Program Code:

XXX M.Tech. (Surface Water Hydrology)/PG Diploma in Surface Water Hydrology

Department: Year: Department of Hydrology

Year: Model:

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		Teaching Scheme			Contact Hours/Week			Exan Duration	
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
_		Semester-I (Autumn)							
1.	HYC-501	Open Channel and Fluvial Hydraulics	PCC	3	2	0	2	3	0
2.	HYC-503	Stochastic Hydrology	PCC	3	2	1	0	.3	0
3.	HYC-505	Remote Sensing and GIS Applications	PCC	3	2	0	2	3	0
4.	HYC-507	Deterministic Hydrology	PCC	3	2	1	0	3	0
5.	HYC-509	Surface Water Quality Modelling	PCC	3	2	0	2	3	0
6.		Social Science Course	SSC	2	-	+		-	-
1000		Total		17					
		Semester-II (Spring)							
1.		Program Elective-I	PEC	3	100	3			*
2.		Program Elective-II	PEC	3	-51	-		150	+
3.		Program Elective-III	PEC	3	255	-		100	5
4.		Program Elective-IV	PEC	3	*		*		27
5.		Program Elective-V	PEC	3	-8.0	-	-	-	
6.		Science, Technology, and Advanced Research-tools	STAR	3	**		*	**	17
7.	HYC-700	Seminar	SEM	2	-	-	-		100
-		Total		20					

डींo सुमित सेन / Dr. Sumit Sen प्राच्यापक एवं विभागाच्या / Professor & Head जल विज्ञान विभाग / Department of Hydrology

Program Code:

XXX M.Tech. (Surface Water Hydrology)/PG Diploma in Surface Water Hydrology Department of Hydrology

Department:

Year:

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Model:

_		Teaching Scheme				Conta urs/W		Exam Duratio	
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
		Semester-I (Autu	mn)						
1.	HYC-691	Internship Social Activity	ISA	5	-	-		-	-
-	7.5.00000000000000000000000000000000000	Thesis Stage-I	THESIS	10		-		+	-
2.	HYC-701A	Total		15					
		Semester-II (Spr	ing)						
1.	HYC-701B	Thesis Stage-II	THESIS	14	-	-	-	-	-
l-	1110-7010	Total		14					

Sur	nmary			
Semester	1	2	3	4
Semester-wise Total Credits	17	20	15	14
Total Credits		6	6	

M.Tech. (Surface Water Hydrology)/PG Diploma in Surface Water Hydrology <u>Program Elective Courses</u>

		Teaching Scheme			0.00	Conta urs/W		A PACTE AND A STATE	
S.No.	Subject Code	Course Title	Subject	Credits	L	Т	P	Theory	Practical
1.	HYL-501	Water Resources Planning and Management	PEC	3	2	1	0	3	0
2.	HYL-502	Urban Hydrology	PEC	3	2	1	0	3	0
3.	HYL-503	Irrigation and Drainage Engineering	PEC	3	2	1	0	3	0
4.	HYL-504	Geophysical Investigations	PEC	3	2	0	2	3	0
5.	HYL-505	Surface Water Modelling and Simulation	PEC	3	2	0	2	3	0
6.	HYL-506	Soil and Groundwater Contamination Modelling	PEC	3	2	1	0	3	0
7.	HYL-507	Hydrometeorology and Climate Change	PEC	3	2	1	0	3	0
8.	HYL-508	Vadose Zone Hydrology	PEC	3	2	0	2	3	0
9.	HYL-509	Ecohydrology	PEC	3	2	1	0	3	0
10.	HYL-510	Membranes for Desalination and Purification	PEC	3	2	0	2	3	0
11.	HYL-511	Hydrological Data Collection and Processing	PEC	3	2	0	2	3	0
12.	HYL-512	Numerical Methods in Hydrology	PEC	3	2	1	0	3	.0
13.	HYL-513	Environmental Planning and Assessment of Projects	PEC	3	2	1	0	3	0
14.	HYL-514	Soil and Water Remediation	PEC	3	2	0	2	3	0
15.	HYL-515	Hydrogeochemistry	PEC	3	2	0	2	3	.0
16.	HYL-516	Soft Computing Techniques	PEC	3	2	0	2	3	0
17.	HYL-517	Multi-phase Flow through Porous Media	PEC	3	2	1	0	3	0
18.	HYL-518	Hydro-informatics	PEC	3	2	0.	2	3	0
19.	HYL-519	Watershed Modelling and Simulation	PEC	3	2	0	2	3	0
20.	HYL-520	Isotope Hydrology	PEC	3	2	-1	0	3	0



M.Tech. (Surface Water Hydrology)/PG Diploma in Surface Water Hydrology

Science, Technology, and Advanced Research-tools basket

	Teaching Scheme			Contact Hours/Week			n ion		
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
1.	HYT-501	Data Analysis and Numerical Modelling	STAR	3	2	1	0	3	0

Social Science Course Basket

	Teaching Scheme					Conta urs/W	Exam Duration		
S.No.	Subject Code	Course Title	Subject	Credits	L	Т	P	Theory	Practical
1.	HYS-501	Natural Resources, Society and Environment	SSC	2	2	0	0	2	0
2.	HYS-502	Rural Water Supply and Sanitation	SSC	2	2	0	0	2	0

Program Code:

XXX M.Tech. (Ground Water Hydrology)/P.G. Diploma in Ground Water Hydrology

Department:

Department of Hydrology

Year:

Model:

		Teaching Scheme			Contact Hours/Week			Exa Durat	
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
-		Semester-I (Autumn)							
1.	HYC-505	Remote Sensing and GIS Applications	PCC	3	2	0	2	3	0
2	HYC-511	Groundwater Hydrology	PCC	3	2	0	2	3	0
3.	HYC-513	Environmental Quality	PCC	3	2	0	2	3	0
4.	HYC-515	Hydrologic Elements and Analysis	PCC	3	2	I	0	3	0
5.	HYC-517	Systems Analysis and Applications in Hydrology	PCC	3	2	0	2	3	- 0
6.	HTC-ST	Social Science Course	SSC	2	-	-		-	
U.		Total		17					
-		Semester-II (Spring							
1.		Program Elective-I	PEC	-3	+	-	3.7	7.	
2.		Program Elective-II	PEC	3		+		-	1
3.		Program Elective-III	PEC	3	-	-	- 2	-	
4.		Program Elective-IV	PEC	3	-	-	14	-	1
5.	-	Program Elective-V	PEC	3	-	-	-4	-	1
6.		Science, Technology, and Advanced Research-tools	STAR	3	-		-	-	
7,	HYC-700	Seminar	SEM	2	-	- 4	-	-	-
10	1110-700	Total		20					



Program Code:

XXX M.Tech. (Ground Water Hydrology)/P.G. Diploma in Ground Water Hydrology Department of Hydrology

Department:

Year: Model:

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		Teaching Scheme				Conta ours/W		100000000000000000000000000000000000000	xam ration
S.No.	Subject Code	Course Title	Subject	Credits	L	Т	P	Theory	Practical
		Semester-I (Au	itumn)						
1.	HYC-691	Internship Social Activity	ISA	5	2	-	-	-21	-
2.	HYC-701A	Thesis Stage-I	THESIS	10	-	-	-		-
		Total		15					
		Semester-II (S	pring)						
1.	HYC-701B	Thesis Stage-II	THESIS	14	-	-	-	-	
		Total		14					

Sui	mmary			
Semester	1	2	3	4
Semester-wise Total Credits	17	20	15	14
Total Credits		6	6	

M.Tech. (Ground Water Hydrology)/P.G. Diploma in Ground Water Hydrology <u>Program Elective Courses</u>

		Teaching Scheme				ontac rs/W		Exan Durati	
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
	HYL-501	Water Resources Planning and Management	PEC	3	2	1	0	3	0
2.	HYL-502	Urban Hydrology	PEC	-3	2	1	0	3	.0
3.	HYL-503	Irrigation and Drainage Engineering	PEC	3	2	1	0	3	-0
4.	HYL-504	Geophysical Investigations	PEC	3	2	0	2	3	- 0
5.	HYL-505	Surface Water Modelling and Simulation	PEC	3	2	0	2	3	100
5.	HYL-506	Soil and Groundwater Contamination Modelling	PEC	3	2	-1	0	3	- (
7.	HYL-507	Hydrometeorology and Climate Change	PEC	3	2	1	0	3	(
8.	HYL-508	Vadose Zone Hydrology	PEC	3.	2	0	2	3	- (
9.	HYL-509	Ecohydrology	PEC	3	2	1	0	3	(
10.	HYL-510	Membranes for Desalination and Purification	PEC	3	2	0	2	3	
11.	HYL-511	Hydrological Data Collection and Processing	PEC	3	2	0	2	3	1
12.	HYL-512	Numerical Methods in Hydrology	PEC	3	2	1	0	3	-
13.	HYL-513	Environmental Planning and Assessment of Projects	PEC	3	2	1	0	3	1
14.	HYL-514	Soil and Water Remediation	PEC	3	2	0	2	3	1
15.	HYL-515	Hydrogeochemistry	PEC	3	2	0	2	3	- (
16.	HYL-516	Soft Computing Techniques	PEC	3	2	0	2	3	
17.	HYL-517	Multi-phase Flow through Porous Media	PEC	3	2	1	0	3	100
18.	HYL-518	Hydro-informatics	PEC	3	2	0	2	3	- 0
19.	HYL-519	Watershed Modelling and Simulation	PEC	3	2	0	2	3	
20.	HYL-520	Isotope Hydrology	PEC	3	2	1	0	3	1,74

M.Tech. (Ground Water Hydrology)/P.G. Diploma in Ground Water Hydrology

Science, Technology, and Advanced Research-tools basket

	Teaching Scheme				1000	Contact Hours/Week			n ion
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
1.	HYT-501	Data Analysis and Numerical Modelling	STAR	3	2	1	0	3	0

Social Science Course Basket

	Teaching Scheme				1000000	Conta urs/W	Exam Duration		
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
1.	HYS-501	Natural Resources, Society and Environment	SSC	2	2	0	0	2	0
2.	HYS-502	Rural Water Supply and Sanitation	SSC	2	2	0	0	2	0

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XXX M.Tech. (Watershed Management)/P.G. Diploma in Watershed Management

Department:

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	Teaching Scheme				Contact Hours/Week		Exar Durati		
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
		Semester-I (Autumn)							
1.	HYC-509	Surface Water Quality Modelling	PCC	3	2	0	2	3	-0
2.	HYC-511	Groundwater Hydrology	PCC	3	2	0	2	3	0
3.	HYC-515	Hydrologic Elements and Analysis	PCC	3	2	1	0	3	-0
4.	HYC-517	Systems Analysis and Applications in Hydrology	PCC	3	2	0	2	3	0
5.	HYC-521	Watershed Behaviour and Conservation Practices	PCC	3	2	1	0	3	0
6.		Social Science Course	SSC	2		-	*	+	
		Total		17					
		Semester-II (Spring)							
1.		Program Elective-I	PEC	3	+	-	+		- 9
2.		Program Elective-II	PEC	3		-	4.	+	
3.		Program Elective-III	PEC	3	120	-		+	-
4.		Program Elective-IV	PEC	3		-	2	-	-
5.		Program Elective-V	PEC	3			*		-
6.		Science, Technology, and Advanced Research-tools	STAR	3	1.00			-	*
7.	HYC-700	Seminar	SEM	2	*				1.7
		Total		20					

Program Code:

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Department:

Department of Hydrology

Year

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Model:

	Teaching Scheme				1777.73	Conta urs/W		Exam Duration		
S.No.	Subject Code	Course Title	Subject	Credits	L	Т	P	Theory	Practical	
		Semester-I (Au	tumn)							
1.	HYC-691	Internship Social Activity	ISA	5	-	*	- 10	+	+1	
2.	HYC-701A	Thesis Stage-I	THESIS	10	-		-	-	*	
	1110-10111	Total		15						
-	1	Semester-II (S	pring)							
1	HYC-701B	Thesis Stage-II	THESIS	14	12	2	-	-	-	
43)	11101010	Total		14						

Sui	nmary			
Semester	1	2	3	4
Semester-wise Total Credits	17	20	15	14
Total Credits		6	6	

M.Tech. (Watershed Management)/P.G. Diploma in Watershed Management <u>Program Elective Courses</u>

Teaching Scheme		Teaching Scheme					Exar Durat		
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
1.	HYL-501	Water Resources Planning and Management	PEC	3	2	1	0	3	0
2.	HYL-502	Urban Hydrology	PEC	3	2	1	0	3	0
3.	HYL-503	Irrigation and Drainage Engineering	PEC	3	2	1	0	3	0
4.	HYL-504	Geophysical Investigations	PEC	3	2	0	2	3	0
5.	HYL-505	Surface Water Modelling and Simulation	PEC	3	2	0	2	3	0
6.	HYL-506	Soil and Groundwater Contamination Modelling	PEC	3	2	1.	0	3	0
7.	HYL-507	Hydrometeorology and Climate Change	PEC	3	2	1	0	3	0
8.	HYL-508	Vadose Zone Hydrology	PEC	3	2	0	2	3.	0
9.	HYL-509	Ecohydrology	PEC	3	2	1	0	3	0
10.	HYL-510	Membranes for Desalination and Purification	PEC	3	2	0	2	3	()
11.	HYL-511	Hydrological Data Collection and Processing	PEC	3	2	0	2	3.	0
12.	HYL-512	Numerical Methods in Hydrology	PEC	3	2	1	0	3	-0
13.	HYL-513	Environmental Planning and Assessment of Projects	PEC	3	2	1	0	3	0
14.	HYL-514	Soil and Water Remediation	PEC	3	2	0	2	3	0
15.	HYL-515	Hydrogeochemistry	PEC	3	2	0	2	3	0
16.	HYL-516	Soft Computing Techniques	PEC	3	2	0	2	3	0
17.	HYL-517	Multi-phase Flow through Porous Media	PEC	3	2	1	0	3	0
18,	HYL-518	Hydro-informatics	PEC	3	2	0	2	3	0
19.	HYL-519	Watershed Modelling and Simulation	PEC	3	2	0	2	3	0
20.	HYL-520	Isotope Hydrology	PEC	3	2	1	0	3	0

M.Tech. (Watershed Management)/P.G. Diploma in Watershed Management

Science, Technology, and Advanced Research-tools basket

	Teaching Scheme		н	Conta ours/W	Exam Duration			
S.No.	Subject Code	Course Title	Subject Area Credits	L	т	P	Theory	Practical
1.	HYT-501	Data Analysis and Numerical Modelling	STAR 3	2	1	0	3	0

Social Science Course Basket

	Teaching Scheme			Contact Hours/Week			Exam Duration		
S.No.	Subject Code	Course Title	Subject	Credits	L	т	P	Theory	Practical
1.	HYS-501	Natural Resources, Society and Environment	SSC	2	2	0	0	2	0
2.	HYS-502	Rural Water Supply and Sanitation	SSC	2	2	0	0	2	0