



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. HYDRAULICS AND WATER RESOURCES ENGINEERING (HWE)

SEMESTER I					
Code	Type	Cr	L-T-P	Total Credits	Level
HWE501	Departmental Core-1	4	3-0-2	24	500-599*
HWE503	Departmental Core-2	4	3-0-2		
HWE505	Departmental Core-3	4	3-0-2		
HWE507	Departmental Core-4	4	3-0-2		
Departmental Elective Course					
HWE511 HWE513	Departmental Elective-1	4	3-1-0/ 3-1-0/		
Self-Study Course*					
HWE551 HWE553	Seminar MOOC/ SWAYAM*	2	-- -		
Skill Enhancement Course 1					
HWE541	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
HWE502	Departmental Core-5	4	3-0-2	24	500-599*
HWE504	Departmental Core-6	4	3-0-2		
HWE520 HWE522	Departmental Elective-2	4	3-1-0 3-1-0		
HWE530 HWE532	Departmental Elective-3	4	3-1-0 3-1-0		
UCC502	Research Methodology and IPR	4	3-1-0		

Skill Enhancement Course 2/ Industrial Training					
HWE540	Industrial Training	4	0-0-8		
HWE542	Skill Enhancement Course (A)		0-0-8		
HWE544	Skill Enhancement Course (B)		2-0-4		
NHEQF Level					6.5
SEMESTER III					
Code	Type	Cr	L-T-P	Total Credits	Level
HWE601	Departmental Core-7	4	3-0-2	16	
OCE601	Open Elective Course	4	3-1-0		
HWE603	Minor Project/ Research Thesis/ Patent	8	-		
SEMESTER IV					
Code	Type	Cr	L-T-P	Total Credits	Level
HWE602	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 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. HYDRAULICS AND WATER RESOURCES ENGINEERING (HWE)

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	HWE501	Advanced Fluid Mechanics	DCC-1	4	3	0	2	15	25	20	40	-
2	HWE503	Advanced Hydrology	DCC-2	4	3	0	2	15	25	20	40	-
3	HWE505	Water Power Engineering	DCC-3	4	3	0	2	15	25	20	40	-
4	HWE507	Computational Hydraulics	DCC-4	4	3	0	2	15	25	20	40	-
5	HWE511	Sediment Transport	DEC-1	4	3	1	0	25	-	25	50	-
6	HWE513	Irrigation & Drainage Engineering			3	1	0	25	-	25	50	-
	Self-Study Course*											
7	HWE551	Seminar	SSC	2	-	-	-	-	40	--		60
8	HWE553	MOOC/ SWAYAM *										
	Skill Enhancement Course 1											
9	HWE541	Introduction to AI Techniques in Hydraulics Engineering	SEC1	2	1	0	2	15	25	20	40	-
	Audit Course (Non-Credit)**											
10	UEC501	English for Research Paper Writing	AC1	0	2	0	2	25	-	25	50	-
11	UEC503	Disaster Management		0	2	0	2	25	-	25	50	-
12	UEC505	Sanskrit for Technical Knowledge		0	2	0	2	25	-	25	50	-
13	UEC507	Value Education		0	2	0	2	25	-	25	50	-
14	UEC509	Constitution of India		0	2	0	2	25	-	25	50	-
15	UEC511	Pedagogy Studies		0	2	0	2	25	-	25	50	-
16	UEC513	Stress Management by Yoga		0	2	0	2	25	-	25	50	-
17	UEC515	Personality Development through Life Enlightenment Skills		0	2	0	2	25	-	25	50	-
18	UCE517	Multi-Dimensional Poverty Indices for Developing Countries		0	2	0	2	25	-	25	50	-
Total Credits				24								
SEMESTER II												
1	HWE502	Advanced Open Channel Hydraulics	DCC-5	4	3	0	2	15	25	20	40	-
2	HWE504	Design of Hydraulic Structures	DCC-6	4	3	0	2	15	25	20	40	-
3	HWE520	Groundwater Hydrology	DEC-2	4	3	1	0	25	-	25	50	-
4	HWE522	Design of Flood Control and River Training Works			3	1	0	25	-	25	50	-
5	HWE530	Hydro-informatics and Simulation	DEC-3	4	3	1	0	25	-	25	50	-

6	HWE532	Ground Improvement Techniques			3	1	0	25	-	25	50	-
7	UCC502	Research Methodology and IPR	UCC-1	4	3	1	0	25	-	25	50	-
	Skill Enhancement Course 2/ Industrial Training											
8	HWE540	Industrial Training	SEC-2	4	0	0	8	--	40	--	--	60
9	HWE542	Computational Lab-Hydraulics			0	0	8	-	50	-	-	50
10	HWE544	Modeling & Simulation in HWE			2	0	4	15	25	20	40	-
Total Credits				24								
SEMESTER III												
1.	HWE601	Water Resources Systems Planning and Management	DCC-7	4	3	0	2	15	25	20	40	-
2.	OCE601	Economic and Social Resilience through Sustainable Infrastructure	OEC-1	4	3	1	0	25	-	25	50	-
3	HWE603	Minor Project/ Research Thesis/ Patent	DCC-8	8	0	0	0	-	40	-	-	60
Total Credits				16								
SEMESTER IV												
1.	HWE602	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: University/ Open Electives	Department Electives (DEC)	Self-Study	Skill Enhancement Courses (SEC)
80	Credits	52	8	12	2	6