



*Maulana Azad*  
**NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal-462003**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**M. Tech. in Civil Engineering**  
*With Specialization in: Structural Engineering*  
**SCHEME OF STUDY (Revised April 2020)**

**FIRST SEMESTER**

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ST101	Finite Element Method	3	1	-	4
ST102	Theory of Elasticity	3	1	-	4
ST103	Advanced Structural Analysis	3	1	-	4
ST104	Advanced Design of Structures	3	1	-	4
	Elective 1(A)	3	1	-	4
	Elective 2(B)	3	1	-	4
ST105	Lab - 1	-	-	2	1
ST106	Seminar - 1	-	-	2	1
ST107	Communication Skills NPTEL/MOOC/HUM DEPTT.	2	-	-	2
<b>Total Hours 30</b>		<b>Total credits</b>			<b>28</b>
<b>Total Credits (Cumulative) 28</b>					

**SECOND SEMESTER**

Course No.	Proposed Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ST 201	Pre Stressed Concrete	3	1	-	4
ST 202	Structural Dynamics	3	1	-	4
ST 203	Theory of Plates and shells	3	1	-	4
	Elective 3 (A)	3	1	-	4
	Elective 4 (A)	3	1	-	4
	Elective 5 (C)	3	1	-	4
ST 204	Lab - 2	-	-	2	1
ST 205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
ST 206	Seminar - 2	-	-	2	1
<b>Total hours 30</b>		<b>Total credits</b>			<b>28</b>
<b>Total Credits (Cumulative) 56</b>					

**THIRD SEMESTER**

<b>Course No.</b>	<b>Subject</b>	<b>Scheme of Studies Period per week</b>			<b>Total Credits</b>
		<b>L</b>	<b>T</b>	<b>P</b>	
<b>ST301</b>	Dissertation Phase-1	-	-	24	12
<b>Total hours 24</b>		<b>Total credits</b>			<b>12</b>
<b>Total Credits (Cumulative) 68</b>					

**FOURTH SEMESTER**

<b>Course No.</b>	<b>Subject</b>	<b>Scheme of Studies Period per week</b>			<b>Total Credits</b>
		<b>L</b>	<b>T</b>	<b>P</b>	
<b>ST401</b>	Dissertation Phase-2	-	-	24	12
<b>Total hours 24</b>		<b>Total credits</b>			<b>12</b>
<b>Total Credits (Cumulative) 80</b>					

## **LIST OF ELECTIVES**

### **Group – A Program Electives**

ST 501	Soil Structure Interaction
ST 502	Design of Steel Concrete Composite Structures
ST 503	Experimental Stress Analysis
ST 504	Bridge Design
ST 505	Structural Health Monitoring
ST 506	Earthquake Analysis and Design of Structures
ST 507	Design of Foundation Systems
ST 508	Mechanics of Composite Materials
ST 509	Soft Computing

### **Group – B Department Electives (for other programs of same department only)**

ST 601	Finite Element Method
ST 602	Theory of Elasticity
ST 603	Advanced Structural Analysis
ST 604	Advanced Design of Structures
ST 605	Design of Steel Concrete Composite Structures

### **Group – C Institute Electives (for other departments only)**

ST 701	Prestressed Concrete
ST 702	Structural Dynamics
ST 703	Theory of Plates and Shells
ST 704	Earthquake Analysis and Design of Structures
ST 705	Soft Computing Techniques