

**School of Engineering and Applied Science,
Ahmedabad University**

Programme: B. Tech. (Mechanical Engineering)

Semester	Name of the courses	Credits	Core/ Elective
First			
1	Applied Physics	3	Core
2	Engineering Graphics	3	Core
3	Engineering Graphics Lab	1.5	Core
4	Environmental Studies	3	Core
5	Calculus and Differential Equations	4	Core
6	Workshop Practice	2.5	Core
7	Introduction to Materials Science and Engineering	3	Core
8	Communication Skills	3	Core
	Semester Total Credits:	23	
Second			
1	Introduction to Computation and Programming	4	Core
2	Introduction to Computation and Programming Lab	1.5	Core
3	Linear Algebra	4	Core
4	User Centered Design	4.5	Core
5	Chemistry	3	Core
	Semester Total Credits:	17	
Third			
1	Economics	3	Core
2	Vector and Complex Analysis	4	Core
3	Thermodynamics - I	3	Core
4	Power Plants and Mechanical Operations	4	Core
5	Strength of Materials	3	Core
	Semester Total Credits:	17	
Fourth			
1	Fluid Mechanics	3	Core
2	Fluid Mechanics Lab	1.5	Core
3	Design of Machine Elements	3	Core
4	Manufacturing Processes	3	Core
5	Manufacturing Processes Lab	1.5	Core
6	Ethics	3	Core
7	Mechatronics	3	Core
8	Mechatronics Lab	1.5	Core
	Semester Total Credits:	19.5	
Fifth			
1	Heat Transfer	3	Core

2	Heat Transfer Lab	1.5	Core
3	Thermal Engineering	3	Core
4	Fluid Machines	4	Core
5	Computer Aided Design and Manufacturing	3	Core
6	Computer Aided Design and Manufacturing Lab	1.5	Core
7	Elective - I	3	Elective
	Note: Any one of the courses can be selected as an Elective course.		
8	HASS Elective - I	3	HASS Elective
	Note: Any one of the AU level courses can be selected as HASS Elective courses		
	Semester Total Credits:	22	
Sixth			
1	Control System Design	3	Core
2	Control System Design Lab	1.5	Core
3	Elective - II	3	Elective
4	Elective - III	3	Elective
	Note: Any of two following courses can be selected as Elective courses.		
5	Mechanical Engineering Lab - I	1.5	Core
6	Thermal Machines	3	Core
7	HASS Elective - II	3	HASS Elective
	Note: Any one of the AU level courses can be selected as HASS Elective courses		
	Semester Total Credits:	18	
Seventh			
1	Dynamics of Machines	3	Core
2	Dynamics of Machines Lab	1.5	Core
3	Metal Casting, Welding and Forming Processes	3	Core
4	Material Science and Metallurgy	3	Core
5	Elective - IV	3	Elective
6	Elective - V	3	Elective
	Note: BTech: Any of two courses can be selected as Elective courses		
	Advanced Mechanical Vibrations	3	Elective
	Optimization Methods	3	Elective
	Automobile Engineering	3	Elective
	Production and Operations Management	3	Elective
7	HASS Elective	3	Elective
	Note: Any one of the courses can be selected as HASS Elective courses, AU Wide HASS Courses		

Eighth			
	B.Tech Project Part - 1 (BTP - 1)	3	
	B.Tech Project Part - 2 (BTP - 2)	12	
	Technical Electives * BTech: Any student doing on campus who could not register for one of the elective courses in Semester VII can register for an Elective course	3	Elective