Templates for programs Mechanical Engineering (ME)

Template for BT Program in Mechanical Engineering

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-1 (9) ELC111/ELC112/ELC113 *	ETH111 (3) **	SCHEME-2 HSS-I (9-11)	SCHEME-3 EME (9-11)	SCHEME HSS-II (9)	--	SCHEME HSS-II (9)	SCHEME HSS-II (9)
MTH 111 (6)	MTH 113 (6)	ESC201 (14)	ME231 (8)	ME333 (3)	ME334 (4)	OE-1 (9)	OE-5 (9)
MTH 112 (6)	MTH 114 (6)	MSO202M	ME222 (6)	ME301 (9)	ME302 (9)	OE-2 (9)	OE-6 (9)
PHY 113 (11)	PHY 115 (11)	MSO203M	ME252 (9)	ME331 (9)	ME354 (9)	OE-3 (9)	DE-2 (9)
PHY 111 (3)	CHM 111 (3)	ESO201 (11)	ESO202 (11)	ME321 (9)	ME341 (9)	OE-4 (6)	DE-3/UGP-2 (9)
TA 111 (9)	ESC 111 (7)	ME209 (9)	ME261 (7)	ME361 (7)	ME371 (9)	DE-1/UGP-1 (9)	
CHM 112 (4)	ESC 112 (7)			ME381 (7)	ME351 (8)		
CHM 113 (4)	LIF111 (6)				MEXXX (9) -One course from Basket*		
PE111 (3)	PE112 (3)						
55	52	55-57	50-52	53	57	51	45

* DC Basket (MEXXX): 3 to 4 electives courses will be designated every even semester

Credit Table for BT Program in Mechanical Engineering		
Course type	Allowable Credit range	Credit in the department
Institute Core (IC)	112	112
E/SO	18-45	34
Department requirements	144-179	167 (140 DC + 27 DE)
Open electives (OE)	51-57	51
SCHEME	54-58	54-58
Total for 4-year BT/BS	391-420	418-422*

* Exceeds the credit range recommended by UGARC

Template for BTH Program in Mechanical Engineering

Template for 3rd to 8th semester for BTH Program in Mechanical Engineering					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 HSS-I (9-11)	SCHEME-3 EME (9-11)	SCHEME HSS-II (9)	--	SCHEME HSS-II (9)	SCHEME HSS-II (9)
ESC201 (14)	ME231 (8)	ME333 (3)	ME334 (4)	OE-1 (9)	OE-5 (9)
MSO202M (6)	ME222 (6)	ME301 (9)	ME302 (9)	OE-2 (9)	OE-6 (9)
MSO203M (6)	ME252 (9)	ME331 (9)	ME354 (9)	OE-3 (9)	DE-1 (9)
ESO201 (11)	ESO202 (11)	ME321 (9)	ME341 (9)	OE-4 (6)	UGP-2 (9)
ME209 (9)	ME261 (7)	ME361 (7)	ME371 (9)	UGP-1 (9)	DEH-2 (9)
		ME381 (7)	ME351 (8)	DEH-1 (9)	DEH-3 (9)
			MEXXX (9) - One course from Basket*		
55-57	50-52	53	57	60	63

- DEH: 27 credits of DEs at the level of 6 or 7 must be taken
- CPI criteria for BTH: 8.0
- UGP-1 and UGP-2 are mandatory for BTH

Template for BTM program in Mechanical Engineering

Template for 3rd to 8th semester for BTM Program in Mechanical Engineering					
Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
SCHEME-2 HSS-I (9-11)	SCHEME-3 EME (9-11)	SCHEME HSS-II (9)	--	SCHEME HSS-II (9)	SCHEME HSS-II (9)
ESC201 (14)	ME231 (8)	ME333 (3)	ME334 (4)	OE-1 (9)	OE-3 (9)
MSO202M (6)	ME222 (6)	ME301 (9)	ME302 (9)	OE-2 (6)	MTB-4 (9)
MSO203M (6)	ME252 (9)	ME331 (9)	ME354 (9)	MTB-1 (9)	MTB-5 (9)
ESO201 (11)	ESO202 (11)	ME321 (9)	ME341 (9)	MTB-2 (9)	MTB-6 (9)
ME209 (9)	ME261 (7)	ME361 (7)	ME371 (9)	MTB-3 (9)	
		ME381 (7)	ME351 (8)		
			MEXXX (9) - One course from Basket*		
55-57	50-52	53	57	51	45

- 54 credits of MTB courses should be taken from the Management Track Basket

Template for five-year dual degree program in Mechanical Engineering

Template for dual degree program in Mechanical Engineering (PG Part-Category A)			
7th	8th	9th	10th
DE PG-1 [09]	DE PG-4[09]	M.TECH. THESIS [36]	M.TECH. THESIS [36]
DE PG-2 [09]	DE PG-5[09]	-	-
DE PG-3 [09] OE PG-1 [09]	DE PG-6 [09]/ OE PG-1 [09]		

MINIMUM CREDIT REQUIREMENT IN M.TECH PART FOR GRADUATION

- PG Component : 54 Credits
- Thesis Component : 72 Credits

36 OE credits may be waived off in the UG requirements

Template for dual degree program in Mechanical Engineering (PG Part-Category B)				
Sl. No.	Specialization	Compulsory Courses	Elective Credits	Thesis Credits
1.	SOLID MECHANICS AND DESIGN (SMD)	ME621 [9] ME625 [9] ME681 [9]	DE PG-1[09] DE PG-2[09] DE PG-3[09]	M.TECH THESIS [72]
2.	FLUID & THERMAL SCIENCES (FTS)	ME631 [9] ME641 [9] ME642 [9] ME681 [9]	DE PG-1[09] DE PG-2[09]	M.TECH THESIS [72
3.	MANUFACTURING SCIENCES (MFS)	ME661 [9] ME662 [9] ME663 [9] ME681 [9]	DE PG-1[09] DE PG-2[09]	M.TECH THESIS [72]

MINIMUM CREDIT REQUIREMENT IN M.TECH PART FOR GRADUATION

- PG Component : 54 (27 Compulsory +27 Electives) Credits for SMD
- PG Component : 54 (36 Compulsory +18 Electives) Credits for FTS and
- Thesis : 72 MFS Credits

36 OE credits may be waived off in the UG requirements

Template for double major: second major in Mechanical Engineering

Template for double major	
Odd Semester	Even Semester
Pre-Requisites	
ESO201A [11] / ESO202A [11]	ESO201A [11] / ESO202A [11]
11	11
ME Mandatory Courses	
ME209 [09]&	ME231 [09]*
ME341 [09]&&	ME252 [09]
ME321 [09]&&&	ME261 [07]**
ME361 [07]	ME302 [09]
	ME354 [09]
	ME331 [09]***
	ME371 [09]
34	61

TOTAL MANDATORY CREDITS FOR SECOND MAJOR IN MECHANICAL ENGINEERING: 95

REMARKS:

1) * Equivalent courses for ME231 are ESO204 or CE261
2) ** Equivalent course for ME261 is MSE305
3) *** Equivalent courses for ME331 are CHE311 or (AE211+AE312)
4) & Equivalent course for ME209 is AE209
5) && Equivalent course for ME341 is CHE312
6) &&& Equivalent course for ME321 is (AE333+AE334)
7) Up to 36 OE credits may be waived from the parent department's BT/BS graduation requirements when they are used to fulfil requirements for the double major.

Minors in Mechanical Engineering

Minors	
MANUFACTUIRNG SCIENCES	COMPUTATIONAL TECHNIQUES IN MECHANICAL ENIGNEERING
Any THREE from the following	Any THREE from the following
ME661 [09] (Prerequisite TA212)	ME623 [09] (Prerequisite ESO202, MSO203M)
ME662 [09] (Prerequisite TA212)	ME630 [09] (Prerequisite ESO201, ESO204, MSO203M)
ME663 [09] (Prerequisite ESO202, MSO203M)	ME685 [09] (Prerequisite- No backlog in core courses)
ME664 [09] (Prerequisite TA212, ESO204 or an equivalent course in Heat	ME751 [09] (Prerequisite TA101)
ME665 [09] (Prerequisite TA212)	ME676 [09] (Nonlinear Finite Element Method in Solid Mechanics)
ME774 [09] (Prerequisite ESO202, MSO203B)	ME653 [09] (Atomistic Simulations in Engineering)
ME751 [09] (Prerequisite TA101)	-
ME761 [09] (Prerequisite TA212)	
27	27