Masters in Geospatial Technologies

COURSE OVERVIEW

The study programme consists of three semesters (90 ECTS): two semesters of courses (30 ECTS each) and the Master's thesis in the third semester (30 ECTS). Academic excellence is ensured by several complementary measures such as an innovative curriculum, extensive quality assurance on all levels, and a thorough selection procedure. The programme offers two different entry points (Figure 3 below) depending on the students' background: the first semester at either UJI or UNL provides basic modules in Geospatial Technologies but with different emphases: UJI is more focused on topics related to informatics (e.g., programming, databases, machine learning), whereas UNL emphasises data modelling and analysis (e.g., geospatial data mining, spatial statistics, spatial analysis and visualisation). This ensures a strong common foundation in Geospatial Technologies and facilitates working at a common high level in the second semester, which all students take at UM. The diagram in Figure 3 shows how modules across the three sites are connected.

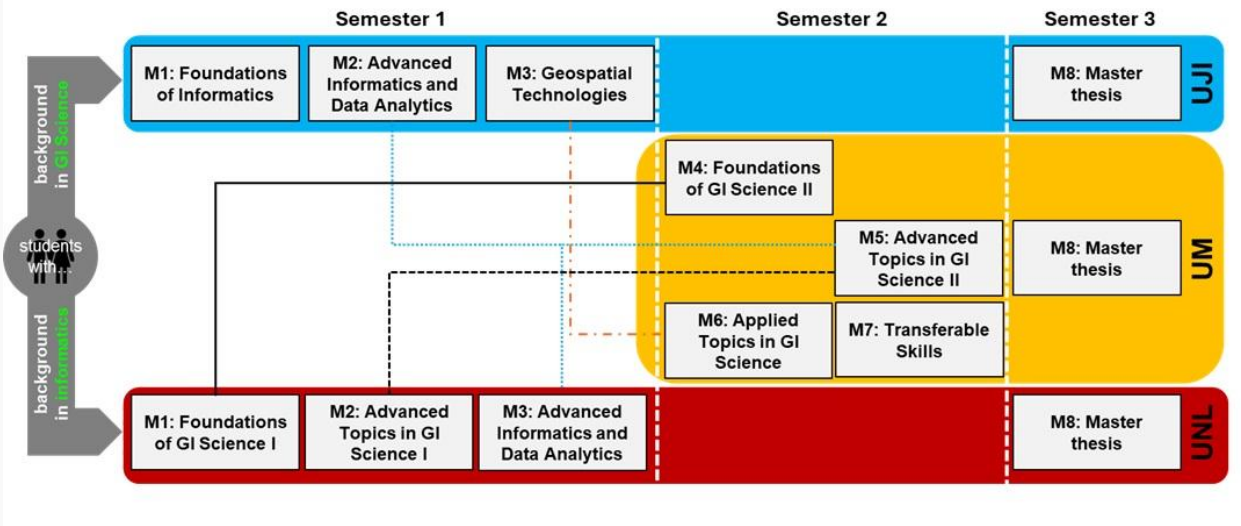


Figure 3: Programme Overview

semester 1 (UNL)	semester 1 (UJI)	semester 2 (UM)	semester 3 (UJI, UNL, UM)
M1: Foundations of Geographic Information Science I [5]	**M1: Foundations of Informatics [10]**	**M4: Foundations of Geographic Information Science II [4]**	**Master thesis [30]**
Geographic Information Science [5]	Programming [4]	Core Topics in Geographic Information Science [2]	Master thesis seminar [2]
	Databases and Data Management [3]	Geoinformatics Forum [1]	Master thesis with defence [28]
	Artificial Intelligence and Machine Learning [3]	Geoinformatics Forum Discussion Group [1]	
M2: Advanced Topics in Geographic Information Science I [15]	**M2: Advanced Informatics and Data Analytics [12]**	**M5: Advanced Topics in Geographic Information Science II [10]**	
Spatial Analysis and Visualization [5]	Data Science [4]	Spatial Data Science in R [5]	
Remote Sensing [5]	Development of Applications for Geographic Data Exploration and Visualization [5]	Location-based Services [5]	
Spatial Statistics [5]	Spatial Data Services, Sources, Standards and Infrastructures [3]	Spatial Cognition [5]	
Project in Geospatial Technologies [5]		Machine Learning for Visual Spatial-temporal Data [5]	
M3: Advanced Informatics and Data Analytics [10]	**M3: Geospatial Technologies [8]**	**M6: Applied Topics in Geographic Information Science [10]**	
Group Project Seminar on Programming and Analysis [5]	Geographic Information Systems: Desktop to Web [3]	From Data to Knowledge [5]	
Geospatial Datamining [5]	Geographic Information Systems Applications and Trends [2]	Applied topics (one course out of (a) Applied Geospatial Technologies, (b) Advanced Digital Cartography, (c) further electives) [5]	
	Earth Observation and Remote Sensing [3]		**Legend:** Credit points in square brackets [ECTS]
		M7: Transferable Skills [6]	Modules in blue
		Project Management / Geomundus Conference [3]	Compulsory courses in dark grey
		Research Methods in GI Science [3]	Electives in light grey

Figure 2: Detailed Curriculum Overview