

Cartography MSc (in English, full time, from 2025)

1. Professional core material

1.1 Basic in geography													
								Semester					
Subject Code	Subject	Lecture (L)	Practice (Pr)	Laboratory	Consultation	Form of assessment	Credit	Recommended Semester	Prerequisite	1st Semester	2nd Semester	3rd Semester	4th Semester
ELTE-OI-AI	Start wAltless - Introduction to the use of Artificial Intelligence in Higher Education						0	1		online course			
ITM-EGVL	Geovisualization	2	0	0	0	E	3	1		2+0+0+0			
ITM-EMDPL	Map design and production L	4	0	0	0	E	5	1	ITM-EMDPP (weak)	2+0+0+0			
ITM-EMDPP	Map design and production Pr	0	2	0	0	PG	2	1		0+2+0+0			
ITM-EMDC	Measurements and data collection	0	2	0	1	PG	3	2			0+2+0+1		
ITM-ESHA	Basics of soil science, hydrology, and agriculture	2	0	0	0	E	2	3				2+0+0+0	
ITM-EHC	History of Cartography	2	0	0	0	E	2	3				2+0+0+0	
ITM-E3DMP	3D modelling in geoinformatics	0	2	0	1	PG	3	3				0+2+0+1	

ITM-EDGS	Dedicated geospatial information systems	2	0	0	0	E	2	4					2+0+0+0
	1.1 Summa credit						22			10	3	7	2

1.2 Basic in technical, mathematics													
								Semester					
Subject Code	Subject	Lecture (L)	Practice (Pr)	Laboratory	Consultation	Form of assessment	Credit	Recommended Semester	Prerequisite	1st Semester	2nd Semester	3rd Semester	4th Semester
ITM-E25MP1L	Map projections 1 L	3	0	0	1	E	4	1	ITM-EMP1P (weak)	3+0+0+1			
ITM-EMP1P	Map projections 1 P	0	1	0	0	PG	2	1		0+1+0+0			
ITM-EMP2L	Map projections 2	2	0	0	1	E	3	2	ITM-E25MP1L		2+0+0+1		
ITM-E25PRSL	Photogrammetry and remote sensing L	2	0	0	1	E	3	2	ITM-E25PRSP (weak)		2+0+0+1		
ITM-E25PRSP	Photogrammetry and remote sensing P	0	2	0	1	PG	3	2			0+2+0+1		
ITM-ECTTC	Colour theory and typography in cartography	0	2	0	1	PG	3	3				0+2+0+1	
	1.2 Summa credit						18			6	9	3	0

2. Geoinformatics specialization

2.1 Module Cartography													
								Semester					
Subject Code	Subject	Lecture (L)	Practice (Pr)	Laboratory	Consultation	Form of assessment	Credit	Recommended Semester	Prerequisite	1st Semester	2nd Semester	3rd Semester	4th Semester
ITM-ESTL	Surveying and topography L	2	0	0	0	E	2	2	ITM-ESTG (weak)		2+0+0+0		
ITM-ESTG	Surveying and topography P	0	2	0	1	PG	3	2			0+2+0+1		
ITM-ETCL	Thematic cartography L	2	0	0	1	E	3	2	ITM-ETCG (weak)		2+0+0+1		
ITM-ETCG	Thematic cartography P	0	2	0	1	PG	3	2			0+2+0+1		
ITM-EVTQ	Vector-based GIS (QGIS)	0	2	0	1	PG	3	2			0+2+0+1		
ITM-ELRC	Basic knowledge on land registry and copyright law	1	0	0	0	E	1	3				1+0+0+0	
	2.1 Summa credit						15			0	14	1	0

2.2 Module Geoinformatics													
								Semester					
Subject Code	Subject	Lecture (L)	Practice (Pr)	Laboratory	Consultation	Form of assessment	Credit	Recommended Semester	Prerequisite	1st Semester	2nd Semester	3rd Semester	4th Semester
ITM-EGSAL	Geospatial algorithms L	2	0	0	1	E	3	1	ITM-EGSAP (weak)	2+0+0+1			
ITM-EGSAP	Geospatial algorithms P	0	2	0	1	PG	3	1		0+2+0+1			
ITM-EGIL	Geoinformatics	2	0	0	1	E	3	1		2+0+0+1			
ITM-EBP	Batch processing	0	2	0	0	PG	2	2			0+2+0+0		
ITM-S25SLWP	Scripting languages in webcartography	0	2	0	1	PG	3	2			0+2+0+1		
ITM-EPMG	Projectmanagement in geoinformatics	0	2	0	1	PG	3	3				0+2+0+1	
	2.2 Summa credit						17			9	5	3	0

2.3 Obligatory optional courses													
								Semester					
Subject Code	Subject	Lecture (L)	Practice (Pr)	Laboratory	Consultation	Form of assessment	Credit	Recommended Semester	Prerequisite	1st Semester	2nd Semester	3rd Semester	4th Semester
ITM-EDMS	Data mining and cloud-based solutions	0	2	0	1	PG	3	1		0+2+0+1			
ITM-EIQGS	Introduction to QGIS	0	2	0	1	PG	3	1		0+2+0+1			
ITM-EIAGS	Introduction to ArcGIS	0	2	0	1	PG	3	1		0+2+0+1			
ITM-E25SDBP	Spatial databases	0	2	0	1	PG	3	1		0+2+0+1			
ITM-EPTB	Printing technology and bookbinding	2	0	0	1	E	3	1,3		2+0+0+1		2+0+0+1	
ITM-EGBC	GIS-based cartography	0	2	0	1	G	3	2			0+2+0+1		
ITM-EDEDM	Digital editing of derived maps	0	2	0	1	G	3	2			0+2+0+1		
ITM-ETCG	Terminology of Cartography and GIS	0	2	0	1	G	3	3				0+2+0+1	
ITM-E25OSWP	Open-source WebGIS Programming	0	2	0	1	G	3	3				0+2+0+1	
ITM-EDA	Digitization and archiving	0	2	0	1	G	3	3				0+2+0+1	

ITM-ECAD	CAD-based cartography	0	2	0	1	G	3	4					0+2+0+1
ITM-EGISA	GIS software (ArcGIS)	0	2	0	1	G	3	4					0+2+0+1
ITM-SNSP	Navigation systems	0	2	0	1	G	3	4					0+2+0+1
ITM-ESPMB	Spatial process model building	0	2	0	1	G	3	4					0+2+0+1
	Professional core materials (1.1+1.2)						40	1-4		16	12	10	2
	Module Cartography+Geoinformatics (2.1+2.2)						32	1-3		9	19	4	0
	Obligatory optional courses (2.3)						15	1-4		4	3	4	4
ITM-E25ERASMUS	Erasmus mobility (max 15 kredit)						15	3				15	
	Optional courses						6					6	
ITM-EINT	Internship (3 weeks)						7				7		
ITM-EDTL	Degree thesis						15	4					15
ITM-EDTCP	Degree thesis consultation						5	4					5
	Summa credit in semester									29	41	24	26
	Summa credit						120						

PG: Practice Grade E: Exam Grade XPG: Lecture+Practice with Practical Grade XE: Lecture+Practice with Exam