



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. GEOTECHNICAL ENGINEERING (GTE)

SEMESTER I					
Code	Type	Cr	L-T-P	Total Credits	Level
GTE501	Departmental Core-1	4	3-0-2	24	500-599*
GTE503	Departmental Core-2	4	3-0-2		
GTE505	Departmental Core-3	4	3-0-2		
GTE507	Departmental Core-4	4	3-0-2		
GTE511 GTE513 GTE515	Departmental Elective-1	4	3-0-2/ 3-0-2/ 3-0-2/		
	Self-study	2	-		
GTE551 GTE553	Seminar MOOC				
	Skill Enhancement Course				
GTE541	Skill Enhancement Course 1	2	1-1-0/1-0-2/ 2-0-0/0-0-4		
	Audit Course	0			
UEC501	English for Research Paper Writing		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
GTE502	Departmental Core-5	4	3-0-2	24	500-599*
GTE504	Departmental Core-6	4	3-1-0		
GTE520 GTE522 GTE524	Departmental Elective-2	4	3-0-2 3-0-2 3-0-2		
GTE530 GTE532 GTE534	Departmental Elective-3	4	3-1-0 3-1-0 3-1-0		
UCC502	Research Methodology and IPR	4	3-1-0		

	Skill Enhancement Course 2/ Industrial Training				
GTE540	Industrial Training	4	0-0-8		
GTE542	Skill Enhancement Course (A)		0-0-8		
GTE544	Skill Enhancement Course (B)		2-0-4		
NHEQF Level					6.5
SEMESTER III					
Code	Type	Cr	L-T-P	Total Credits	Level
GTE601	Departmental Core-7	4	3-1-0	16	600-699*
GTE605			3-1-0		
OCE601	Open Elective Course	4	3-1-0		
GTE603	Minor Project/ Research Thesis/ Patent	8	-		
SEMESTER IV					
Code	Type	Cr	L-T-P	Total Credits	Level
GTE602	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. GEOTECHNICAL ENGINEERING (GTE)
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 S	PRS/ STS/ CMS	M TE	ET E	PRE
SEMESTER I												
1	GTE501	Advanced Soil Mechanics	DCC-1	4	3	0	2	15	25	20	40	-
2	GTE503	Rock Mechanics	DCC-2	4	3	0	2	15	25	20	40	-
3	GTE505	Advanced Foundation Engineering	DCC-3	4	3	0	2	15	25	20	40	-
4	GTE507	Soil Dynamics and Machine Foundations	DCC-4	4	3	0	2	15	25	20	40	-
5	GTE511	Geo-environmental Engineering	DEC1	4	3	0	2	15	25	20	40	-
6	GTE513	Application of remote sensing and GIS in Geotechnical Engineering			3	0	2	15	25	20	40	-
7	GTE515	Tunnel Engineering			3	0	2	15	25	20	40	-
	Self-Study Course*											
8	GTE551	Seminar	SSC	2	-	-	-	-	40	--		60
9	GTE553	MOOC/ SWAYAM *										
	Skill Enhancement Course 2/ Industrial Training											
10	GTE541	Introduction to AI Techniques in Geotechnical Engineering	SEC1	2	1	0	2	15	25	20	40	-
	Audit Course (Non-Credit)**											
11	UEC501	English for Research Paper Writing	AC1	0	2	0	0	25	-	25	50	-
12	UEC503	Disaster Management		0	2	0	0	25	-	25	50	-
13	UEC505	Sanskrit for Technical Knowledge		0	2	0	0	25	-	25	50	-
14	UEC507	Value Education		0	2	0	0	25	-	25	50	-
15	UEC509	Constitution of India		0	2	0	0	25	-	25	50	-
16	UEC511	Pedagogy Studies		0	2	0	0	25	-	25	50	-
17	UEC513	Stress Management by Yoga		0	1	0	2	15	25	20	40	-
18	UEC515	Personality Development through Life Enlightenment		0	2	0	0	25	-	25	50	-

		Skills										
19	UCE517	Multi-Dimensional Poverty Indices for Developing Countries		0	2	0	0	25	-	25	50	-
Total Credits				24								
SEMESTER II												
1	GTE502	Geotechnical Exploration	DCC-5	4	3	0	2	15	25	20	40	-
2	GTE504	Soil Structure Interaction	DCC-6	4	3	1	0	25	-	25	50	-
3	GTE520	Theoretical Soil Mechanics	DEC-2	4	3	0	2	15	25	20	40	-
4	GTE522	Critical State Soil Mechanics			3	0	2	15	25	20	40	-
5	GTE524	Cost Management of Engineering Project			3	0	2	15	25	20	40	-
6	GTE530	Geotechnical Earthquake Engineering	DEC-3	4	3	1	0	25	-	25	50	-
7	GTE532	Stability Analysis of Slopes			3	1	0	25	-	25	50	-
8	GTE534	Pavement Analysis and Design			3	1	0	25	-	25	50	-
9	UCC502	Research Methodology and IPR	UCC-1	4	3	1	0	25	-	25	50	-
10	GTE540	Industrial Training	SEC-2	4	0	0	8	--	40	--	--	60
11	GTE542	Computational Lab-Geotechnical			0	0	8	-	50	-	-	50
12	GTE544	Modeling & Simulation in Geotechnical Engineering			2	0	4	15	25	20	40	-
Total Credits				24								
SEMESTER III												
1	GTE601	Earth Pressure & Earth Retaining Structures	DCC-7	4	3	1	0	25	-	25	50	-
2	GTE605	Ground Improvement Techniques			3	1	0	25	-	25	50	-
3	OCE601	Economic and Social Resilience through Sustainable Infrastructure	OEC-1	4	3	1	0	25	-	25	50	-
4	GTE603	Minor Project/ Research Thesis/ Patent	DCC-8	8	0	0	0	-	40	-	-	60
Total Credits				16								
SEMESTER IV												
1	GTE602	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