

Course name	Atmospheric Pollution						
Code	PMP16D	Year of study	3 D				
Course teacher	Prof.dr.sc. Darko Koračin	Credits (ECTS)	3				
Associate teachers		Type of instruction (number of hours)	P	S	AV	LV	KV
			30	10			
Course status	Compulsory	Percentage of application of e-learning	30				
COURSE DESCRIPTION							
Course objectives	Provide knowledge on <ul style="list-style-type: none"> • Characteristics of the atmosphere and air quality • Main atmospheric pollutants • Effects of pollutants on health effects • Ozone in the atmosphere • Main chemical reactions of pollutants in the atmosphere • Modeling transport and dispersion of atmospheric pollutants 						
Course enrolment requirements and entry competences required for the course	Prerequisites <ul style="list-style-type: none"> • Basic physics • Basic meteorology • Basic chemistry 						
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Understanding main characteristics of air pollution Awareness on human health degradation caused by atmospheric pollutants Knowledge on chemical reactions and processes relevant to air quality Ability to analyze modeling results and to construct a simple dispersion model						
Course content broken down in detail by weekly class schedule (syllabus)	1. Chemical elements and compounds in the atmosphere 2. Structure of the atmosphere 3. Ideal gas laws 4. Chemical elements and compounds relevant to air pollution and health impacts 5. Aerosols in the atmosphere 6. Ozone in the atmosphere 7. Modeling air pollution 7.1 Gaussian models of dispersion 7.2 Numerical models based on higher-order closures 7.3 Lagrangian stochastic models of dispersion 7.4 Forecasting air pollution using photochemical models					1 1 3 5 5 5 3 3 1 2 1	
Instruction format:	x lectures x seminars x exercise <input type="checkbox"/> on line x combined e-learning <input type="checkbox"/> field work		x independent homework <input type="checkbox"/> multimedia <input type="checkbox"/> laboratory x mentoring <input type="checkbox"/> other				
Student responsibilities							
Screening student work (name the proportion of ECTS)	Attendance	1	Research		Practical work		
	Experimental work		Report		Homework		

credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Essay	1	Seminars		Other	
	Colloquium		Oral exam	1	Other	
	Written exam		Project		Other	
Grading and evaluating student work in class and at the final exam	Ocjena se utvrđuje na temelju ocjena: <ul style="list-style-type: none"> • usmene prezentacije • domaćih radova. 					
Required literature (available in the library and via other media)	Title			Number of copies in library	From other media	
	Jacobson, M. Z., 2012: Air Pollution and Global Warming. Cambridge University Press. 375 pp.			3		
	Turner, B. D., 1970: Workbook of Atmospheric Dispersion Estimates. U.S. Department of Health, Education and Wealthfare. 95 pp.					
Optional literature						
Quality assurance methods that ensure the acquisition of exit competences	<ul style="list-style-type: none"> • 1. Analysis of the acquired learning outcomes at the end of the class, compared with the work of students. • 2. Monitoring the development of students in the subjects who followed the links with the success of the case • 3. Other surveys of studentsvjere 					
Other (as the proposer wishes to add)						