CENTRE FOR SPACE SCIENCE AND TECHNOLOGY
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code : **XXX M.Tech. (Space Science and Technology)**
Department : **Centre for Space Science and Technology**
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.	SSC-501	Introduction to Space Sciences	PCC	4	3	0	2	3	0
2.	SSC-503	Experimental Techniques for Space Exploration	PCC	4	3	0	2	3	0
3.	SSC-505	Launch Vehicle Technology	PCC	4	3	1	0	3	0
4.	SSC-507	Satellite System Technology	PCC	4	3	0	2	3	0
5.		Social Science Course	SSC	2	-	-	-	-	-
		Total		**18**					
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.	SSC-700	Seminar	SEM	2	-	-	-	-	-
		Total		**21**					

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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.	SSC-691	Internship Social Activity	ISA	3	-	-	-	-	-
2.	SSC-701A	Thesis Stage-I	THESIS	10	-	-	-	-	-
		Total		**13**					
Semester-II (Spring)									
1.	SSC-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. (Space Science and Technology)

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.	SSL-501	Materials for Extreme Conditions	PEC	4	3	1	0	3	0
2.	SSL-502	Antennas for Space Applications	PEC	4	3	1	0	3	0
3.	SSL-503	Observing & Predicting Climate of Planets	PEC	4	3	1	0	3	0
4.	SSL-504	Orbital Mechanics	PEC	4	3	1	0	3	0
5.	SSL-505	Space Mission Design and Optimization	PEC	4	3	1	0	3	0
6.	SSL-506	Terrestrial Planets & Their Climate	PEC	4	3	1	0	3	0
7.	SSL-507	Astrochemistry	PEC	4	3	1	0	3	0
8.	SSL-508	Navigation, Guidance and Control of Launch Vehicles and Satellites	PEC	4	3	1	0	3	0
9.	SSL-509	Rocket Propulsion	PEC	4	3	1	0	3	0
10.	SSL-510	Space Economics and Policy	PEC	4	3	1	0	3	0
11.	SSL-511	Exploration of Planetary Interiors	PEC	4	3	1	0	3	0
12.	SSL-512	Statistics and Machine Learning for Space Studies	PEC	4	3	1	0	3	0
13.	SSL-513	Satellite Meteorology	PEC	4	3	1	0	3	0
14.	SSL-514	Astrobiology	PEC	4	3	1	0	3	0
15.	MTL-512	Engineering Ceramics	PEC	4	3	1	0	3	0
16.	ECL-631	RF Receiver Design	PEC	4	3	1	0	3	0
17.	ECL-550	Radar Signal Processing	PEC	4	3	1	0	3	0
18.	ESL-XXX	Planetary Science and Space Exploration	PEC	4	3	1	0	3	0
19.	PHL-514	Solar Terrestrial Physics	PEC	4	3	1	0	3	0

M.Tech. (Space Science and Technology)

Science, Technology, and Advanced Research-tools Basket

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	**Subject Code**	**Course Title**	**Subject Area**	**Credits**	**L**	**T**	**P**	**Theory**	**Practical**
1.	SST-501	Space Exploration and Applications	STAR	3	2	1	0	3	0