



# Vidya Jyothi Institute of Technology

(An Autonomous Institution)

(Accredited by NAAC, Approved by AICTE New Delhi & Permanently Affiliated to JNTUH)  
Aziz Nagar Gate, C.B. Post, Hyderabad-500 075

## M. Tech COURSE STRUCTURE: STRUCTURAL ENGINEERING (R19)

### I Year – I Semester

Subject Code	Course Title	L	T	P	C
19D1CS1101	Theory of Elasticity	4	0	0	4
19D1CS1102	Structural Dynamics	4	0	0	4
19D1CS1103	Advanced Structural Analysis	4	0	0	4
19D1E11101	1. Advanced Concrete Technology	3	0	0	3
19D1E11102	2. Tall Buildings				
19D1E11103	3. Advanced Foundation Engineering				
19D1E21101	1. Advanced R.C. Design	3	0	0	3
19D1E21102	2. Soil Dynamic & Foundation Engineering				
19D1E21103	3. Plastic Analysis & Design				
<b>*Open Elective-I</b>					
19D1OE1101	Cost management of Engineering projects	3	0	0	3
19D1LB1101	Advanced Concrete Lab	0	0	3	2
19D1SM1101	Seminar-I	0	0	3	2
<b>Total Credits</b>		<b>21</b>	<b>0</b>	<b>6</b>	<b>25</b>

### I Year – II Semester

Subject Code	Course Title	L	T	P	C
19D1CS1204	Advanced Steel Design	4	0	0	4
19D1CS1205	Theory of Plates	4	0	0	4
19D1CS1206	Pre-stressed Concrete	4	0	0	4
19D1E31201	1. Finite Element Method	3	0	0	3
19D1E31202	2. Bridge Engineering				
19D1E31203	3. Design of Sub Structures				
19D1E41201	1. Earthquake Resistant Design of Buildings	3	0	0	3
19D1E41202	2. Repair & Rehabilitation of Buildings				
19D1E41203	3. Stability of Structures				



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<b>*Open Elective-II</b>					
19D1OE1201	1.Sustainable Building Technology	3	0	0	3
19D1LB1201	Computer aided structural design Lab	0	0	3	2
19D1SM1201	Seminar-II	0	0	3	2
<b>Total Credits</b>		<b>21</b>	<b>0</b>	<b>6</b>	<b>25</b>

## II Year – I Semester

Subject Code	Course Title	L	T	P	C
19D5CS2107	Technical Paper Writing	0	3	0	2
19D5CV2101	Comprehensive Viva-Voce	0	0	0	4
19D5PW2101	Project work Review I	0	0	22	8
<b>Total Credits</b>		<b>0</b>	<b>3</b>	<b>22</b>	<b>14</b>

## II Year – II Semester

Subject Code	Course Title	L	T	P	C
19D5PW2202	Project work Review II	0	0	24	8
19D5PE2201	Project Evaluation (Viva-Voce)	0	0	0	16
<b>Total Credits</b>		<b>0</b>	<b>0</b>	<b>24</b>	<b>24</b>



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*M.Tech R15 Regulations*

## M. TECH (STRUCTURAL ENGINEERING) COURSE STRUCTURE AND SYLLABUS

### I Year – I Semester

Subject Code	Category	Course Title	Int. marks	Ext. marks	L	P	C
15D1CS1101	Core Course I	Theory of Elasticity and plasticity	40	60	4	--	4
15D1CS1102	Core Course II	Theory of Plates	40	60	4	--	4
15D1CS1103	Core Course III	Advanced Structural Analysis	40	60	4	--	4
15D1E11101	Core Elective I	Advanced Concrete Technology	40	60	4	--	4
15D1E11102		Tall Buildings					
15D1E11103		Advanced Foundation Engineering					
15D1E21101	Core Elective II	Advanced R.C. Design	40	60	4	--	4
15D1E21102		Bridge Engineering					
15D1E21103		Plastic Analysis & Design					
15D1OE1101	Open Elective I	Computer Oriented Numerical Methods	40	60	4	--	4
15D1OE1102		Reliability Engineering					
15D1OE1103		Experimental Stress Analysis					
15D1LB1101	Laboratory I	Advanced Concrete Lab	40	60	--	4	2
15D1SM1101	Seminar I	Seminar	50	--	--	4	2
<b>Total Credits</b>					<b>24</b>	<b>8</b>	<b>28</b>

### I Year – II Semester

Subject Code	Category	Course Title	Int. marks	Ext. marks	L	P	C
15D1CS1204	Core Course IV	Finite Element Method	40	60	4	--	4
15D1CS1205	Core Course V	Structural Dynamics	40	60	4	--	4
15D1CS1206	Core Course VI	Pre-stressed Concrete	40	60	4	--	4
15D1E31201	Core Elective III	Advanced Steel Design	40	60	4	--	4
15D1E31202		Soil Dynamic & Foundation Engineering					
15D1E31203		Stability of Structures					
15D1E41201	Core Elective IV	Design of shells & folded plates	40	60	4	--	4
15D1E41202		Earthquake Resistant Design of Buildings					
15D1E41203		Fracture Mechanics					
15D1OE1201	Open Elective II	Repair & Rehabilitation of Buildings	40	60	4	--	4
15D1OE1202		Composite Materials					
15D1OE1203		Optimisation Techniques					
15D1LB1201	Laboratory II	CAD Lab	40	60	--	4	2
15D1SM1201	Seminar II	Seminar	50	--	--	4	2
<b>Total Credits</b>					<b>24</b>	<b>8</b>	<b>28</b>

### II Year - I Semester

Subject Code	Course Title	Int. marks	Ext. marks	L	P	C
15D1CV2101	Comprehensive Viva-Voce	--	100	--	--	4
15D1PW2101	Project work Review I	50	--	--	24	12
<b>Total Credits</b>				--	24	16

### II Year - II Semester

Subject Code	Course Title	Int. marks	Ext. marks	L	P	C
15D1PW2202	Project work Review II	50	--	--	8	4
15D1PE2201	Project Evaluation (Viva-Voce)	--	150	--	16	12
<b>Total Credits</b>				--	24	16