<table>
<tr><td colspan="2">NAME OF THE COURSE</td><td colspan="5">AIR POLLUTION MODELING</td></tr>
<tr><td>Code</td><td></td><td>Year of study</td><td colspan="4">2., III. semester</td></tr>
<tr><td>Course teacher</td><td>Darko Koracin, PhD</td><td>Credits (ECTS)</td><td colspan="4">4.0</td></tr>
<tr><td rowspan="2">Associate teachers</td><td rowspan="2"></td><td rowspan="2">Type of instruction (number of hours)</td><td>L</td><td>S</td><td>E</td><td>F</td></tr>
<tr><td>30</td><td>5</td><td>10</td><td></td></tr>
<tr><td>Status of the course</td><td>compulsory</td><td>Percentage of application of e-learning</td><td colspan="4">/</td></tr>
<tr><td colspan="7">COURSE DESCRIPTION</td></tr>
<tr><td>Course objectives</td><td colspan="6">The aim of the course is to provide students with basic and practical knowledge about the processes in the atmosphee and computer applications in air pollution modeling.</td></tr>
<tr><td>Course enrolment requirements and entry competences required for the course</td><td colspan="6">Undergraduate qualification (6th level of EQF or CROQF).</td></tr>
<tr><td>Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</td><td colspan="6">The student will:
- Learn and plan air pollution control strategies based on monitoring and modelling;
- Lead and initiate studies for modelling air pollutants impacts on human and animal health and vegetation damages;
- Create optimum monitoring of relevant pollutants in a specific region for model evaluation;
- Prepare inputs for air pollution models;
- Understand and use air pollution models;
- Participate and organize public meetings and hearings explaining monitoring and modelling results;
- Present air pollution seminars for the public, undergraduate students, schools, and stakeholders;.</td></tr>
<tr><td>Course content broken down in detail by weekly class schedule (syllabus)</td><td colspan="6">History of air pollution research and applications. Structure of the atmosphere. Emission sources of atmospheric pollutants. Characteristics and monitoring of the main primary and secondary air pollutants and their effects on human health. Criteria pollutants and National Ambient Air Quality Standards. Modelling of the air pollutants. Regulatory and advanced air pollution models. Gaussian, Eulerian, and Lagrangian models. Risk assessment using modeling.</td></tr>
<tr><td>Format of instruction</td><td colspan="3">☒ lectures
☒ seminars and workshops
☒ exercises
☐ on line in entirety
☐ partial e-learning
☐ field work</td><td colspan="3">☒ independent assignments
☐ multimedia
☐ laboratory
☐ work with mentor</td></tr>
<tr><td>Student responsibilities</td><td colspan="6">Regular attendance of classes, tests, written and oral exam¸</td></tr>
<tr><td>Screening student work(name the</td><td>Class attendance</td><td>1.5</td><td>Research</td><td></td><td>Practical training</td><td></td></tr>
</table>

proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Experimental work		Report			
	Essay		Seminar essay	1.0		
	Tests	0.5	Oral exam	1.0		
	Written exam		Project			

Grading and evaluating student work in class and at the final exam	Frontal lectures. Exercises in groups. Preparing written assignment about a selected subject. Exam and written assignment presentation.		
Required literature (available in the library and via other media)	**Title**	**Number of copies in the library**	**Availability via other media**
	D. Koracin: lectures given as ppt files;		
	Jacobson, M.Z., 2002: Atmospheric Pollution: History, Science, and Regulations. Cambridge University Press, ISBN 0-521-01044, pp. 401		
	M.Z. Jacobson, 2005: Fundamentals of Atmospheric Modeling. Cambridge University Press, ISBN 0521548659		
	N.P. Cheremisinoff: Handbook of Air Pollution Prevention and Control, Elsevier Science, ISBN 0750674997.		
Optional literature (at the time of submission of study programme proposal)	To be defined in accordance with student's particular interests and theme of student's assignment.		
Quality assurance methods that ensure the acquisition of exit competences	Quality assurance will be performed at three levels: (1) University level, through questionnaires; (2) Faculty level by Quality Control Committee; (3) Lecturer's level.		
Other (as the proposer wishes to add)			