COURSE DESCRIPTION CARD – SPECIMEN

<table>
<tr><td colspan="10">Faculty of Civil Engineering and Environmental Science</td></tr>
<tr><td>Field of study</td><td colspan="6">Environmental Engineering</td><td>Degree level and programme type</td><td>Graduate</td></tr>
<tr><td>Specialization/ diploma path</td><td colspan="6"></td><td>Study profile</td><td>general</td></tr>
<tr><td rowspan="2">Course name</td><td colspan="6" rowspan="2">Environmental Management</td><td>Course code</td><td>1928251H</td></tr>
<tr><td>Course type</td><td>Compulsory</td></tr>
<tr><td rowspan="2">Forms and number of hours of tuition</td><td>L</td><td>C</td><td>LC</td><td>P</td><td>SW</td><td>FW</td><td>S</td><td>Semester</td><td>1</td></tr>
<tr><td>15</td><td></td><td></td><td>30</td><td></td><td></td><td></td><td>No. of ECTS credits</td><td>3</td></tr>
<tr><td>Entry requirements</td><td colspan="9">Env. Assessment, Legal regulations</td></tr>
<tr><td>Course objectives</td><td colspan="9">To introduce students to the basic principles and documents of environmental management in territorial units. To teach the rules of preparation of environmental management documents in territorial units. To present the types of environmental management, the principles of their design and the content of documents. To familiarize students with the basic systems of environmental management in an enterprise. To teach the principles of system selection depending on the size and type of production. To educate the principles of designing environmental management systems. To systematize the transferred knowledge, skills and competencies on program excursions. Group performance of projects of EMS systems in territorial units and enterprises.</td></tr>
<tr><td>Course content</td><td colspan="9">Lecture: National environmental policy, pro-environmental management of the territorial unit and enterprise. Environmental management documents at the national, provincial, district and municipal levels. Instruments of environmental impact analysis in territorial units and enterprises, environmental management systems - characteristics and requirements: system according to ISO 14001, according to EMAS regulation, Cleaner Production Concept, LCA. Financing of environmental management systems, domestic and foreign sources of financing environmental management, ways of applying for financing of environmental management projects.
Project: preparation of environmental management documents in territorial units at national, provincial, district and municipal levels. Consideration of management systems</td></tr>
<tr><td>Teaching methods</td><td colspan="9">Informational and problematic lecture, project and disscussion</td></tr>
<tr><td>Assessment method</td><td colspan="9">Lecture - written test, Project- realization of ppt cons. systems.</td></tr>
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Symbol of learning outcome	Learning outcomes	Reference to the learning outcomes for the field of study
EU1	The student has advanced knowledge in basic methods of physicochemical and physical analyses, processes and phenomena in water and the latest methods of water treatment.	IS2_W06 IS2_U02
EU2	Student knows in an advanced degree - the rules of technology design, systems in environmental engineering, as well as the rules of operation and exploitation of equipment. The student is able to use scientific, popular-scientific and branch literature, subject matter norms, legal acts, Internet databases, make proper use of the obtained information, draw conclusions, formulate and present opinions, evaluate and discuss various opinions.	IS1_W09 IS1_U14
LO3	Student Is able to analyze and evaluate technical, technological and organizational solutions concerning emerging pollution, is able to design, according to the initial assumptions, water and sewage systems adequate to the needs and possibilities, using appropriately selected technologies, methods, tools and materials.	IS2_W07 IS2_U09
LO4	She/he knows how to act in an entrepreneurial manner by furthering his/her education and professional competence and initiating actions to apply his/her knowledge and skills. He/she can act creatively and entrepreneurially, cooperate in a group and take on different roles in it.	IS1_U11 IS1_U13
LO5	The student is able to plan and conduct advanced experiments, including measurements of technical, technological and operational parameters of equipment used in environmental engineering, interpret the obtained results and draw conclusions.	IS1_U07
LO6	Student Is able to analyze the content of different sources and to critically assess the possibility of their use in professional practice. She/he is prepared to consciously apply non-technical aspects of engineering activities and to take into account their impact on the environment and the associated responsibility for own decisions	IS1_K01 IS2_K05
Symbol of learning outcome	**Methods of assessing the learning outcomes**	**Type of tuition during which the outcome is assessed**
LO1	Written testt	L
LO2	Written test, project	L, P
LO3	Written test, project	L, P
LO4	Written test, project	L, P
LO5	Written test, project	L, P
LO6	Written test	L

Student workload (in hours)		No. of hours	
Calculation	Participation at the lecture	15	
	Participation at project classes	30	
	Preparation for exam	15	
	Preparation for project, making homwork	15	
	Preparation for final project	10	
	Consultation with teacher	10	
	TOTAL:	195	
Quantitative indicators		HOURS	No. of ECTS credits
Student workload – activities that require direct teacher participation		55	2
Student workload – practical activities		25	1
Basic references	1. ENVIRONMENTAL MANAGEMENT JOHN PALLISTER TEACHING GUIDE A Core Text for O Level and IGCSE 2. Environmental Management and Development CJ Barrow		
Supplementary references	1. Environmental.Management.Sustainable.Development CJ Barrow 2. Environmental Management Strategies: The 21st Century Perspective G. Crognale		
Organisational unit conducting the course	Department of Technology in Env. Engineering	Date of issuing the programme	
Author of the programme	prof. Iwona Skoczko	14.11.2019	

L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW - field work, S – seminar