



FACULTY OF ENGINEERING STUDY COURSE DESCRIPTION

Course Title:	GIS system integration				
Course code (LAIS):					
Study programme:	Information Technologies				
Level of Study programme:	<input type="checkbox"/> 1st level professional higher education				
	<input checked="" type="checkbox"/> Professional Bachelor				
	<input type="checkbox"/> Professional Master				
	<input type="checkbox"/> Academic Master				
	<input type="checkbox"/> PhD level				
Type of Study programme:	<input type="checkbox"/> Compulsory course (Part A)				
	<input checked="" type="checkbox"/> Professional specialization courses (Part B, compulsory)				
	<input type="checkbox"/> Professional specialization optional courses (Part B, optional)				
	<input type="checkbox"/> Elective courses (Part C)				
Course Workload:	Credits	ECTS	Academic hours	Contact hours	Independent work hours
Full time	2	3	80	32	48
Part time	2	3	80	10	70
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:	3 rd year; 6 th semester				
Language:	English				
Prerequisites for the Course:	General IT				
Course Summary:	The goal of the course is to present to students fundamentals of GIS, processing and analysis of spatial data, web technologies for GIS, web services for GIS, fundamentals of spatial data visualization and web cartography.				
Assessment:	Written and practical exam covering topics and theme from individual lectures.				
Requirements for Credits:	Obtain 60% of points from written and practical exam.				
Abiding by the Academic Ethics	Students must abide by the academic and research ethics, Vidzeme University of Applied Sciences Ethics Regulations, incl.:				
	<ul style="list-style-type: none"> – 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. <p>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.</p>				
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	
<i>The date is specified before the implementation of the course</i>				
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	
<i>The date is specified before the implementation of the course</i>				
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	1	10	Lecture / individual study



	services, standards			
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	