Subject code: FG-204.12-2	**Subject name:** Applied hydrography		
Study cycle: I	**Year:** II	**Semester:** III	**ECTS credits:** 2
Status: Optional		**Contact hours:** 30 Lectures: 15 Exercises: 15	

Assigned professors and assistants:	Teachers and associates selected in the field to which the subject belongs
Prerequisits:	/
Subject objectives:	To introduce students to the issues of water resources management, as the growing pressures on the natural environment, including water, are the key issue of sustainable development. Through the introduction of Integrated Water Resources Management and the concept of sustainable use of water to gain knowledge about the daily water requirements, consumption and stocks of water. The acquired knowledge from the hydrography of mainland used to give the area. Execute data processing related to elements of the river regime and water bilance. Categories of river regime placed in relation of physical geographic conditions a given geographical area.
Teaching units:	1. Hydrography - definition, subject and tasks. 2. Applied hydrography in the system of geographic sciences. 3. The importance of water for the environment and a man. 4. Fundamentals of Integrated Water Resources Management. 5. Sustainable use of water. 6. Legal issues in water management. 7. First test. 8. Physical-geographic terms of surface and groundwater. 9. Hydrometric – concept, tasks and hydrometric monitoring. 10. The indicators of water quality. 11. Measuring water levels. Measuring of river flow. 12. Determination of runoff and runoff elements. 13. The ratio of water level and water flow. The ratio of river flow and sediment. 14. Hypsometrical zoning of water in the basin. 15. Analysis of student seminar papers.
Learning outcomes:	**Knowledge:** • the student is critically aware of the issue of water resources management; • the student acquires knowledge of Integrated Water

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<tr><td></td><td>Resources Management and the concept of sustainable water use, as well as knowledge of water needs, consumption and water supplies.
Skills:
• the student independently performs tasks related to hydrometry;
• the student independently performs tasks related to the analysis of the elements of the river regime, the calculation of the water balance, as well as the zoning of waters in the basin for the purpose of proper management of water resources;
• the student assesses the relationship between physical and geographical factors in the basin, as well as their impact on the water balance;
Competencies:
• the student independently interprets hydrological concepts, water properties and characteristics of inland waters;
• the student independently determines and causally perceives the water balance in an area and connects it to the proper management of water resources.</td></tr>
<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>
<table>
<tr><th></th><th>Maximum Points</th><th>Minimum points</th></tr>
<tr><td>Attendance</td><td>5</td><td>3</td></tr>
<tr><td>Participation on lectures</td><td>5</td><td>3</td></tr>
<tr><td>Tests</td><td>40</td><td>22</td></tr>
<tr><td>Seminar paper (Practicum)</td><td>10</td><td>6</td></tr>
<tr><td>Final exam</td><td>40</td><td>21</td></tr>
<tr><td>TOTAL</td><td>100</td><td>55</td></tr>
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Assessment:
<table>
<tr><th>Grade</th><th>ECTS grade</th><th>Points scale</th></tr>
<tr><td>10</td><td>(A) excellent</td><td>95 - 100</td></tr>
<tr><td>9</td><td>(B) very good</td><td>85 - 94</td></tr>
<tr><td>8</td><td>(C) good</td><td>75 - 84</td></tr>
<tr><td>7</td><td>(D) satisfactory</td><td>66 - 74</td></tr>
<tr><td>6</td><td>(E) sufficient</td><td>55 - 64</td></tr>
<tr><td>5</td><td>(F, FX) insufficient</td><td>55</td></tr>
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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

Literature[2]:	**Mandatory:** 1. Spahić, M. (2013): Hidrologija kopna, Sarajevo publishing, Sarajevo 2. Vučijak, B. i sar. (2011): Voda za život: Osnove integralnog upravljanja vodnim resursima, UNDP, Sarajevo **Recommended:** 1. Korjenić, A., Temimović, E. (2016): Praktikum iz Hidrografije kopna I, Prirodno-matematički fakultet u Sarajevu, Sarajevo. 2. Hrelja, H. (2007): Inženjerska hidrologija, Građevinski fakultet Univerziteta u Sarajevu, Sarajevo 3. Spahić M at all. (2015):Potamološki monitoring na rijekama Bosne i Hercegovine u funkciji upravljanja i prostornog planiranja, Acta geographica Bosniae et Herzegovinae, 3, pp. 31-40

[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.