Subject code: *GE-516-3*	**Subject name: Quantitative methods of geoecological research**		
Study cycle: *II*	**Year:** *I*	**Semester:** *I*	**ECTS credits:** *2*
Status: *optional*		**Contact hours: 30** *Lectures: 15* *Exercises: 15*	

Assigned professors and assistants:	
Prerequisites:	/
Subject objectives:	*Acquiring knowledge about the concept of geoecological methodology research.* *Acquiring knowledge about the valorization of physical geography elements in applied geoecological research.*
Teaching units:	*1. Introductory remarks* *2. Development of geoecology and scientific study of landscapes* *3. Landscape as a geoecological spatial unit* *4. Geoecological research and its application* *5. Methodology of physical-geographic valorization elements in geoecological research* *6. Methods of the lithosphere valorization* *7. Test* *8. Methods of relief valorization* *9. Methods of pedosphere valorization* *10. Methods of atmosphere valorization* *11. Methods of hydrosphere valorization* *12. Methods of biosphere valorization* *13. Carrying capacity of the environment* *14. The role and importance of the geographic information system in geoecological research* *15. The role and importance of field work in geoecology researches*
Learning outcomes:	**Knowledge:** • *student understands and explains the concept of geoecological research;* **Skills:**

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- *student analyzes the carrying capacity of the certain area's natural environment;*

Competencies:

- *student independently valorizes physical-geographical elements of the environment for the purpose of geoecological research;*

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<tr><td>Teaching methods:</td><td>Multimedia presentation and discussion (lectures); practical work, educational material analysis and discussion (exercises).</td></tr>
<tr><td>Knowledge testing methods with grading structure[1]:</td><td>

		Points
Attendance	*5*	*3*
Participation on lectures	*5*	*3*
Tests	*30*	*16*
Seminar paper	*20*	*11*
Final exam	*40*	*22*
TOTAL	*100*	*55*

Assessment:

Grade	*ECTS grade*	*Points scale*
10	*(A) excellent*	*95 - 100*
9	*(B) very good*	*85 - 94*
8	*(C) good*	*75 - 84*
7	*(D) satisfactory*	*66 - 74*
6	*(E) sufficient*	*55 - 64*
5	*(F, FX) insufficient*	*55*

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<tr><td>Literature[2]:</td><td>

Mandatory:

- *Farina, A., 1998: Principles and Methods in Landscape Ecology. London: Chapman & Hall.*
- *Moss, M., 2000a: Interdisciplinarity, landscape ecology, and the transformation of agricultural landscapes. Landscape Ecology 15, 303-311*
- *Buzjak, N., 2008: Geoekološko vrednovanje speleoloških pojava Žumberačke gore. Hrvatski geografski glasnik, 70/2, 73-89.*

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[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 the Sarajevo Canton.

- *Lješević M., 1983: Kvantitativne metode valorizacije prirodne sredine, Zaštita prirode 36, 93-109, Beograd.*
- *Ružička, M., 2005: The relationship between carrying capacity and ecological stability of the landscape, Acta Environmentalica Universitatis Comenianae 4-5, 55-60*

Recommended:

- *Botequilha-Leitão, A., Ahern, J., 2002: Applying landscape ecological concepts and metrics in sustainable landscape planning, Landscape and Urban Planning 59, 65-93.*
- *Coccossis, H.; Mexa A. (2004.), The Challenge of Tourism Carrying Capacity Assessment: Theory and Practice, Ashgate, Farnham.*
- *Lepirica, A., 2006: Geoekološke značajke doline gornjeg toka Une od Martin Broda do Pritoke, Hrvatski geografski glasnik 68 (2), 31-55.*
- *Malczewski, J., 2004: GIS-based land-use suitability analysis: a critical overview, Progress in Planning 62, 3-65*
- *Tandarić, N., Ćosić, M., Buzjak, N., Bočić, N., Dubovečak, V., Lacković, I., Zastavniković, I., Tomić, D., 2018: Fizičkogeografska analiza i geoekološko vrednovanje potencijalno zaštićenog područja - primjer doline Kupčine. Hrvatski geografski glasnik, 80, 1, 27-59.*