

	UNIVERSITY OF BANJA LUKA				
	Bachelor academic studies Geodesy				
Course title	Cartography 1				
Acronym	Status	Semester	Number of lectures	Number of tutorials/practical	ESPB
K1	mandatory	3	2	2	5
Lecturer	prof. dr Gordana Jakovljević				
Prerequisites			Type of prerequisites		
None			None		
Aim of the course					
To enable students to acquire the necessary theoretical and practical knowledge in general and thematic cartography, including knowledge of methods for modeling geographic content on topographic, overview-topographic, general geographic, and thematic maps, as well as methods of cartographic generalization and cartographic data sources required for the design, compilation, creation, and updating of topographic and other maps.					
Learning outcomes					
Acquiring fundamental knowledge of cartography, the development of cartography, objects of representation, cartographic visualization, cartographic design, cartographic generalization, maps and map-related representations, thematic cartography and its classification, the design and cartographic processing of thematic maps, as well as the possibilities of applying the QGIS software package in the production of thematic maps of the administrative regions of the Republic of Srpska.					
Course content					
LECTURES: Cartography-research area, classification and methodes. Cartography and its relationships with other sciences. Geographic elements of a map, the importance of classification, and modeling. Mathematical elements of a map. Means of cartographic representation. GIS, geospatial data models. Standards. Cartographic data, open geospatial data infrastructure and data quality assessment. Mathematical foundations of a map. Cartographic generalization (tasks, types of cartographic generalization, factors influencing the degree of generalization). Representation and generalization of geographic elements. Generalization of map extent and content. Topographic cartography. Thematic cartography. Thematic cartography and green transformation. Cartography, GIS, and the Internet. EXERCISES: Georeferencing of a scanned map. Generation of a digital terrain model. Representation of landforms using contour lines (isohypses). Representation of landforms using the hypsometric method. Representation of landforms using a combined method. Generalization of landform representation. Generalization of hydrography. Generalization of settlements. Generalization of transportation networks and vegetation. Data collection and creation of a thematic map. Data collection and creation of a thematic map using QGIS.					
Teaching methods					
Teaching is conducted through lectures and computer-based exercises. During the course, students will be trained to work in the QGIS software, after which they are required to prepare a report (elaborate) of the graphic exercises. Knowledge assessment is carried out through two midterm tests.					
Literature					
Гомзяков А.В.: Общая картография, Санкт-Петербург, 2015.; Ромашова, А. Л., Николаева, Н.О.: Основы тематической картографии, Новосибирск СГГА, 2013; Берлянт, М.А.: Кратография, Аспект Пресс, Москва, 2002; Љешевић, М., Живковић, Д.: Картографија, Географски факултет Универзитета у Београду, 2001;					
Methods of knowledge assessment and grading					
Activity		Pre-exam obligations		Exam	
5		15+25+25		30	
Note					

Students are required to attend classes and two theoretical midterm tests. The midterms may be retaken once. Students are also required to complete the Elaborate in a timely manner, in accordance with the assessment plan, and the report must be completed and approved before the semester. Final exams are held during official examination periods, in accordance with regulations. A student who is unjustifiably absent from more than 20% of classes must re-enroll in the course in order to gain the right to take the exam.

Modernization of course through the activities of the ERASMUS project SKILL2SUSTAIN.

Name of lecturer that prepared syllabus
prof. dr Gordana Jakovljević