Maulana Azad National Institute of Technology, Bhopal – 462003

Civil Engineering Department

M Tech in Geoinformatics and its applications

New SCHEME OF STUDY (w.e.f. July-2024)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
CE GI 1101	Mapping and Cartography	3	-	-	3
CE GI 1102	Remote Sensing Technology & its Applications	3	-	-	3
CE GI 1103	Geodesy and GNSS	3	-	-	3
	Department Elective-1	3	-	-	3
	Department Elective-2	3	-	-	3
CE GI 1104	Lab-I- Mapping and Cartography Lab	-	-	2	1
CE GI 1105	Lab-II- Geodesy and GNSS Lab			2	1
CE GI 1106	Seminar-I	-	-	2	1
CE GI 1107	Minor Project-1 (Self Learning)				2
HS PG	Communication Skill	3			-
Total Hours: 21 Total Credits: 20		Total Semester Credits			20

Second Semester:

Course No.	Subje ct	Scheme of studies periods per week			Total Credits
		L	T	P	
CE GI 1201	Geographic Information System (GIS) & its Applications	3	-	-	3
CE GI 1202	Digital Processing of Remotely Sensed Data	3	-	-	3
	Department Elective-3	3	-	-	3
	Department Elective-4	3	-	-	3
	Open Elective-5	3	-	-	3
CE GI 1203	Lab-III-Remote Sensing Lab	-	-	2	1
CE GI 1204	Lab-IV-GIS Lab			2	
CE GI 1205	Seminar-II	-	-	2	1
CE GI 1206	Minor Project-2 (Self Learning)				2
Total hours: 21 Total Credits: 40		Total Semester Credits			20

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Third Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
CE GI 2101	Dissertation Phase - I	-	-	40	20
Total hours: 40 **Total Credits: 60**		**Total Semester Credits**			**20**

Fourth Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
CE GI 2201	Dissertation Phase - II	-	-	40	20
Total hours: 40 **Total Credits: 80**		**Total Semester Credits**			**20**

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LIST OF ELECTIVES

Codes of Open Elective will be provided by respective department

List of Department Electives		List of Open Electives	
CE GI 1151/ CE GI 1251	Basic concepts and Applications of Microwave Remote Sensing		Introduction to Urban Planning
CE GI 1152/ CE GI 1252	Remote Sensing and GIS applications in Earth Sciences and Geotechnical Engg.		Intellectual Property Rights for Engineers
CE GI 1153 / CE GI 1253	Remote sensing and GIS for applications in agriculture & forestry		Applied Psychology: Human Centered Design and Engineering
CE GI 1154 / CE GI 1254	Air Borne Laser Terrain Mapping		Analytical Techniques
CE GI 1155 / CE GI 1255	Hyper spectral Remote Sensing		Green Technology & Processes
CE GI 1156 / CE GI 1256	Remote sensing and GIS for Hydrology and Water Resources		Machine Learning
CE GI 1157 / CE GI 1257	Remote sensing and GIS applications in Environmental Engineering		Advanced Data Structures and Algorithms
CE GI 1158 / CE GI 1258	Geo informatics in urban development and planning		Nanotechnology and Nanoscience
CE GI 1159 / CE GI 1259	Remote sensing and GIS applications in DisasterMitigation and Management		Electric Machines & Applications
CE GI 1160 / CE GI 1260	Change detection using remote sensing		Control and Instrumentation
CE GI 1161 / CE GI 1261	Digital Photogrammetry		Introduction to Fuzzy Logic
CE GI 1162 / CE GI 1262	Advanced Soft Computing Techniques		Neural Networks and its Applications
CE GI 1163 / CE GI 1264	Concepts of Database Systems		Energy Resource Technologies
CE GI 1165 / CE GI 1265	Geo informatics Applications in Engineering Projects and Utility Management		Bioprocess Engineering
CE GI 1174 / CE GI 1274	Computational Methods in Civil Engg.		Biophysics Tools and Techniques
CE GI 1175 / CE GE 1275	Research Methodology		Advanced Operations Research

	M Tech in Geoinformatics and its applications		Computing Technologies
			Value Engineering
			Design Thinking
			Mechatronics and NDT in Engineering
			Advanced Instrumentation Methods for Material Analysis
			Smart Materials and their Application
			Engineering Startup Management