

Study programmes: PhD studies – Astronomy and Astrophysics				
Course name: The rotation of the Earth				
Lecturer: Nadežda Pejović, Goran Damjanović				
Status: Optional				
ECTS: 9				
Attendance prerequisites: None				
Course aims: Obtaining advanced and specific knowledge of the rotation of our planet, Earth and its complicated motions.				
Course outcome: After completing the course, student has advanced knowledge in the field of Earth motions and rotation and is capable to do independent scientific research, and to make computer simulations.				
Course content. Precession, nutation of Earth axe and movement of Earths poles. Dynamics: fundamental principles. Love numbers and associated coefficients. The secular Love numbers. Observations of latitude: history, methods. Observations of the longitude. Seasonal and other short-period variations. Tides. Distributions of air and water. Winds and currents. Chandler Wobble. The concept of an instantaneous Chandler period. The Love number k. Tidal dissipation: evidence, problem. Earth models.				
Literature: Munk, W.H., MacDonald, G.T.F., 1960, <i>The rotation of the Earth. A geophysical discussion</i> , Cambridge, Univ. Press Lambeck, K., 1980, <i>The Earth's variable rotation: geophysical causes and consequences</i> , Cambridge Univ. Press, Moritz, H., 1980, <i>Advanced physical geodesy</i> , Abacus Press Turnbridge Wells Kent Милутин Миланковић, <i>Небеска механика</i> , Београд, 1937				
Number of hours: 10		Lectures: 4	Tutorials: 6	
Teaching and learning methods: Frontal, group, practical work				
Assessment (maximal 100 points)				
Course assignments		points	Final exam	points
Lectures			Written exam	
Exercises / Tutorials			Oral exam	50
Colloquia				
Seminars		50		