

Study program		Study cycle Orientation	First study cycle Regional and Spatial Planning		
SUBJECT					
Subject name		Geoinformatics			
Subject code	Semester	Subject status	ECTS credits	Contact hours	
GIS-202-2	III	Mandatory	5	125	
Prerequisites					
Assigned professors and assistants	Subject leader	Dr. Sc. Nusret Drešković, Full Professor			
	Teaching Assistants	MA Amina Sivac, Senior Teaching Assistant			
Subject objectives	<p>The main objectives of the subject are:</p> <ul style="list-style-type: none"> - Exploring and acquiring knowledge of students about the collection, preparation and geoinformation modeling of geographic data; - Exploring and acquiring knowledge of students about geoinformation system, its structure and components; - Exploring and acquiring knowledge of students about the hardware of a computer system; - Exploring and acquiring knowledge of students about the characteristics and functions of the system and application software; - Learning and acquiring knowledge of students about geodatabase, their structure, organization, and their application in modeling; - Understanding and gaining knowledge of students about the organization geoinformation graphical data and concepts of their application in modeling; - Exploring and acquiring knowledge of students about the spatial models geoinformation management facilities for tourism and environmental protection; - Exploring and acquiring knowledge of students about the most famous digital models of the Earth and its different regions and their potential application in regional and spatial planning 				
SUBJECT CONTENT					
#	Teaching units	Contact hours			
		L	P	S	C
1.	Geoinformatics – term, definition, objectives, tasks and object of study. Geoinformatically data - concept, types, collection and organization.	2	2		
2.	Computer system and its components. History of development of computers. Types of computers. The architecture of a computer system.	2	2		
3.	Computer system architecture. Hardware - concept, structure and functioning of the computer. BIOS system.	2	2	1	1
4.	Hardware Components. Internal hardware components. The output-input devices. Optional external devices.	2	2	1	1
5.	System software. Operating system - concept, structure and implementation.	2	2	1	1
6.	OS MS-DOS - the main functions of the user interface. Windows OS - main functions and user interface. LINUX OS. Mac OS.	2	2	2	1
7.	First test	1			
8.	Application software - term, definition and importance. Division of application software. MS Office. Corel Draw.	2	2	2	1
9.	Geoinformatically software - term, definition and importance. Types of Geoinformatics software. GIS - basic concepts, definitions and classification.	2	2		
10.	Geoinformatic organization geodatabases and their structure. Basic models of operation with geodatabases.	2	2	2	1
11.	Graphic Geoinformatics data - term, definition and importance. Types of graphical GIS data. Sources graphical GIS data. Raster graphics data - term, types and sources of raster data.	3	4	2	1
12.	Vector graphics data - term, definition and importance. Structure and types of vector data. Sources vector data.	3	4	2	1
13.	Basic modules of geoinformatics software. Preparing geographic data for geoinformatic processing.	2	2	1	1
14.	Geoprocessing. Geovisualizations. Thematic data sets	2	2	1	1
15.	The world's computer networks. Internet sources of GIS data. The best-known Internet applications of digital models of the earth and continents.	1	1		

STUDENT WORKLOAD (HOURS)

Contact Hours (L+P)	60	Practical work	10	Seminars	15	Exam study time	15
Literature – reading	15	Written papers		Other (state)	10	TOTAL	125

LITERATURE	EVALUATION OF KNOWLEDGE AND CRITERIA			
<p>BASIC LITERATURE:</p> <p>1. Đug S., Drešković, N., Odžak, S. (2015): Daljinska istraživanja – principi i primjena u prirodnim naukama. University textbook.. University of Sarajevo. Sarajevo.</p> <p>2. Burrough, P.A., McDonnel, R.A. (2006): Principles of Geographical Information Systems – 2nd Edition.Oxford University Press.</p> <p>3. Kvarternik, R.(1988): Uvod u operativne sisteme. Informator. Zagreb,.</p> <p>8. Rožić, N. (1996): Geoinformatika III. Manuscript. Zagreb.</p> <p>ADDITIONAL LITERATURE:</p> <p>1. Kurtović – Numić,S. (2002): Informatika, Fojnica</p> <p>2. A Guide to Computer Systems (2015)</p> <p>3. OS Windows Guide (2015)</p> <p>4. Microsoft Office Guide (2015)</p> <p>5. Corel Draw Guide (2015)</p> <p>6. ESRI Guide (2015)</p>	PARAMETERS	Maximum Points	Minimum points	
	1.	Attendance	5	3
	2.	Participation on lectures	5	3
	3.	First test	40	22
	4.	Seminar	10	6
	6.	Final exam	40	21
	Total		100	55