

Syllabus:

DIVISION OF MARKS

Total Marks : 1200
 SEM I Marks : 300
 SEM II Marks : 300
 SEM III Marks : 300
 SEM IV Marks : 300

Theoretical Marks : 650 (SEM I: 200, SEM II: 200, SEM III : 200, SEM IV:50)
 Practical Marks : 300(SEM I: 100, SEM II: 100, SEM III : 100)
 Dissertation : 200 marks (SEM IV)
 Grand Viva : 50 marks (SEM IV)

STRUCTURE OF THE SYLLABUS (SEM-I)

Type	Name of Paper	Paper /Module No.	Subject	Marks	Exam Time
THEORETICAL	SURVEYING CARTOGRAPHY AND DIGITAL MAPPING	I / M-I RG 1101	Surveying & Projections	20	2 hours
		I / M-II RG 1102	Cartography and digital mapping	20	
			Internal Assessment	10	
	PHOTOGRAMMETRY	II / M-I RG 1103	Photogrammetry – Introduction, Geometry of Aerial Photographs	20	2 hours
		II / M-II RG 1104	Stereo Photogrammetry, Analytical and Digital Photogrammetry	20	
			Internal Assessment	10	
	ATION OF REMOT E SENSIN	III / M-I RG 1105	Fundamentals & Physics of Remote Sensing, Platforms and Sensors	20	2 hours

		III / M-II RG 1106	Thermal, Hyper spectral Remote Sensing, Lidar, Microwave Remote Sensing, Data Processing, Applications	20		
			Internal Assessment	10		
		IV / M-I RG 1107	Basic Computing, Introduction to Programming, Programming languages	20	2 hours	
		IV / M-II RG 1108	Basics of C language, C with functions and pointers, User defined data structure, Visual Basic 6.0 language	20		
		Internal Assessment	10			
	PRACTICAL		I RG 1111	Surveying, Cartography and digital mapping	25	2 hours
			II RG 1112	Photogrammetry	25	2 hours
			III RG 1113	Basic applications of Remote Sensing (Based on Field Work)	25	2 hours
IV RG 1114			Computer Fundamentals & Programming	25	2 hours	

STRUCTURE OF THE SYLLABUS (SEM-II)

Type	Name of Paper	Paper /Module No.	Subject	Marks	Exam Time
THEORETICAL	DIGITAL IMAGE PROCESSING	V / M-I RG 1201	DIP – Introduction, Pre-processing, Enhancement	20	2 hours
		V / M-II RG 1202	Information Extraction, Image Processing System Considerations	20	
			Internal Assessment	10	

	GEOGRAPHIC INFORMATION SYSTEM	VI / M-I RG 1203	GIS – Fundamental Geographic Concept for GI science, Implementing Geographic concept in GI system and data structure, Spatial data input and editing	20	2 hours
		VI / M-II RG 1204	Data storage and exploration, Raster data analysis, Vector data analysis, Data integration and Management	20	
			Internal Assessment	10	
	GEODESY & GPS	VII / M-I RG 1205	Fundamentals Geodesy & Satellite Geodesy	20	2 hours
		VII / M-II RG 1206	Fundamentals of GPS Components of GPS, GPS surveying methods and accuracy Factors	20	
			Internal Assessment	10	
	STATISTICS	VIII / M-I RG 1207	Fundamental Statistical Concepts	20	2 hours
		VIII / M-II RG 1208	Spatial/Geo-statistics & Statistical applications in GIS.	20	
			Internal Assessment	10	
	PRACTICAL		V RG 1211	Digital Image Processing (DIP)	25
		VI RG 1212	Geographic Information system (GIS)	25	2 hours
		VII RG 1213	Geodesy, Global Positioning System and mobile mapping	25	2 hours
		VIII RG 1214	Geo-statistical Applications	25	2 hours

STRUCTURE OF THE SYLLABUS (SEM-III)

Ty pe	Name of Paper	Paper /Module No.	Subject	Marks	Exam Time
THEORETICAL	GEOINFORMATICS & SPATIAL DATABASE MANAGEMENT	IX / M-I RG 2101	Remote Sensing & GIS in Land and Water resource Management, Basic Hydrologic concepts, Land use planning.	25	2 hours
		IX/ M-II RG 2102	Introduction to Watershed Management, Use of Empirical Models, Case Studies.	15	
			Internal Assessment	10	
	WATERSHED MANAGEMENT	X/ M-I RG 2103	Application of Geo-informatics	20	2 hours
		X/ M-II RG 2104	Spatial decision support system	20	
			Internal Assessment	10	
	ELECTIVE PAPERS	XI / M-I RG 2105	<i>Elective Special paper</i>	40	2 hours
		XI / M-II RG2106	<i>Elective Special paper</i>		
			Internal Assessment	10	
	ELECTIVE PAPERS	XII / M-I RG2107	<i>Elective Special paper</i>	40	2 hours
		XII / M-II RG2108	<i>Elective Special paper</i>		
			Internal Assessment	10	
PRACTICAL		IX RG 2111	Remote Sensing & GIS in Watershed Management	25	2 hours
		X RG 2112	Geo-informatics & Spatial decision support system (Based on Field Work)	25	2 hours
		X I RG 2113	<i>Elective Special paper</i>	25	2 hours

		XII RG 2114	<i>Elective Special paper</i>	25	2 hours
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STRUCTURE OF THE SYLLABUS (SEM-IV)

Type	Name of Paper	Paper /Module No.	Subject	Marks	Exam Time
THEORETICAL	RESEARCH METHODOLOGY AND PROJECT MANAGEMENT	XIII / M-I RG 2201	Introduction to Research Methodology and Project Management	20	2 hours
		XIII/ M-II RG 2202	Project process, management and presentation	20	
			Internal Assessment	10	
		XIV RG 2211	DISSERTATION	200	
		XV RG 2212	GRAND VIVA	50	

• **The students have to select any two of following subjects, likely to be offered as elective special papers:**

1. Advanced Photogrammetry (only for those having Mathematics in Graduation)
2. Microwave, Thermal and Hyper spectral Remote Sensing (Maths in graduation desirable)
3. GEOINFORMATICS IN COASTAL MANAGEMENT
4. GEOINFORMATICS IN GEOSCIENCES
5. GEOINFORMATICS IN FOREST MANAGEMENT
6. GEOINFORMATICS IN DISASTER MANAGEMENT
7. GEOINFORMATICS IN AGRICULTURE
8. GEOINFORMATICS IN URBAN, RURAL DEVELOPMENT & REGIONAL PLANNING
9. GEOINFORMATICS IN ENVIRONMENTAL SCIENCE & MANAGEMENT
10. GEOINFORMATICS IN RESOURCE MANAGEMENT
11. GEOINFORMATICS IN TRANSPORT NETWORK ANALYSIS
12. GEOINFORMATICS IN UTILITY MANAGEMENT

Important Note:

- ❖ **Total intake capacity of the Department (SEM-I) every year is 40 candidates at present.**
- ❖ **The intake capacity of each special paper (SEM-III) will be decided by the Departmental Committee before commencement of SEM-III classes.**
- ❖ **First class 60 %, Second Class 50 %, No third class. Min marks for passing Theory 20, practical 10.**
- ❖ **Internal assessment will be based on class attendance and class performance.**
- ❖ **Field work is compulsory for Students of semester - I & III.**
- ❖ **Students will get maximum 3 months to complete his/her dissertation work in semester-IV.**
- ❖ **Students may have to carry out Dissertation works in an outstation institution at their own expenses.**
- ❖ **Grand viva will be based on the overall understanding of the subject.**