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| <b>Study Program: GEOGRAPHY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                        |                      |
| <b>Type and level of studies: Bachelor studies</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                        |                      |
| <b>Course name: MATEMATICAL GEOGRAPHY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                        |                      |
| <b>Lecturer: Dragan Radovanović</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                        |                      |
| <b>Status: Compulsory subject</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                        |                      |
| <b>ECTS: 6</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                        |                      |
| <b>Attendance prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                        |                      |
| <b>Course aims</b><br>Acquiring knowledge about the Universe, the Solar system, celestial bodies, the Earth as a celestial body, the Moon, time zones.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                        |                      |
| <b>Course outcome</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                        |                      |
| <b>Course content</b><br><i>Theoretical part</i><br>Celestial sphere: elements, constellations, coordinate systems, Earth as a celestial body: position of the Earth in space (stars - galaxies - cosmos), solar system (planets, satellites, asteroids, comets, meteoroids), Earth's shape and size, Orientation on the Earth's surface (geographic coordinate system), Earth's orbit, Celestial sphere, Earth's movements (evidence, geographical consequences), Light-heat belts, Moon-Earth relationship, Measurement of time intervals: gnomonics, Determination of geographical coordinates in school conditions, Solar geometry, Astronomy - astrology.<br><i>Practical part</i><br>Celestial sky and celestial coordinate system, Rotating map of the starry sky, Planet Earth, Geographic coordinate system, Determining the shortest orbit on the globe, Determining the simplest orbit on the globe, Evidence for Earth's rotation, Evidence for the Earth revolution, School sun measurement methods and geographical coordinates, Phases of the Moon, Sundial construction, Determining sunrises and sunsets and the length of day, Astronomy - astrology, Astronomical software. |               |                        |                      |
| <b>Literature</b><br>Манојловић, П.(1995): <i>Математичка географија</i> , Географски факултет, Београд<br>Тадић, М. (2004): <i>Математичка географија</i> , Завод за уџбенике и наставна средства, Београд<br>Тадић, М. (2004): <i>Астрономија – поглед у звездано небо</i> , Завод за уџбенике и наставна средства, Београд<br>Тадић, М. (2005): <i>Птолемејевска географија – античка математичка географија</i> , Завод за уџбенике и наставна средства, Београд                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                        |                      |
| Number of active classes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               | Theoretical classes: 3 | Practical classes: 2 |
| <b>Teaching methods</b> Lectures, exercises, consultations, term test(s), term paper(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                        |                      |
| <b>Assessment (maximum 100 points)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                        |                      |
| <b>Course assignments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>points</b> | <b>Final exam</b>      | <b>Points</b>        |
| activity during lectures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>10</b>     | written exam           |                      |
| practical classes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>10</b>     | oral exam              | <b>50</b>            |
| term test(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>20</b>     | .....                  |                      |
| term paper(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>10</b>     |                        |                      |
| Knowledge assessment: written and oral exam, presenting projects, term papers, workbooks, fieldwork, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                        |                      |