

**DOCTORAL SCHOOL OF WROCLAW UNIVERSITY OF SCIENCE AND
TECHNOLOGY**

SUPERVISOR DECLARING/CONDUCTING COURSE: Katarzyna Pactwa, PhD, DSc
DEPARTMENT: Faculty of Geoengineering, Mining and Geology
SCIENTIFIC DISCIPLINE: environmental engineering, mining and energy

COURSE CARD

Course name in Polish: Zrównoważony przemysł
Course name in English: Sustainable industry
Course language: polish/ english
University-wide general course type*:
The course is intended for all PhD students: YES / NO

- 1) ~~BASIC COURSE~~
- 2) ~~SPECIALIST COURSE~~
- 3) ~~SEMINAR~~
- 4) ~~HUMANISTIC COURSE~~
- 5) ~~LANGUAGE~~

Subject code: IGQ100224W

* delete as applicable

	Lecture	Foreign language course	Seminar	Mixed forms (Lecture+Seminar)
Number of hours of organized classes in university (ZZU)				15
Grading				presentation (selected topic)

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic information about the impact of industry on the environment and society.

COURSE OBJECTIVES

- C1 Gaining knowledge in the field of sustainable development, including: knowledge of legal regulations and guidelines; forms and scope of non-financial reporting; the scope of the implementation of the sustainable development goals by industry.
 C2 Developing the ability to present scientific content.
 C3 Developing the ability to discuss in a group.

PROGRAM CONTENTS

Form of classes		Number of hours
L1	Principles of participation. Introduction to the subject.	1
L2	Sustainable development - evolution or revolution?	2

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L3	Sustainable industry from the point of view of different stakeholder groups.	2
L4	Measures of sustainability, i.e. how much companies tell us about themselves.	2
L5	Is sustainable development for everyone?	2
S1	Sustainable development - achieving goals in selected industries (speeches by course participants).	2
S2		2
S3		2
Total hours		15

TEACHING TOOLS USED
N1. Multimedia lecture N2. Discussion N3. Presentation

ACHIEVED SUBJECT LEARNING OUTCOMES		
Type of learning outcome	Code of learning outcome	Assessment of learning outcome
Knowledge	P8S_WG	has knowledge at an advanced level in relation to the discipline and topics related to the area of research, including the latest research results and scientific achievements
Skills	P8S_UO	knows how to initiate and conduct discussions on research topics, obtained results and their interpretation

PRIMARY AND SECONDARY LITERATURE
<p><u>PRIMARY LITERATURE:</u></p> <p>[1] Blewitt J. (2015) Understanding Sustainable Development. 2nd edn. Routledge: Abingdon, UK. [2] Kamble S.S., Gunasekaran A., Gawankar S.A. (2018) Sustainable Industry 4.0 framework: A systematic literature review identifying the current trends and future perspectives. Process Safety and Environmental Protection, vol. 117, pp. 408-425 [3] Azpagic A., Perdan S. (2000) Indicators of Sustainable Development for Industry: A General Framework. Process Safety and Environmental Protection, 78(4), pp. 243-261</p> <p><u>SECONDARY LITERATURE:</u></p> <p>[1] Rogers P.P., Jalal K.F., Boyd J.A. (2008) An introduction to sustainable development. Earthscan, London</p>
SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)
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