



Maulana Azad
NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal-462003
DEPARTMENT OF CIVIL ENGINEERING
M. Tech. in Civil Engineering
With Specialization in: Geoinformatics & It's Applications
SCHEME OF STUDY (Revised April 2020)

FIRST SEMESTER

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
MTH101GI	Advanced Mathematics	3	1	-	4
GI102	Basic Concepts of Mapping Cartography	3	1	-	4
GI103	Basics of Remote SensingTech	3	1	-	4
GI104	Geodesy and GNSS based Mapping	3	1	-	4
	Elective 1(A)	3	1	-	4
	Elective 2 (B)	3	1	-	4
GI105	Lab - 1	-	-	2	1
GI106	Seminar - 1	-	-	2	1
GI 107	Communication Skills NPTEL/MOOC/HUM DEPTT.	2	-	-	2
Total Hours 30		Total Credits			28
Total Credits (Cumulative) 28					

SECOND SEMESTER

Course No.	Proposed Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
GI201	Basic Concepts of GIS	3	1	-	4
GI202	Digital Processingof Remotely Sensed Data	3	1	-	4
GI203	BasicConceptsPhotogrammetry	3	1	-	4
	Elective - 3(A)	3	1	-	4
	Elective - 4(A)	3	1	-	4
	Elective - 5(C)	3	1	-	4
GI204	Lab - 2	-	-	2	1
GI205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
GI206	Seminar - 2	-	-	2	1
Total hours 30		Total Credits			28
Total Credits (Cumulative) 56					

THIRD SEMESTER

Course Number	Subject	Scheme of Studies Period per week			Credits
		L	T	P	
GI301	Dissertation Phase-1	-	-	24	12
Total hours 24					12
Total Credits (Cumulative) 68					Total Credits

FOURTH SEMESTER

Course Number	Subject	Scheme of Studies Period per week			Credits
		L	T	P	
GI401	Dissertation Phase-2	-	-	24	12
Total hours 24					12
Total Credits (Cumulative) 80					Total Credits

LIST OF ELECTIVES

Group – A Program Electives

- GI 501 Basic concepts and Applications of Microwave Remote Sensing
- GI 502 Remote Sensing and GIS applications in Earth Sciences and Geotechnical Engg.
- GI 503 Remote sensing and GIS for applications in agriculture & forestry
- GI 504 Air Borne Laser Terrain Mapping
- GI 505 Hyper spectral Remote Sensing
- GI 506 Remote sensing and GIS for Hydrology and Water Resources
- GI 507 Remote sensing and GIS applications in Environmental Engineering
- GI 508 Geoinformatics in urban development and planning
- GI 509 Remote sensing and GIS applications in Disaster Mitigation and Management
- GI 510 Change detection using remote sensing
- GI 511 Digital Photogrammetry
- GI 512 Advanced Soft Computing Techniques
- GI 513 Concepts of Database Systems
- GI 514 Geoinformatics Applications in Engineering Projects and Utility Management

Group – B Department Electives (for other programs of same department only)

- GI 601 Basics of Remote Sensing Technology
- GI 602 Geodesy and GNSS based Mapping
- GI 603 Remote sensing and GIS applications in Environmental Engineering
- GI 604 Basic Concepts of GIS
- GI 605 Digital Processing of Remotely Sensed Data
- GI 606 Geoinformatics Applications in Engineering Projects and Utility Management

Group – C Institute Electives (for other departments only)

- GI 701 Basics of Remote Sensing Technology
- GI 702 Geodesy and GNSS based Mapping
- GI 703 Basic Concepts of GIS
- GI 704 Digital Processing of Remotely Sensed Data
- GI 705 Basic concepts and Applications of Microwave Remote Sensing