



UNIVERSITY OF SARAJEVO – FACULTY OF SCIENCE
SUBJECT DESCRIPTION

Form SP2

Page 1 of 5

Subject code: <i>GIS-301.5-2</i>	Subject name: <i>Practicum in GIS</i>		
Study cycle: <i>I</i>	Year: <i>III</i>	Semester: <i>V</i>	ECTS credits: <i>3</i>
Status: <i>Optional</i>		Contact hours: <i>45</i> <i>Lectures: 30</i> <i>Exercises: 15</i>	
Assigned professors and assistants:	<i>Teachers and associates who are selected for the teaching area to which the subject belongs</i>		
Prerequisites:	/		
Subject objectives:	<p><i>The main Subject objectives are:</i></p> <ul style="list-style-type: none"> <i>– Exploring and acquiring knowledge of students about the content and structure of a digital atlas of Bosnia and Herzegovina;</i> <i>– Exploring and acquiring knowledge of students about editing existing and creating new thematic spatial data sets from a digital atlas of Bosnia and Herzegovina;</i> <i>– Exploring and acquiring knowledge of students about the possibilities of using different analog and digital data sources to improve the content of a digital atlas of Bosnia and Herzegovina;</i> <i>– Exploring and acquiring knowledge of students about the possibilities of using thematic sets of digital database of digital atlas of Bosnia and Herzegovina in the development of regional and spatial planning at different levels of planning.</i> 		
Teaching units:	<ol style="list-style-type: none"> <i>1. Digital thematic data sets - concept, definition and importance. The methodological concept of the organization and the types of digital thematic sets. The importance of digital thematic datasets for regional and spatial planning.</i> <i>2. Digital Atlas of Bosnia and Herzegovina - concept, origin and development. The methodological concept of the organization and structure of a digital atlas of Bosnia and Herzegovina. The importance and use of digital atlas of Bosnia and Herzegovina in regional and spatial planning.</i> <i>3. The methodological concept of the organization and structure of geology and geomorphology geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i> <i>4. The methodological concept of the organization and structure of climatic and hydrological geodatabase of Bosnia and Herzegovina. Practical individual work of students on</i> 		



	<p><i>entering and editing data.</i></p> <p>5. <i>The methodological concept of the organization and structure of the pedology-biogeographic geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>6. <i>The methodological concept of the organization and structure of the geodatabase of natural, cultural and historical heritage of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>7. <i>The methodological concept of the organization and structure of the demographic geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>8. <i>The methodological concept of the organization and structure of the geodatabase of populated areas of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>9. <i>The methodological concept of the organization and structure traffic-geographical geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>10. <i>The methodological concept of the organization and structure of economy-geographical geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>11. <i>The methodological concept of the organization and structure of the geo- ecological geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>12. <i>The methodological concept of the organization and structure of turismology geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>13. <i>The methodological concept of the organization and structure of regional-geographical geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>14. <i>The methodological concept of the organization and structure of historical-geographical geodatabase of Bosnia and Herzegovina. Practical individual work of students on entering and editing data.</i></p> <p>15. <i>Synthesis of practical individual student work on entering and editing data</i></p>
Learning outcomes:	Knowledge:



- *The student states and explains the possibilities of using different analog and digital data sources to improve the content of the digital atlas of Bosnia and Herzegovina;*
- *The student classifies and actively participates in the allocation and redesigning various analog and digital data;*

Skills:

- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the geological-geomorphological geobase of Bosnia and Herzegovina;*
- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the climatic-hydrological geobase of Bosnia and Herzegovina. Student enters, sorts, organizes, edits and graphically presents the methodological concept of organization and structure of the pedological-biogeographic geobase of Bosnia and Herzegovina;*
- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the geobase of data on the natural and cultural-historical heritage of Bosnia and Herzegovina.*
- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the demographic geographic database of Bosnia and Herzegovina. The student enters, sorts, organizes, edits and graphically presents the methodological concept of organization and structure of the geobase of settlements in Bosnia and Herzegovina;*
- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the traffic geographic database of Bosnia and Herzegovina;*
- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the economic-geographical geobase of Bosnia and Herzegovina;*
- *The student enters, classifies, organizes, edits and graphically presents the methodological concept of organization and structure of the geo-ecological geo-database of Bosnia and Herzegovina.*
- *The student enters, sorts, organizes, edits and graphically presents the methodological concept of organization and structure of the tourism geological database of Bosnia and*



	<p><i>Herzegovina;</i></p> <ul style="list-style-type: none"> - <i>The student enters, sorts, organizes, edits and graphically presents the methodological concept of organization and structure of the regional geographical and historical-geographical geobase of Bosnia and Herzegovina.</i> <p>Competencies:</p> <ul style="list-style-type: none"> - <i>The student evaluates, evaluates, combines and ranks sets digital databases from the digital atlas of Bosnia and Herzegovina;</i> - <i>The student presents the possibilities of using thematic sets of digital databases from the digital atlas of Bosnia and Herzegovina in the development of regional and spatial plans of different levels of planning.</i> 																																									
Teaching methods:	<ul style="list-style-type: none"> - <i>Multimedia presentation and conversation (lecture);</i> - <i>Research independent work of students;</i> - <i>Joint analysis and practical work of students in relevant application software (exercises).</i> 																																									
Knowledge testing methods with grading structure¹:	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right; width: 20%;">Points</th> </tr> </thead> <tbody> <tr> <td><i>Attendance</i></td> <td style="text-align: right;"><i>5</i></td> </tr> <tr> <td><i>Participation on lectures</i></td> <td style="text-align: right;"><i>10</i></td> </tr> <tr> <td><i>Tests</i></td> <td style="text-align: right;"><i>85</i></td> </tr> <tr> <td><i>Seminar paper</i></td> <td></td> </tr> <tr> <td><i>Final exam</i></td> <td></td> </tr> <tr> <td style="border-top: 1px solid black;"><i>TOTAL</i></td> <td style="text-align: right; border-top: 1px solid black;"><i>100</i></td> </tr> </tbody> </table> <p>Assessment:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"><i>Grade</i></th> <th style="width: 45%;"><i>ECTS grade</i></th> <th style="width: 40%;"><i>Points scale</i></th> </tr> </thead> <tbody> <tr> <td><i>10</i></td> <td><i>(A) excellent</i></td> <td style="text-align: right;"><i>95 - 100</i></td> </tr> <tr> <td><i>9</i></td> <td><i>(B) very good</i></td> <td style="text-align: right;"><i>85 - 94</i></td> </tr> <tr> <td><i>8</i></td> <td><i>(C) good</i></td> <td style="text-align: right;"><i>75 - 84</i></td> </tr> <tr> <td><i>7</i></td> <td></td> <td></td> </tr> <tr> <td></td> <td><i>(D) satisfactory</i></td> <td style="text-align: right;"><i>66 - 74</i></td> </tr> <tr> <td><i>6</i></td> <td><i>(E) sufficient</i></td> <td style="text-align: right;"><i>55 - 64</i></td> </tr> <tr> <td><i>5</i></td> <td><i>(F, FX) insufficient</i></td> <td></td> </tr> <tr> <td><i>55</i></td> <td></td> <td></td> </tr> </tbody> </table>		Points	<i>Attendance</i>	<i>5</i>	<i>Participation on lectures</i>	<i>10</i>	<i>Tests</i>	<i>85</i>	<i>Seminar paper</i>		<i>Final exam</i>		<i>TOTAL</i>	<i>100</i>	<i>Grade</i>	<i>ECTS grade</i>	<i>Points scale</i>	<i>10</i>	<i>(A) excellent</i>	<i>95 - 100</i>	<i>9</i>	<i>(B) very good</i>	<i>85 - 94</i>	<i>8</i>	<i>(C) good</i>	<i>75 - 84</i>	<i>7</i>				<i>(D) satisfactory</i>	<i>66 - 74</i>	<i>6</i>	<i>(E) sufficient</i>	<i>55 - 64</i>	<i>5</i>	<i>(F, FX) insufficient</i>		<i>55</i>		
	Points																																									
<i>Attendance</i>	<i>5</i>																																									
<i>Participation on lectures</i>	<i>10</i>																																									
<i>Tests</i>	<i>85</i>																																									
<i>Seminar paper</i>																																										
<i>Final exam</i>																																										
<i>TOTAL</i>	<i>100</i>																																									
<i>Grade</i>	<i>ECTS grade</i>	<i>Points scale</i>																																								
<i>10</i>	<i>(A) excellent</i>	<i>95 - 100</i>																																								
<i>9</i>	<i>(B) very good</i>	<i>85 - 94</i>																																								
<i>8</i>	<i>(C) good</i>	<i>75 - 84</i>																																								
<i>7</i>																																										
	<i>(D) satisfactory</i>	<i>66 - 74</i>																																								
<i>6</i>	<i>(E) sufficient</i>	<i>55 - 64</i>																																								
<i>5</i>	<i>(F, FX) insufficient</i>																																									
<i>55</i>																																										
Literature²:	Mandatory:																																									

¹ The structure of points and point criteria for each subject is determined by the Council of the organizational unit before the beginning of the academic year in which the subject is taught in accordance with Article 64, paragraph 6 of the Law on Higher Education of Sarajevo Canton

² The Senate of the higher education institution as an institution or a council of the organizational unit of the higher education institution as a public institution determines mandatory and recommended textbooks and manuals, as well as other recommended literature on the basis of which exams are prepared by a special act which is required to be published on its website before the beginning of the academic year in accordance with Article 56, paragraph 3 of the Law on Higher Education of



- Đug S., Drešković, N., Odžak, S. (2015): *Daljinska istraživanja - principi i primjena u prirodnim naukama. Univerzitetski udžbenik. Univerzitet u Sarajevu. Sarajevo*
- Heywod, I., Cornelius, S. And Carver, S.(1998): *An Introducion to Geographical Informatio Systems. Pearson Education Inc. New York.*
- Walford, N. (1995): *Geographical Data Analysis. School of Geography, Kingston University UK,.*

Recommended:

- Malone, L., Palmer A.M., i Voigt, C.L. (2003): *Mapping Our World, GIS Lessons for Educators. ESRI Press, Redlands, California, USA.*
- *Getting to Know Arc View GIS. Geoinformation. International. Environmental System Research Institute. New York, 1997.*