



VidyaJyothi Institute of Technology (Autonomous)

(Accredited by NBA, Approved By A.I.C.T.E., New Delhi, Permanently Affiliated to JNTU, Hyderabad)

(Aziz Nagar, C.B.Post, Hyderabad -500075)

M.Tech. (CAD, CAM) COURSE STRUCTURE AND SYLLABUS

R19 Regulations

I Year – I Semester

Subject Code	Category	Course Title	Int. marks	Ext. marks	L	T	P,D	C
19D3CS1101	PC-1	Advanced CAD	30	70	4	--	--	4
19D3CS1102	PC-2	Computer Aided Manufacturing	30	70	4	--	--	4
19D3CS1103	PC-3	Advanced FEM	30	70	4	--	--	4
19D3E11101 19D3E11102 19D3E11103	PE-1	1. Mechanical Behaviour of Materials 2. Stress Analysis and Vibration 3. Additive Manufacturing Technologies	30	70	3	--	--	3
19D3E21101 19D3E21102 19D3E21103	PE-2	1. Automation in Manufacturing 2. Computer Aided Process Planning 3. Performance Modeling and Analysis of Manufacturing Systems	30	70	3	--	--	3
191EOE1102	OE-1	1. Optimization Techniques and applications	30	70	3	--	--	3
19D3LB1101	PC LAB-1	Advanced CAD,CAM LAB	30	70	--	--	3	2
19D3SM1101	Seminar I	Seminar-I	100	--	--	--	3	2
Total Credits			310	490	21		6	25

I Year – II Semester

Subject Code	Category	Course Title	Int. marks	Ext. marks	L	T	P,D	C
19D3CS1204	PC-4	Design for Manufacturing And Assembly	30	70	4	--	--	4
19D3CS1205	PC-5	Flexible Manufacturing Systems	30	70	4	--	--	4
19D3CS1206	PC-6	Industrial Robotics	30	70	4	--	--	4
19D3E31101 19D3E31102 19D3E31103	PE-3	1. Intelligent Manufacturing Systems 2. Special Manufacturing Process 3. Optimization Techniques and Applications	30	70	3	--	--	3
19D3E41101 19D3E41102 19D3E41103	PE-4	1. Advanced Mechatronics 2. MEMS and Micro Systems: Design and Manufacture 3. Fuzzy Logic and Neural Networks	30	70	3	--	--	3
191EOE1202	OE-2	1. Engineering Research and Methodology	30	70	3	--	--	3
19D3LB1201	PC LAB-2	Computer Aided Modeling and Analysis Lab	30	70	--	--	3	2
19D3SM1201	Seminar II	Seminar-II	100	--	--	--	3	2
Total Credits			310	490	21		6	25

II Year - I Semester

Subject Code	Course Title	Int. marks	Ext. marks	L	T	P,D	C
19D3CS1207	Technical paper writing	100	--	--	3	--	2
19D3CV2101	Comprehensive Viva-Voce	--	100	--	--	--	4
19D3PW2101	Project work Review I	100	--	--	--	22	8
Total Credits		200	100			22	14

II Year - II Semester

Subject Code	Course Title	Int. marks	Ext. marks	L	T	P,D	C
19D3PW2202	Project work Review II	100	--	--	--	24	8
19D3PE2201	Project Evaluation (Viva-Voce)	--	100	--	--	--	16
Total Credits		100	100	--	--	24	24

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M.Tech R15 Regulations

M.Tech. (CAD/CAM) COURSE STRUCTURE AND SYLLABUS

Year – I Semester

Sul Code	Category	Course Title	Int. marks	Ext. marks	L	P	C	
15D3CS1101	Core Course I	Advanced CAD	40	60	4	--	4	
15D3CS1102	Core Course II	Computer Aided Manufacturing	40	60	4	--	4	
15D3CS1103	Core Course III	Advanced FEM	40	60	4	--	4	
15D3E11101	Core Elective I	Mechanical Behaviour of Materials	40	60	4	--	4	
15D3E11102		Stress Analysis and Vibration						
15D3E11103		Rapid Prototyping Technologies						
15D3E21101	Core Elective II	Automation in Manufacturing	40	60	4	--	4	
15D3E21102		Computer Aided Process Planning						
15D3E21103		Performance Modeling and Analysis of Manufacturing Systems						
15D3OE1101	Open Elective I	Numerical Methods for Partial Differential Equations	40	60	4	--	4	
15D3OE1102		Production and Operations Management						
15D3LB1101	Laboratory I	Laboratory	40	60	--	4	2	
15D3SM1101	Seminar I	Seminar	50	--	--	4	2	
Total Credits						24	8	28

I Year – II Semester

Subject Code	Category	Course Title	Int. marks	Ext. marks	L	P	C	
15D3CS1204	Core Course IV	Design for Manufacturing And Assembly	40	60	4	--	4	
15D3CS1205	Core Course V	Flexible Manufacturing Systems	40	60	4	--	4	
15D3CS1206	Core Course VI	Industrial Robotics	40	60	4	--	4	
15D3E31201	Core Elective III	Intelligent Manufacturing Systems	40	60	4	--	4	
15D3E31202		Special Manufacturing Process						
15D3E31203		Design Optimization						
15D3E41201	Core Elective IV	Advanced Mechatronics	40	60	4	--	4	
15D3E41202		Design and Manufacturing of MEMS and Micro Systems						
15D3E41203		Fuzzy Logic and Neural Networks						
15D3OE1201	Open Elective II	Engineering Research and Methodology	40	60	4	--	4	
15D3OE1202		Quality Engineering in Manufacturing						
15D3LB1201	Laboratory II	Manufacturing Simulation & Precision Engineering Lab	40	60	--	4	2	
15D3SM1201	Seminar II	Seminar	50	--	--	4	2	
Total Credits						24	8	28

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M.Tech R15 Regulations

II Year - I Semester

Subject Code	Course Title	Int. marks	Ext. marks	L	P	C
15D3CV2101	Comprehensive Viva-Voce	--	100	--	--	4
15D3PW2101	Project work Review I	50	--	--	24	12
	Total Credits			--	24	16

II Year - II Semester

Subject Code	Course Title	Int. marks	Ext. marks	L	P	C
15D3PW2202	Project work Review II	50	--	--	8	4
15D3PE2201	Project Evaluation (Viva-Voce)	--	150	--	16	12
	Total Credits			--	24	16

Controller of Examinations

DIRECTOR

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.TECH - CAD / CAM

COURSE STRUCTURE AND SYLLABUS

I Year I Semester

Code	Group	Subject	L	P	Credits
		Advanced CAD	3	-	3
		Advanced Finite Element Analysis	3	-	3
		Precision Engineering	3	-	3
		Design for Manufacturing and Assembly	3	-	3
	Elective-I	Numerical Methods for Partial Differential Equations Advanced Mechanics of Solids Advanced Mechatronics	3	-	3
	Elective-II	Advanced Mechanics of Composite Materials Total Quality Management Stress Analysis and Vibrations	3	-	3
		Computer Aided Design Lab	-	3	2
		Seminar	-	-	2
		Total Credits	18	3	22

I Year II Semester

Code	Group	Subject	L	P	Credits
		Design of Hydraulics and Pneumatics Systems	3	-	3
		Flexible Manufacturing Systems	3	-	3
		Computer Aided Manufacturing	3	-	3
		Industrial Robotics	3	-	3
	Elective -III	Production and Operations Management Computational Fluid Dynamics Automation in Manufacturing	3	-	3
	Elective -IV	Design Optimization Intelligent Manufacturing Systems Computer Aided Process Planning	3	-	3
	Lab	Computer Aided Machining and Robotics Lab	-	3	2
		Seminar	-	-	2
		Total Credits	18	3	22

II Year - I Semester

Code	Group	Subject	L	P	Credits
		Comprehensive Viva	-	-	2
		Project Seminar	-	3	2
		Project work	-	-	18
		Total Credits	-	3	22

II Year - II Semester

Code	Group	Subject	L	P	Credits
		Project work and Seminar	-	-	22
		Total Credits	-	-	22