VIDZEMES AUGSTSKOLA

FACULTY OF ENGINEERING
STUDY COURSE DESCRIPTION

Course Title:	**Geoinformation Systems**				
Course code (LAIS):					
Study programme:	**Information Technologies**				
Level of Study programme:	☐ 1st level professional higher education				
	☒ Professional Bachelor				
	☐ Professional Master				
	☐ Academic Master				
	☐ PhD level				
Type of Study programme:	☐ Compulsory course (Part A)				
	☒ Professional specialization courses (Part B, compulsory)				
	☐ Professional specialization optional courses (Part B, optional)				
	☐ Elective courses (Part C)				
Course Workload:	**Credits**	**ECTS**	**Academic hours**	**Contact hours**	**Independent work hours**
Full time	2	3	80	32	48
Course Author/ Tutor:	**Michal Kepka**				
	Academic, Ph.D.				
	e-mail: mkepka@kgm.zcu.cz				
	Consultation: according to the schedule for each semester				
Study Form:	Full time studies/ Part time studies				
Study year, semester:	3rd year; 6th semester				
Language:	English				
Prerequisites for the Course:					
Course Summary:					
Assessment:					
Requirements for Credits:					
Abiding by the Academic Ethics	Students must abide by the academic and research ethics, Vidzeme University of Applied Sciences Ethics Regulations, incl.: – study papers must be independently developed; – the study work should reference all statements, ideas and data used that have been authored by someone else; – appropriate data acquisition methods should be used in the acquisition of data, the research ethics must be respected, empirical data must be collected independently and cannot be distorted or falsified; – the examination must be carried out by the student independently, without the use of supporting materials and/or consultations with other students, unless the lecturer states otherwise. In the event of non-compliance with the academic and research ethics, punishment is imposed in accordance with the ViA Ethics Regulations and the study course must be re-taken, unless the punishment is extramarital.				
Learning Outcomes; the evaluation methods and criteria	**Learning Outcomes**	**The evaluation methods and criteria**			
	Knowledge				
	Define geographical information systems	Seminar project			
	Define concept of raster and vector data	Written exam			
	Define principles of spatial data processing				
	Define principles of spatial data visualization				
	Skills				
	Get spatial data from open repositories	Written exam			
	Process spatial data by GIS methods	Practical exam			
	Analyse spatial data by GIS algorithms	Seminar project			
	Visualize spatial data on the Web				
	Competency				
	Utilize of GIS methods to analyse data	Written exam			

	Visualize data with spatial dimension	Practical exam
	Extract added value from spatial data	Seminar project
Course Compulsory literature:		
Course additional literature:		
Course confirmation date:		
Date of course description update:		

Study Course Plan for Full Time Students:

Date	Theme	Academic hours		Study Form/ Organization of independent work of students and task description
		Contact hours	**Independent work hours**	
The date is specified before the implementation of the course				
1	Introduction of GIS	**5**	**6**	Lecture / individual study
2	Relationships between spatial data and attributes	5	7	Lecture / individual study
3	Processing and storing of geographic data.	5	7	Lecture / individual study
4	Analysis and synthesis of information.	5	7	Practicum / individual study
5	Accessible and open applications, web services, standards	5	7	Lecture / individual study
6	Introduction of Computer cartography	4	7	Practicum / individual study
7	Visualization of data on the Web	3	7	Practicum / individual study
	Hours total:	***32***	***48***	

Study Course Plan for Part Time Students:

Date	Theme	Academic hours		Study Form/ Organization of independent work of students and task description
		Contact hours	**Independent work hours**	
The date is specified before the implementation of the course				
1	Introduction of GIS	2	5	Lecture / individual study
2	Relationships between spatial data and attributes	2	5	Lecture / individual study
3	Processing and storing of geographic data.	1	10	Lecture / individual study
4	Analysis and synthesis of information.	1	10	Practicum / individual study
5	Accessible and open applications, web services, standards	1	10	Lecture / individual study
6	Introduction of Computer cartography	1	10	Practicum / individual study
7	Visualization of data on the Web	2	20	Practicum / individual study
	Hours total:	***10***	***70***	