – IV Metrology & Measurement Lab	0	0	2	2	1
9.	Practical (Sessional) (PCC)	**MEE12036**	Prof. Core Lab – V Thermal Engineering Lab	0	0	2	2	1
10.	Theory (Mandatory)	CLL11103	Soft Skills and Aptitude-III	1	0	0	1	1
			Total	**15**	**2**	**6**	**23**	**23**

THIRD YEAR

SEMESTER –V								
S. No	**Type**	**Course Code**	**Subject Name**	**L**	**T**	**P**	**Contact Hrs /week**	**Credits**
1.	Theory (PCC)	**MEE11026**	Prof. Core – VIII Heat Transfer	3	1	0	4	4
2.	Theory (PCC)	**MEE11010**	Prof. Core – IX Dynamics of machines	3	0	0	3	3
3.	Theory (PCC)	**MEE11008**	Prof. Core – X Fluid Machinery	3	1	0	4	4
4.	Theory (PEC)	**MEE11056** **MEE11018**	**Prof. Elective – I** 1. Agricultural Engineering 1. Computer Integrated Manufacturing 1. Generative Design	3	0	0	3	3
5.	Theory (PEC)	**MEE11048** **MEE11038**	**Prof. Elective – II** 2. Power Plant Engineering 2. Additive Manufacturing 2. Smart materials	3	0	0	3	3
6.	Practical (PCC)	**MEE12034**	Prof. Core Lab – VI Heat Transfer Lab	0	0	2	2	1
7.	Practical (PCC)	**MEE12012**	Prof. Core Lab – VII Fluid mechanics & Hydraulics Lab	0	0	2	2	1
8.	Practical (PCC)	**MEE12023**	Prof. Core Lab – VIII Manufacturing Technology - II Lab	0	0	2	2	1
9.	Practical (PSI)	**MEE15062**	Technical Seminar	0	0	2	2	1
10.	Theory (Mandatory)	CLL11104	Soft Skills and Aptitude-IV	1	0	0	1	1
			Total	**16**	**2**	**8**	**26**	**22**

SEMESTER –VI								
S. No	**Type**	**Course Code**	**Subject Name**	**L**	**T**	**P**	**Contact Hrs/wk**	**Credits**
1.	Theory (PCC)		Prof. Core – XI Production Planning and controls	3	0	0	3	3
2.	Theory (PCC)	**MEE11011**	Design of Mechanical Systems	3	0	0	3	3
3.	Theory (PCC)	**MEE11028**	Prof. Core – XII IC Engines & Gas Turbines	3	1	0	4	4
4.	Theory (PEC)	MEE11054/ **MEE11062/** **MEE11036**	**Prof. Elective – III** Computational Fluid Dynamics/ Data Science & AI in Mechanical Engineering/ Mechanical Vibration and Control	3	0	0	3	3
5.	Theory (PEC)	**MEE11063/** **/MEE11030**	**Prof. Elective – IV** Refrigeration and Air Conditioning/ Industrial Automation/ Computer Aided Design & Simulation	3	0	0	3	3
6.	Theory (OEC)		**Open Elective – I**	3	0	0	3	3
7.	Theory (HSSM)	**ECO11505**	Economics for Engineers	3	0	0	3	3
8.	Practical (PCC)	**MEE12024**	Prof. Core Lab – IX Mechanisms & Machines Lab	0	0	2	2	1
9.	Practical (PEC)	**MEE12031**	**Prof. Elective-IV Lab** Refrigeration and Air Conditioning Lab/ Industrial Automation Lab/ Computer Aided Design & Simulation Lab	0	0	2	2	1
10.	Practical (PCC)	**MEE12029**	Prof. Core Lab – XII Internal Combustion Engines Lab	0	0	0	2	1
11.	Theory (Mandatory)	CLL11105	Soft Skills and Aptitude-V	1	0	0	1	1
			Total	**22**	**1**	**4**	**30**	**27**

FOURTH YEAR

	SEMESTER-VII							
S. No	**Type**	**Course CODE**	**Subject Name**	**L**	**T**	**P**	**Contact Hrs/week**	**Credits**
1.	Theory (HSSM)	**MGT11402**	Industrial Management	3	0	0	3	3
2.	Theory (PCC)	**MEE11069**	Prof. Core – XIII Automobile Engineering Automatic Controls	3	1	0	4	4
3.	Theory (PEC)	**MEE11066/ MEE11037/ MEE11040**	**Prof. Elective – V** Alternative Fuels/ Robotics/ Biomedical Design	3	0	0	3	3
4.	Theory (OEC)		**Open Elective – II**	3	0	0	3	3
5.	Theory (OEC)		**Open Elective – III**	3	0	0	3	3
7.	Practical (PEC)	**MEE12055/**	**Prof. Elective Lab** Computational Fluid Dynamics Lab/ Data Science & AI Lab/ Vibration & Control Lab	0	0	2	2	1
8.	Practical (PCC)	MEE14056	Summer Internship#	0	0	4	4	2
9.	Practical (PCC)	MEE14057	Minor Project	0	0	3	3	3
10.	Theory (Mandatory)	CLL11106	Soft Skills and Aptitude-6	1	0	0	1	1
			Total	**16**	**1**	**9**	**26**	**23**

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

Semester-VIII								
S. No	**Type**	**Course Code**	**Subject Name**	**L**	**T**	**P**	**Contact Hrs/week**	**Credits**
1.	Practical (PCC)	**MEE14060**	Industry Work Experience / SIRE* / Major Project	0	0	12	12	6
2.	Practical (PCC)	**MEE15061**	Comprehensive Viva Voce	------			------	2
			Total	**0**	**0**	**12**	**12**	**8**

***SIRE: Scientific Investigation & Research Experience**