

Maulana Azad National Institute of Technology, Bhopal – 462003
Civil Engineering Department

M Tech in Geoinformatics and its applications
SCHEME OF STUDY (wef July 2021)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
MTH 514	Advanced Mathematics	3	-	-	3
GI 511	Basic Concepts of Mapping Cartography	3	-	-	3
GI 512	Basics of Remote Sensing Technology	3	-	-	3
GI 513	Geodesy and GNSS based Mapping	3	-	-	3
HUM 511	Communication Skills	2	-	-	2
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
GI 514	Lab-1	-	-	2	1
GI 515	Seminar-1	-	-	2	1
Total Hours: 24 Total Credits: 22		Total Semester Credits			22

Second Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
GI 521	Basic Concepts of GIS	3	-	-	3
GI 522	Digital Processing of Remotely Sensed Data	3	-	-	3
GI 523	Basic Concepts Photogrammetry	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
MTH 524	Research Methodology	1	1	-	2
GI 525	Lab-2	-	-	2	1
GI 526	Seminar-2	-	-	2	1
Total hours: 24 Total Credits: 44		Total Semester Credits			22

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Third Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
GI 611	Dissertation Phase - I	-	-	32	16
Total hours: 32 Total Credits: 60		Total Semester Credits			16

Fourth Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
GI 621	Dissertation Phase - II	-	-	40	20
Total hours: 40 Total Credits: 80		Total Semester Credits			20

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List of Program Electives A		List of Open Electives C	
GI 551	Basic concepts and Applications of Microwave Remote Sensing	ARP - 581	Introduction to Urban Planning
GI 552	Remote Sensing and GIS applications in Earth Sciences and Geotechnical Engg.	HUM – 581	Intellectual Property Rights for Engineers
GI 553	Remote sensing and GIS for applications in agriculture & forestry	HUM – 582	Applied Psychology: Human Centered Design and Engineering
GI 554	Air Borne Laser Terrain Mapping	CHE – 581	Analytical Techniques
GI 555	Hyper spectral Remote Sensing	CHE – 582	Green Technology & Processes
GI 556	Remote sensing and GIS for Hydrology and Water Resources	CSE – 581	Machine Learning
GI 557	Remote sensing and GIS applications in Environmental Engineering	CSE – 582	Advanced Data Structures and Algorithms
GI 558	Geo informatics in urban development and planning	PHY – 581	Nanotechnology and Nanoscience
GI 559	Remote sensing and GIS applications in Disaster Mitigation and Management	EE – 581	Electric Machines & Applications
GI 560	Change detection using remote sensing	EE – 582	Control and Instrumentation
GI 561	Digital Photogrammetry	ECE – 581	Introduction to Fuzzy Logic
GI 562	Advanced Soft Computing Techniques	ECE – 582	Neural Networks and its Applications
GI 563	Concepts of Database Systems	EC - 581	Energy Resource Technologies
GI 564	Geo informatics Applications in Engineering Projects and Utility Management	BSE – 581	Bioprocess Engineering
	List of Departmental Electives B	BSE – 582	Biophysics Tools and Techniques
EN 512	Air and Noise Pollution	MTH – 581	Advanced Operations Research
EN 560	Global Warming and Climate Change	MTH – 582	Computing Technologies
GE 511	Advanced Geotechnical Engineering	ME – 581	Value Engineering
GE 512	Advanced Foundation Engineering	ME – 582	Design Thinking
GE 513	Soil Dynamics	ME - 583	Mechatronics and NDT in Engineering
GE 558	Earthquake Engineering	MME – 581	Advanced Instrumentation Methods for Material Analysis
HY 513	Hydro Power Potential Assessment	MME – 582	Smart Materials and their Application
HY 558	Design and Analysis of Piping Systems	MBA-581	Engineering Startup Management
ST 514	Advanced Design of Structures		
ST 559	Soft Computing		
TR 512	Traffic Engineering and Management		
TR 513	Transport Planning		
TR 552	Transport System Analysis		
WR 511	Computational Techniques in Water Resources		
WR 513	Irrigation Management for Sustainable Development		