



UNIVERSITY OF SARAJEVO – FACULTY OF SCIENCE  
SUBJECT DESCRIPTION

Form SP2

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|                                            |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |
|--------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Subject code:</b><br>FG-111-1           |                | <b>Subject name: GEOLOGY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |
| <b>Ciklus: I</b>                           | <b>Year: I</b> | <b>Semester: I</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>ECTS credits: 6</b> |
| <b>Status:</b> mandatory                   |                | <b>Contact hours: 60</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |
|                                            |                | Lectures: 30<br>Practical courses: 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |
| <b>Assigned professors and assistants:</b> |                | Teachers and associates selected in the field to which the subject belongs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |
| <b>Prerequisites:</b>                      |                | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |
| <b>Subject objectives:</b>                 |                | Training students to independently interpret the changes that occur on the surface of the Earth and its interior, to independently interpret the geological structure of individual areas and the basic structures of the Earth's crust (layers, wrinkles, faults and covers). Based on this knowledge, they can discern certain changes that have occurred in the environment, due to the activity of various factors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |
| <b>Teaching units:</b>                     |                | 1.Introduction to Geology<br>2.The origin, structure and composition of the Earth<br>3. Minerals and rocks<br>4.Stratigraphic units and geological time scale<br>5. Stages in the Earth's evolution and changes<br>6. Geological maps, geological columns and geological profiles<br>7.Egzodynamic<br>8.First test<br>9.Water in all three states and its activity<br>10.Aeolian activity, glaciers, facies<br>11. Endodynamics (plutonism, volcanism, metamorphism and earthquakes)<br>12. Basics of tectonics (epyrogenic movements, transgression, regression and orogenic movements. The layer and its elements in the study of tectonics<br>13. The main tectonic stages in the history of the Earth's development. Geotectonic theories (plate tectonics theory and geosyncline theory)<br>14. Tangential disturbances and folds in the Earth's crust.<br>15.Cracks, faults and nappes |                        |



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|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------|---------------------|----|---------------|----------|---|---------------|---------|---|----------|---------|---|------------------|---------|
| <b>Learning outcomes:</b>                                             | <p><b>Knowledge:</b> The student will be able to explain the origin of the Earth, describe the structure and composition of the Earth, explain the changes that occurred on the surface of the Earth and its interior, the student will know how to recognize and interpret the content of the geological map, the student present and interpret lithological rock markings on maps, interpret the plate tectonics and geosynclinal theory and interpret and present the geochronological division.</p> <p><b>Skills:</b> The student will be able to process and demonstrate the basic structures of the Earth's crust (layers, wrinkles, faults and covers) on geological maps and mark the basic structures of the Earth's crust on graphic attachments.</p> <p><b>Competencies:</b> The student will be able to present and explain geological maps, legends, pillars and profiles, independently interpret the geological structure of the area and prepare graphic attachments.</p> |                     |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |
| <b>Teaching methods:</b>                                              | The lectures are theoretical and practical based on graphic attachment production and processing the basic structures of the Earth's crust (layers, wrinkles, faults and covers) and geochronological units on geological maps of various scales and purposes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |
| <b>Knowledge testing methods with grading structure <sup>1</sup>:</b> | <p><b>Knowledge assessment - criteria:</b><br/>Lecture and exercise attendance: maximum 5 - minimum 3 points<br/>activity in class: maximum 5 - minimum 3 points<br/>seminar paper: maximum 10 - minimum 5 points<br/>test: maximum 40 - minimum 22 points<br/>final exam: maximum 40 - minimum 22 points</p> <p>Total 100 points, passing requirement: 55 points minimum.</p> <p><b>Assessment:</b></p> <table><tr><td><i>Grade</i></td><td><i>ECTS grade</i></td><td><i>Points scale</i></td></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></table>                                                                                                                                                                                                                                          | <i>Grade</i>        | <i>ECTS grade</i> | <i>Points scale</i> | 10 | (A) excellent | 95 – 100 | 9 | (B) very good | 85 – 94 | 8 | (C) good | 75 - 84 | 7 | (D) satisfactory | 66 – 74 |
| <i>Grade</i>                                                          | <i>ECTS grade</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <i>Points scale</i> |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |
| 10                                                                    | (A) excellent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 95 – 100            |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |
| 9                                                                     | (B) very good                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 85 – 94             |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |
| 8                                                                     | (C) good                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 75 - 84             |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |
| 7                                                                     | (D) satisfactory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 66 – 74             |                   |                     |    |               |          |   |               |         |   |          |         |   |                  |         |

<sup>1</sup> 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



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|                                | 6 (E) sufficient 55 – 64                                                                                                                                                                                                                                                                                                                                                          |
|                                | 5 (F, FX) insufficient < 55                                                                                                                                                                                                                                                                                                                                                       |
| <b>Literature<sup>2</sup>:</b> | <p>MANDATORY:</p> <p>Operta, M. (2013): Opća geologija, Udžbenik Prirodno-matematičkog fakulteta Sarajevo.</p> <p>Herak, M. (1990): Geologija, Školska knjiga Zagreb.</p> <p>RECOMMENDED:</p> <p>Plummer, Ch.C., McGeary, D., Carlson, D.H. (2001): Physical Geology, Mgraw-Hill, New York</p> <p>Carla W.Montgomery. (1997): Environmental Geology, United States of America</p> |

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<sup>2</sup> The Senate of the higher education institution as an institution or the 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 decision which must 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