Curriculum for B.Tech

Mechanical Engineering

From The Academic Year 2020 (Approved in Senate 43 & 44)



Indian Institute of Information Technology Design and Manufacturing, Kancheepuram

Chennai-600 127

		Semester 1	1	I			l
S.No	Course Code	Course Name	Category	1	Т	P	С
1	MA1000	Calculus	BSC	L 3	1	0	4
2	PH1000		BSC	3	0	0	3
		Engineering Electromagnetics				-	
3	EC1000 CS1000	Electrical Circuits for Engineers	BEC BEC	3	0	0	3
		Problem Solving and Programming		<u> </u>	-	-	
5	ME1000	Materials for Engineers	BEC	3	0	0	3
6	DS1000	Foundation for Engineering and Product Design	DSC	1	2	0	3
7	PH1001	Engineering Electromagnetics Practice	BSC	0	0	3	1.5
8	CS1001	Problem Solving and Programming Practice	BEC	0	0	3	1.5
9	HS1000	Effective Language and Communication Skills	HSC	1	0	2	2
10	NC1000	NSO Semester 1	NC	0	0	2	0
	NC1002	NCC Semester 1					
	NC1004	SSG Semester 1					
							25
		Semester 2					
S.No	Courses Code	Course Name	Category	L	Т	Р	С
1	MA1001	Differential Equations	BSC	3	1	0	4
2		Science Elective Course 1	SEC	3	1	0	4
3	ME1001	Engineering Graphics	BEC	2	0	4	4
4	CS1002	Elementary Data Structures and Logical Thinking	ITC	3	0	0	3
5	DS1001	Sociology of Design	DSC	1	2	0	3
6	ID1000	Design and Manufacturing Lab	ITC	0	0	2	1
7	ME1004	Engineering Mechanics	PCC	3	0	0	3
8	CS1003	Elementary Data Structures and Logical Thinking Practice	ITC	0	0	4	2
9	ME1005	Mechanics and Materials Practice	PCC	0	0	2	1
10	NC1001	NSO Semester 2	NC	0	0	2	0
	NC1003	NCC Semester 2					
	NC1005	SSG Semester 2					
11	NC1008	Earth, Environment and Design	NC	1	0	0	0
							25
		Semester 3					
S.No	Course Code	Course Name	Category	L	Т	Р	С
1	000.00	Science Elective Course 2	SEC	3	1	0	4
2	DS2000	Systems Thinking for Design	DSC	1	2	0	3
3	ME2000	Engineering Thermodynamics	PCC	3	1	0	4
4	ME2001	Fluid Mechanics and Fluid Machinery	PCC	3	1	0	4
5	ME2002	Mechanics of Materials	PCC	3	1	0	4
6	ME2003			-		-	
7	ME2004	Manufacturing Processes - 1 Manufacturing Processes Practice - 1	PCC	0	0	4	2
8	NC2000	Indian Constitution, Essence of Indian Traditional Knowled		1	0	0	0
- °	1402000	maian constitution, Essence of maian frautional knowled	1110	1			25
	Consorting A						23
C NI -	Course Code	Semester 4	Catago		т	P	С
	Course Code	Course Name Science Elective Course 3	Category SEC	3	T 1	0	4
1	D\$2001			1	+		
2	DS2001	Smart Product Design	DSC	+	2	0	3
3	ME2005	Heat Transfer	PCC	3	1	0	4
4	ME2006	Kinematics and Dynamics of Machinery	PCC	3	1	0	4
5	ME2007	Manufacturing Processes - 2	PCC	3	1	0	4
6	ME2008	Fluid Mechanics and Heat Transfer Practice	PCC	0	0	3	1.5
7	ME2009	Mechanical Design Practice	PCC	0	0	4	2
8	ME2010	Manufacturing Processes Practice - 2	PCC	0	0	3	1.5
9	NC2001	Human Values and Stress Management	NC	1	0	0	0
							24

		Semester 5							
S.No	Courses Code	Course Name	Category	L	Т	Р	С		
1	CS3006	Introduction to Data Science for Engineers	ITC	3	0	2	4		
2	DS3000	Entrepreneurship and Management Functions	DSC	1	2	0	3		
3	ME3000	Design of Machine Elements	PCC	3	1	0	4		
4	ME3001	Measurement and Automation	PCC	3	1	. 0 4			
5	ME3002	Thermal Engineering Practice	PCC	0	0	3	3 1.5		
6	ME3003	Production Drawing and Inspection Practice	PCC	0	0	3	1.5		
7		Professional Elective Course 1	PEC	EC 3 1 0			4		
8	NC3000	Professional Ethics and Organizational Behaviour	NC	1	0	0	0		
							22		
		Semester 6							
S.No	Courses Codes	Course Name	Category	L	Т	Р	С		
1	DS3001	Prototyping and Testing	DSC	1	2	0	3		
2		Professional Elective Course 2		3	1	0	4		
3		Professional Elective Course 3	PEC	3	1	0	4		
4		Free Elective Course 1	ELC	3	1	0	4		
5		Free Elective Course 2	ELC	3	1	0	4		
6	HS3000	Professional Communication	HSC	1	0	2	2		
7	NC3001	Intellectual Property Rights	NC	1	0	0	0		
							21		
		Semester 7							
S.No	Courses Codes	Course Name	Category	L	Т	Р	С		
1		Free Elective Course 3	ELC	3	1	0	4		
2	Free Elective Course 4		ELC	3	1	0	4		
3		Free Elective Course 5	ELC	3	1	0	4		
4	ME4000	BT-ME-Summer Internship (May-Jul)	PCD	0	0	16	0		
							12		
		Semester 8							
S.No	Courses Codes	Course Name	Category	L	Т	Р	С		
1		Free Elective Course 6	ELC	3	1	0	4		
2	ME4002	BT-ME-Project	PCD	0	0	16	8		
							12		

\$ All NC courses are Pass/Fail courses for which the letter grade H/L shall be awarded.

- 1. Professional Elective Course is an elective course offered or prescribed by the parent department. Free Elective Course is an elective course offered by any department, including the parent department. For example: a ME student, based on his/her choice, can register the elective course offered by ME department or CSE department as free elective course.
- 2. 3 Months internship is mandatory, however, the curriculum offers the flexibility to carry out 3-12 Months internship with the approval of the parent department. To satisfy the minimum credit requirement, students opting for long term internship (More than 3 months) are expected to advance a few elective courses and credit a few courses from NPTEL. In line with the guidelines approved by the Senate (Senate 46-07), a B.Tech student can earn a maximum of 9 credits from NPTEL Courses. For all successfully completed NPTEL Courses, the letter grade "H" (Pass) will be awarded and credits of such courses will not be accounted for CGPA calculation.

Semester wise Credit Distribution										
	Semester									
Category	S1	S2	S3	S4	S5	S6	S7	S8	Total	%
Basic Science Course (BSC)	8.5	4	0	0	0	0	0	0	12.5	7.5
Science Elective Course (SEC)	0	4	4	4	0	0	0	0	12	7.2
Basic Engineering Course (BEC)	11.5	4	0	0	0	0	0	0	15.5	9.3
Design Course (DSC)	3	3	3	3	3	3	0	0	18	10.8
IT Skill Course (ITC)	0	6	0	0	4	0	0	0	10	6
Professional Core Course (PCC)	0	4	18	17	11	0	0	0	50	30.1
Professional Elective Course (PEC)	0	0	0	0	4	8	0	0	12	7.2
Free Elective Course (ELC)	0	0	0	0	0	8	12	4	24	14.5
Humanities and Social Science Course (HSC)	2	0	0	0	0	2	0	0	4	2.4
Professional Career Development (PCD)	0	0	0	0	0	0	0	8	8	4.8
Total	25	25	25	24	22	21	12	12	166	100
	25	50	75	99	121	142	154	166		