



# DELHI TECHNOLOGICAL UNIVERSITY

(Formerly Delhi College of Engineering)  
Shahbad Daulatpur, Main Bawana Road, Delhi-42

## **Scheme for Full Time M.Tech. as per NEP-2020**

### **DEPARTMENT OF CIVIL ENGINEERING**

### **M.TECH. STRUCTURAL ENGINEERING (STE)**

SEMESTER I					
Code	Type	Cr	L-T-P	Total Credits	Level
STE501	Departmental Core-1	4	3-0-2	24	500-599*
STE503	Departmental Core-2	4	3-0-2		
STE505	Departmental Core-3	4	3-0-2		
STE507	Departmental Core-4	4	3-1-0		
STE511 STE513 STE515 STE517	Departmental Elective-1	4	3-0-2/ 3-0-2/ 3-0-2/ 3-1-0/		
	Self-study				
STE551 STE553	Seminar MOOC/ SWAYAM*	2	-		
	Skill Enhancement Course 1				
STE541	Skill Enhancement Course 1	2	1-1-0/1-0-2/2-0-0/0-0-4		
	Audit Course				
UEC501	English for Research Paper Writing	0	2-0-0		
UEC503	Disaster Management		2-0-0		
UEC505	Sanskrit for Technical Knowledge		2-0-0		
UEC507	Value Education		2-0-0		
UEC509	Constitution of India		2-0-0		
UEC511	Pedagogy Studies		2-0-0		
UEC513	Stress Management by Yoga		1-0-2		
UEC515	Personality Development through Life Enlightenment Skills		2-0-0		
UCE517	Multi-Dimensional Poverty Indices for Developing Countries		2-0-0		
SEMESTER II					
Code	Type	Cr	L-T-P	Total Credits	Level
STE502	Departmental Core-5	4	3-1-0	24	500-599*
STE504	Departmental Core-6	4	3-0-2		
STE520 STE522 STE524 STE526	Departmental Elective-2	4	3-0-2 3-1-0 3-0-2 3-1-0		

STE530 STE532 STE534 STE536	Departmental Elective-3	4	3-0-2 3-1-0 3-1-0 3-0-2		
UCC502	Research Methodology and IPR	4	3-1-0		
	Skill Enhancement Course 2/ Industrial Training				
GTE540 GTE542 GTE544	Industrial Training Skill Enhancement Course (A) Skill Enhancement Course (B)	4	0-0-8 0-0-8 2-0-4		
NHEQF Level					6.5
SEMESTER III					
Code	Type	Cr	L-T-P	Total Credits	Level
STE601	Departmental Core-7	4	3-1-0	16	600-699*
OCE601	Open Elective Course	4	3-1-0		
STE603	Minor Project/ Research Thesis/ Patent	8	-		
SEMESTER IV					
Code	Type	Cr	L-T-P	Total Credits	Level
STE602	Major Project/ Research Thesis/ Patent	16	-	16	-
NHEQF Level					7.0

\*Level: Refer to the draft UGC Curriculum and credit framework for the PG Programme.

Note: The list of self-study course(SSC) subjects shall be available with the PG Section, and credits not to exceed 16 in the program. The open elective course (OEC) will be chosen from other departments' OECs.

**DELHI TECHNOLOGICAL UNIVERSITY**  
**SCHEME OF TEACHING AND EVALUATION**

**DEPARTMENT OF CIVIL ENGINEERING**  
**M.TECH. STRUCTURAL ENGINEERING (STE)**  
**Scheme for Full Time M. Tech. as per NEP-2020**

Teaching Scheme					Contact Hours/ Week			Relative Weightage (%)					
S. No.	Subject Code	Course Title	Subject Area	Credit	L	T	P	CW	SPRS/STS/CMS	MT	ET	E	PRE
SEMESTER I													
1	STE501	Structural Dynamics	DCC-1	4	3	0	2	15	25	20	40	-	
2	STE503	Applied Numerical Methods	DCC-2	4	3	0	2	15	25	20	40	-	
3	STE505	Design of Advanced Reinforced Concrete Structures	DCC-3	4	3	0	2	15	25	20	40	-	
4	STE507	Theory of Elasticity and Plasticity	DCC-4	4	3	1	0	25	-	25	50	-	
	Department Elective Course												
5	STE511	Advanced Concrete Technology	DEC1	4	3	0	2	15	25	20	40	-	
6	STE513	Reliability Analysis of Structures			3	0	2	15	25	20	40	-	
7	STE515	Forensic Structural Engineering			3	0	2	15	25	20	40	-	
8	STE517	Analysis and Design of Bridges			3	1	0	25	-	25	50	-	
	Self-Study Course												
9	STE551	Seminar	SSC	2	-	-	-	-	40	--			60
10	STE553	MOOC/ SWAYAM*											
	Skill Enhancement Course 2/ Industrial Training												
11	STE541	Introduction to AI Techniques in Structural Engineering	SEC1	2	1	0	2	15	25	20	40	-	
	Audit Course (Non-Credit) **												
12	UEC501	English for Research Paper Writing	AC	0	2	0	2	25	-	25	50	-	
	UEC503	Disaster Management			2	0	2	25	-	25	50	-	
	UEC505	Sanskrit for Technical Knowledge			2	0	2	25	-	25	50	-	
	UEC507	Value Education			2	0	2	25	-	25	50	-	
	UEC509	Constitution of India			2	0	2	25	-	25	50	-	
	UEC511	Pedagogy Studies			2	0	2	25	-	25	50	-	
	UEC515	Personality Development through Life Enlightenment Skills			2	0	2	25	-	25	50	-	
	13	UEC513			Stress Management by Yoga		0	1	0	2	15	25	20
14	UCE517	Multi-Dimensional Poverty Indices for Developing Countries		0	2	0	0	25	-	25	50	-	
Total Credits				24									
SEMESTER II													
1	STE502	Finite Element Methods in Structural Engineering	DCC-5	4	3	1	0	25	-	25	50	-	
2	STE504	Advanced Theory of Structures	DCC-6	4	3	0	2	15	25	20	40	-	

3	STE520	Earthquake-Resistant Design of Structures	DEC-2		3	0	2	15	25	20	40	-
4	STE522	Soil Structure Interaction			3	1	0	25	-	25	50	-
5	STE524	Design of Hydraulic Structures			3	0	2	15	25	20	40	-
6	STE526	Cyclonic Risk and Hazard Assessment			3	1	0	25	-	25	50	-
7	STE530	Wind Engineering	DEC-3	4	3	0	2	15	25	20	40	-
8	STE532	Design of Advanced Steel Structures			3	1	0	25	-	25	50	-
9	STE534	Retrofitting of Structures			3	1	0	25	-	25	50	-
10	STE536	Disaster Management and Mitigation			3	0	2	15	25	20	40	-
11	UCC502	Research Methodology and IPR	UCC-1	4	3	1	0	25	-	25	50	-
12	STE540	Industrial Training	SEC-2	4	0	0	8	--	40	--	--	60
13	STE542	Computational Lab- Structures			0	0	8	-	50	-	-	50
14	STE544	Modeling & Simulation in Structural Engineering			2	0	4	15	25	20	40	-
Total Credits				24								
SEMESTER III												
1.	STE601	Design of Pre-Stressed Concrete	DCC-7	4	3	1	0	25	-	25	50	-
2.	OCE601	Economic and Social Resilience through Sustainable Infrastructure	OEC-1	4	3	1	0	25	-	25	50	-
3	STE603	Minor Project/ Research Thesis/ Patent	DCC-8	8	0	0	0	-	40	-	-	60
Total Credits				16								
SEMESTER IV												
1.	STE602	Major Project/ Research Thesis/ Patent	DCC-9	16	0	0	-	-	40	-	-	60
Total Credits				16								

#### CREDITS IN FOUR SEMESTERS

Total	Course Type	Core: DCC	Generic Electives (GEC): University/ Open Electives	Department Electives (DEC)	Self-Study	Skill Enhancement Courses (SEC)
80	Credits	52	8	12	2	6

