Title	**Environmental physics**
Code	ZDOB03
Study Program	Ph.D. study in environmental and nature protection
Semester	I
ECTS	6
Status	* obligatory □ elective
Lecturer	Dr.sc. Jasmina Obhođaš
Co-Lecturers	Prof. dr. sc. Tarzan Legović
Requirements for Enrolment	
Objectives	Enable students to solve environmental physics problems
Learning Outcomes	1. Using, recalculating and applying physical units 2. Solve simpler problems from mechanics of fluids, heath, electricity and magnetism, optics, modern physics, physics of soil, atmosphere and sea. 3. Name research goals in high energy physics 4. Describe operational principles of physical instruments used in environmental and nature protection 5. Estimate rates of processes in the atmosphere, sea and soil

Connection between Learning Outcomes, Curricular and Student Activities

Student Activities	ECTS	Learning Outcomes	Curricular Activities	Methods of Assessment	Credits*	
					min	max
Active participation	1	1,3,4	lectures	monitoring	3	5
Active participation	1	2,5	exercises	monitoring	3	5
Exam preparation	3	1-5	Exercises	exam	7	12
Total	**5**				**13**	**22**

Consultations			
Learning Activities	**Lectures**	**Seminars**	**Practice**
Hours	15	5	5

Contents / Teaching Units	1. Introduction: forces in physics. Review and application of: 2. Mechanics; 3. Heath; 4. Electricity and magnetism; 5. Optics; 6. Modern physics; 7. Fluids; 8 Atmospheric physics; 9. Physics of the sea; 10. Soil physics.
Obligatory Literature	Elert G, Physics Hypertextbook, 2015. http://physics.info/ Crowell B. Light and Matter(Newtonian physics, conservation laws, vibrations and waves, electricity and magnetism, optics, the modern revolution in physics. http://www.lightandmatter.com/books.html
Recommended literature	Salby M.L. Physics of the Atmosphere and Climate, Cambridge, 2012. Steward R.H. Introduction to physical oceanography, Texas A&M Univ., 2005. http://oceanworld.tamu.edu/resources/ocng_textbook/contents.html Lal R., Shukla M.K. Principles of Soil Physics, Marcel Dekker, 2004.
Requirements for Aquiring Signature	Active participation in lectures and exercises
Type of Exam	Writen and oral
Lectures Language	Croatian and English

Quality Monitoring	Questionaire after completion of lectures and exercises