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| <b>Study programmes:</b> PhD studies - Astronomy and Astrophysics  |                    |                     |               |
| <b>Course name:</b> Satellite Astro Geodesy  |                    |                     |               |
| <b>Lecturers:</b> Stevo Šegan  |                    |                     |               |
| <b>Status:</b> Optional  |                    |                     |               |
| <b>ECTS:</b> 9   |                    |                     |               |
| <b>Attendance prerequisites:</b> None  |                    |                     |               |
| <b>Course aims:</b> Obtaining advanced and specific knowledge in the field of satellite astro geodesy  |                    |                     |               |
| <b>Course outcome:</b> After completing the course, student has advanced knowledge in the field of satellite astro geodesy (i.e. Instrumental systems, types of satellites, altimetry, potential surfaces and models) and is capable to do independant scientific research in these subjects.  |                    |                     |               |
| <b>Course content:</b> Types of satellites; classification; Instruments and equipment; observational systems; Doppler; Lasers; Laser distance determination; LLR, SLR, SSR, Radio-telescopes; Interferometry; Special cameras and telescopes; Positioning; Translocation; Relative positioning; Radar altimetry; Potential surfaces and models; Geodetic systems; NAVSTAR, GPS, GLONASS; Alternative systems.<br>Supplement: Elementary astrodynamics; dissipative forces; gravimetry. |                    |                     |               |
| <b>Literature:</b>   |                    |                     |               |
| 1. K Seidelman et al., Explanatory supplement of astronomical almanac, 1992  |                    |                     |               |
| 2. S. Šegan, Astronomske efemeride, 2006. V. Kaula, Satellite geodesy, 1966  |                    |                     |               |
| 3. H. Moritz, Advanced Physical Geodesy, 1980.   |                    |                     |               |
| 4. W. Kaula, Theory of Satellite Geodesy, 2006   |                    |                     |               |
| <b>Number of hours: 10</b>   | <b>Lectures: 4</b> | <b>Tutorials: 6</b> |               |
| <b>Teaching and learning methods:</b>  |                    |                     |               |
| Frontal, group, practical work   |                    |                     |               |
| <b>Assessment (maximal 100 points)</b>   |                    |                     |               |
| <b>Course assignments</b>  | <b>points</b>      | <b>Final exam</b>   | <b>points</b> |
| Lectures   | 20                 | Written exam        | 0             |
| Exercises / Tutorials  | 30                 | Oral exam           | 20            |
| Colloquia  |                    | Written-oral exam   |               |
| Essay / Project  | 30                 |                     |               |