COURSE DESCRIPTION CARD

<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 colspan="2">Degree level and programme type</td><td>Bachelor's degree</td></tr>
<tr><td>Specialization/ diploma path</td><td colspan="6">International School of Engineering</td><td colspan="2">Study profile</td><td>Academic profile</td></tr>
<tr><td rowspan="2">Course name</td><td colspan="6" rowspan="2">Environmental Impact Assessment</td><td colspan="2">Course code</td><td>19284208H</td></tr>
<tr><td colspan="2">Course type</td><td>Obligatory</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 colspan="2">Semester</td><td>VI</td></tr>
<tr><td>16</td><td>-</td><td>-</td><td>-</td><td>16</td><td>-</td><td>-</td><td colspan="2">No. of ECTS credits</td><td>3</td></tr>
<tr><td>Entry requirements</td><td colspan="9">Basic knowledge of chemistry and hydrology, air protection and basic knowledge of information technologies</td></tr>
<tr><td>Course objectives</td><td colspan="9">The aim of the course is to provide students knowledge about principles environmental impact assessment, including information on protection of habitats, protection of surface and groundwater, protection of soils, air protection, protection against noise, vibration and electromagnetic non-ionizing radiation, landscape protection, toxicology, waste management, basics of burning, basis for decision support. Practical outcome of the course is ability to perform environmental impact assessment.</td></tr>
<tr><td>Course content</td><td colspan="9">LECTURES: Understanding the negative impact of the industry on the environment and the selection of technologies that minimize anthropopression. Evaluation of applied technologies in terms of pure production. Impact of installation on the environment. BAT - best available techniques. Renewable energy sources. Product life cycle. Pure production. Polish and international rules and regulations concerning the conduct of environmental impact assessments (EIA). Categories of nuisance of undertakings. The role of the investor and environmental services in the EIA procedure. Principles of sozotechnical negotiations. Value localization and technology. Qualification procedures and selected computing quantifications. Maximal Impact Assessment Systems. Forecasts of the effects of selected policies, strategies, plans of programs Rules for reporting environmental impact of selected municipal and breeding facilities.
SPECIALIZATION WORKSHOP: Presentation of the selected environmental impact assessment report, its verification and assessment, presentation of strengths and weaknesses</td></tr>
<tr><td>Teaching methods</td><td colspan="9">Information lecture, project - case study analysis, discussion, project-based learning</td></tr>
<tr><td>Assessment method</td><td colspan="9">Lecture - written test
Project - project execution, presentation and discussion on the project, performing a SWOT analysis of the selected report</td></tr>
<tr><td>Symbol of learning outcome</td><td colspan="7">Learning outcomes</td><td colspan="2">Reference to the learning outcomes for the field of study</td></tr>
<tr><td>LO1</td><td colspan="7">Student is able to develop an environmental impact assessment for a given engineering facility.</td><td colspan="2">K_W09</td></tr>
<tr><td>LO2</td><td colspan="7">Student can name and explain existing and planned legal requirements in the area of environmental protection.</td><td colspan="2">K_W014, K_W016</td></tr>
</table>

LO3	Student is able to identify the most important elements in the environment in environmental engineering.	K_U09
LO4	Student knows and is able to analyze issues related to the implementation of "Cleaner Technologies" in objects and technical systems related to environmental engineering.	K_U16
LO5	Student can indicate, compare and analyze the best available technologies (BAT).	K_U20
LO6	Student is able to carry out the task in the group and determine the validity and priorities during the EIA procedure.	K_K04
Symbol of learning outcome	**Methods of assessing the learning outcomes**	**Type of tuition during which the outcome is assessed**
LO1	Project task documentation + attached file with calculations and presentation	SW
LO2	Lecture exam	L
LO3	Observation of work on exercises + Project task documentation	SW
LO4	Presentation and discussion on the project	SW
LO5	Project task documentation + attached file with calculations and presentation	SW
LO6	Lecture test + documentation of the project task	L, SW
Student workload (in hours)		**No. of hours**
Calculation	lecture attendance	16
	participation in classes, laboratory classes, etc.	16
	working on projects, reports, etc.	16
	participation in student-teacher sessions related to the classes/seminar/project	5
	implementation of project tasks (including presentation preparation)	16
	preparation for and participation in exams/tests	8
	TOTAL:	**77**

Quantitative indicators	**HOURS**	**No. of ECTS credits**
Student workload – activities that require direct teacher participation	**37**	**1.5**
Student workload – practical activities	**56**	**2.2**

Basic references	1. Eccleston, Charles H. Environmental Impact Assessment: A Guide to Best Professional Practices, CRC Press, 2011. 2. Tromans S. Environmental Impact Assessment, Bloomsbury Professional; 2nd Revised edition edition, 2012. 3. Valli Manickam: Environmental Impact Assessment Methodologies, BS Publications, 2021, ISBN: 9391910491
Supplementary references	1. Daniel, S., Tsoulfas, G., Pappis, C., & Rachaniotis, N. Aggregating and evaluating the results of different Environmental Impact Assessment methods Ecological indicators, 2004.
Organisational unit conducting the course	Department of Technology in Environmental Engineering — **Date of issuing the programme**

Author of the programme	PhD Eng Ewa Szatyłowicz	**May 2022**

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