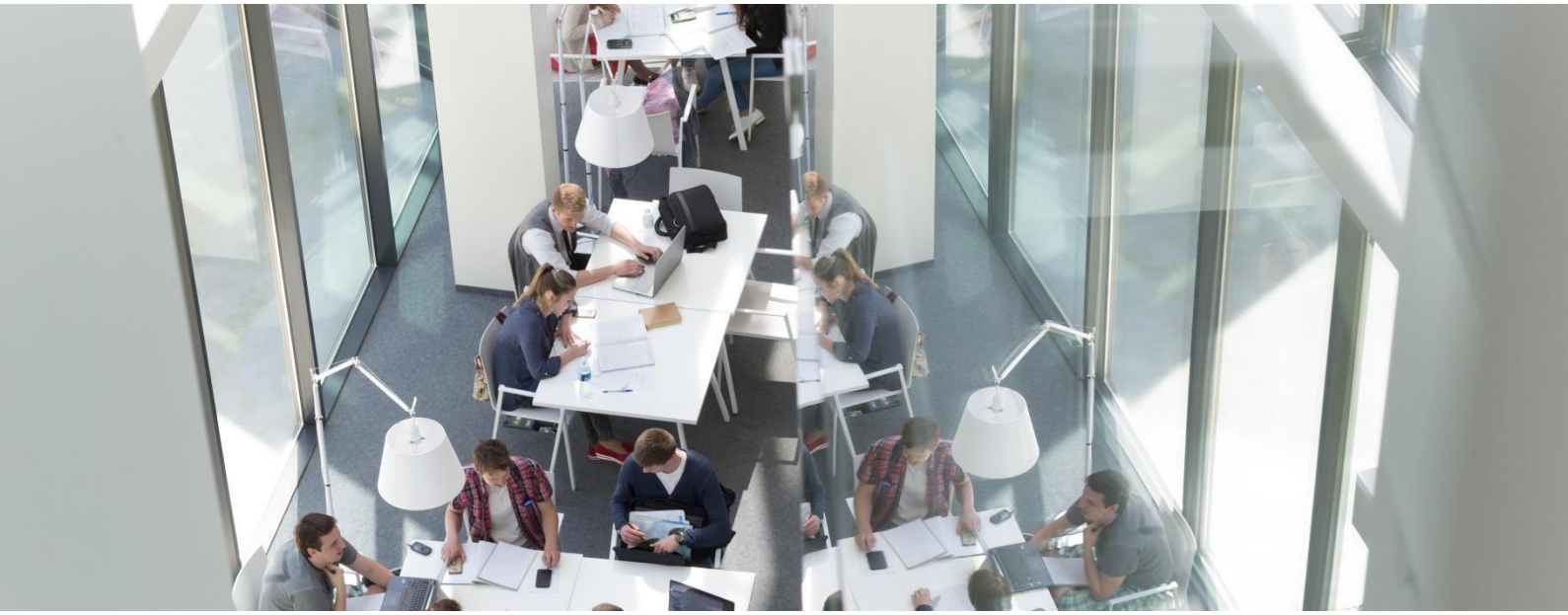

CARTOGRAPHY

Programme type	Master‘s studies (university)
Field of study	Geography
Study area	Physical Sciences
Degree	Master in Physical Sciences
Duration	2 years (4 semesters)
Workload	120 ECTS
Language of instruction	English
Location	Vilnius, Lithuania
Starting date	1st of September, 2020
Tuition fee	4234 EUR/year

PROGRAMME DESCRIPTION

- *The objective*

Prepare a broad range of mapping professionals capable of independently and consistently carry out natural and social phenomena and processes, research, analysis, and dissemination of spatial prognostic cartographic modelling required public aspirations practical implementation.

- *Career opportunities*

Graduates can work in cartographic and topographic public and private enterprises, in scientific and in education-municipal institutions.

- *Access to further studies*

Masters of cartography may continue their studies in doctoral studies (third stage) of the natural, social and nearby sciences branches (physical geography, measurement engineering, computer science, sociology) in Lithuanian and foreign universities.

KEY LEARNING OUTCOMES

1. Having completed cartography programme, a graduate has complex understanding between functions and interaction of nature and anthropogenic structures; principles of sustainable development; systematic and critical approach.
2. Understanding scalability and existence of geographic systems.
3. Recognise cartographic modelling in the interdisciplinary research.
4. Ability to formulate scientific and applied research objectives, shape content and possible results.
5. Strategic analyse and evaluate cartographic projects requirement and complication degree.
6. Formulate results of scientific research.
7. Perform quantitative and qualitative data analysis; formulate and present research results; analyse of scientific reference sources, juridical acts.
8. Use varied technologies for scientific research, information search, evaluation and recall.

COURSE INFORMATION

The programme has the following structure:

Course Type	1st Semester	2nd Semester	3rd Semester	4th Semester
Compulsory Courses	Database design (5 ECTS)	Cartographic information management (5 ECTS)	Mathematical cartography (5 ECTS)	Master seminar (5 ECTS)
	Application programming for spatial data systems (5 ECTS)	Base of cartographic communication (5 ECTS)	Map publishing technologies (5 ECTS)	Master thesis (25 ECTS)
	Methodology of scientific research (5 ECTS)	Scientific project (5 ECTS)	Methodology of thematic mapping (5 ECTS)	
	Topographical maps and plans (5 ECTS)	Earth remote sensing observation (5 ECTS)	Map browsers and web-services (5 ECTS)	
	GIS methodology and applications (10 ECTS)	GIS models and special maps (5 ECTS)	Professional practice (5 ECTS)	
		Cartology (5 ECTS)		
Elective Courses **(One of four things)**			Territorial areas and networks (5 ECTS)	
			Land planning and cadastre (5 ECTS)	
			Geography of Cultural Landscape (5 ECTS)	
			Biometeorology (ETCS)	

GRADUATION REQUIREMENTS

The student must be to pass all obligatory and embrace arbitrary exams, prepare scientific research project and prepared and defend individual master thesis. Scientific research project and master thesis is presented for public defence. The commission evaluates qualification of the student in accordance with the goals of the programme.

EXAMINATION AND ASSESSMENT REGULATIONS

- The main form of assessment is an examination. Every course unit is concluded with either a written examination. Student's knowledge and general performance during the examination are assessed by using the grading scale from 1 (very poor) to 10 (excellent);
- Scientific paper and master thesis evaluated for 10-point system, after summing up the scores and calculating the average;
- The final mark is average of evaluations by the commission members and if necessary, approved by the chair after discussion.

APPLICATION AND SELECTION REQUIREMENTS

- Bachelor's degree or its equivalent in Geography, Physical Geography, Geology, Environmental Sciences, Mathematic, Informatics, Informatics Engineering;
- English language proficiency - the level not lower than B2 (following the Common European Framework of Reference for Languages (CEFR).

Academic contact	Admission contact
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