

**DEPARTMENT OF CIVIL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code : **XXX M.Tech. (Geospatial Engineering)**
 Department : **Department of Civil Engineering**
 Year : **I**
 Model : **2**

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
Semester-I (Autumn)									
1.	CEC-511	Surveying Measurements and Adjustments	PCC	4	3	0	2	3	0
2.	CEC-513	Principles of Photogrammetry	PCC	4	3	0	2	3	0
3.	CEC-515	Principles of Remote Sensing	PCC	3	2	0	2	3	0
4.	CEC-517	Geodesy and GNSS Surveying	PCC	3	2	0	2	3	0
5.	CEC-519	Field Survey Camp*	PCC	2	0	0	4	0	0
6.		Social Science Course	SSC	2	-	-	-	-	-
		Total		18					
* 2 WEEKS CAMP									
Semester-II (Spring)									
1.		Program Elective-I	PEC	4	-	-	-	-	-
2.		Program Elective-II	PEC	4	-	-	-	-	-
3.		Program Elective-III	PEC	4	-	-	-	-	-
4.		Program Elective-IV	PEC	4	-	-	-	-	-
5.		Science, Technology, and Advanced Research-tools	STAR	3	-	-	-	-	-
6.	CEC-700	Seminar	SEM	2	-	-	-	-	-
		Total		21					

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Program Code : **XXX M.Tech. (Geospatial Engineering)**
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Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
Semester-I (Autumn)									
1.	CEC-691	Internship Social Activity	ISA	3	-	-	-	-	-
2.	CEC-701A	Thesis Stage-I	THESIS	10	-	-	-	-	-
		Total		13					
Semester-II (Spring)									
1.	CEC-701B	Thesis Stage-II	THESIS	14	-	-	-	-	-
		Total		14					

Summary				
Semester	1	2	3	4
Semester-wise Total Credits	18	21	13	14
Total Credits	66			

M.Tech. (Geospatial Engineering)

Program Elective Courses

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	CEL-611	Analytical and Digital Photogrammetry	PEC	4	3	0	2	3	0
2.	CEL-511	Digital Image Processing	PEC	4	3	0	2	3	0
3.	CEL-613	Thermal, Microwave and Hyperspectral Remote Sensing	PEC	4	3	0	2	3	0
4.	CEL-614	Theory and Applications of GIS	PEC	4	3	0	2	3	0
5.	CEL-616	Geoinformatics for Landuse Surveys	PEC	4	3	0	2	3	0
6.	CEL-617	Satellite Geodesy	PEC	4	3	0	2	3	0
7.	CEL-618	Modelling and Analysis of Geospatial Data	PEC	4	3	0	2	3	0

Note: Students should opt for PECs in such a way that they earn 03 credits from practical components in the entire programme.