

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Environment Management</b>		Code <b>1011102231011100213</b>
Field of study <b>Engineering Management - Full-time studies -</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>2 / 3</b>
Elective path/specialty <b>Quality Systems and Ergonomics</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>elective</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>15</b> Classes: <b>15</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>6</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>6 100%</b> <b>6 100%</b>
<b>Responsible for subject / lecturer:</b>  dr inż. Bogna Mateja email: bogna.mateja@put.poznan.pl tel. +48 61 665 3438 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Student defines and characterizes basic terms from the area of natural science that relate to the functioning of the natural environment; basic technologies in production processes, chosen terms from the area of management science, ideas and objectives of ergonomics
2	<b>Skills</b>	Student is able to interpret changes occurring in the natural environment and work environment, knows how to apply methods of studying phenomena and dependencies between them, as well as he uses logical reasoning in purpose of correlating and evaluating observed phenomena
3	<b>Social competencies</b>	Student is aware of the role of problems related with the natural environment and he is willing to participate in the process of shaping work conditions and the natural environment
<b>Assumptions and objectives of the course:</b> The course is aimed at giving knowledge on relations between the economy and the natural environment, as well as about social and economical results of the irrational management of natural resources. The student obtains the skill of determining objectives and preparing programs for environmental protection to be applied in enterprises.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Student should know about the role of man in actions for protecting the natural environment and the humanization of the process of work, which all relate to the formation of work conditions and organization of work, as well as ecosystems protection - [K2A_W06]		
2. Student recognizes and explains legal norms from the range of environmental protection and used programs and systems of management normalization, he understands methods of their influence on organization functioning - [K2A_W13]		
<b>Skills:</b>		
1. Student interprets causes and courses of processes of economic and legal phenomena related to correlations between business and natural environment, he presents scientific hypotheses and verifies them - [K2A_U02]		
2. Student uses the knowledge from the range of ecology and organizational management for describing and analyzing processes and phenomena on the contact area of these disciplines of science and he forms own opinions and chooses methods of analyses - [K2A_U02]		
3. Student has the skill of using the obtained knowledge from the described range, widened with the critical analysis of efficiency and usability of the applied knowledge - [K2A_U06]		
4. Student has skills of understanding and analyzing social phenomena that is widened with a skill of deep theoretical assessment of determined phenomena in chosen areas and with use of the scientific method - [K2A_U08]		
<b>Social competencies:</b>		

1. Student is aware of the importance of the professional behavior and of maintaining principles of professional ethics and respect of the diversity of opinions and cultures - [K2A\_K04]
2. Student knows how to present own contribution in the preparation of social projects and administrate ventures resulting from these projects - [K2A\_K05]
3. Student is aware of the interdisciplinary character of the knowledge from the range of ecology, ergonomics and he has the skill to solve composite organizational problems and he creates interdisciplinary teams - [K2A\_K06]

### Assessment methods of study outcomes

Forming assessment:

- a) Classes: on basis of the current progress of work in the realization of the task;
- b) Lectures: on basis of answers to questions concerning the discussed material;

Final assessment

- a) Classes: on basis of public presentation of the realized task;
- b) Lectures: on basis of a written colloquium from the range of lectures (in form of 3 responses to open questions).

### Course description

Lectures

1. Evolution of attempts at the environmental management
2. Anthropogenic environment as an object of management
3. The essence of the process of environmental management
4. Term is the environmental protection and in environmental management
5. Systems of environmental management
- 5.1. The development, the purpose, tasks and the structure of norms of ISO 14000 series
- 5.2. Designing and implementing norms of ISO series in the organization
6. Eco-indicators in the products design

Classes

1. Identification of parameters of the technology and conditions of the enterprise
2. Environmental aspects of the activity of the company
3. The mission and the environmental vision of the enterprise
4. The environmental policy of the enterprise and its strategic objectives
5. Specific objectives and tasks
6. The program of the environmental management and conditions of its implementation

#### Basic bibliography:

1. Jabłoński J., Janik S., Mateja B., Inżynieria ochrony środowiska, WPP, Poznań 2011
2. Jabłoński J., Zarządzanie środowiskiem, WPP, Poznań 2011
3. Jabłoński J., Zarządzanie środowiskowe jako warunek ekologizacji przedsiębiorstwa. Próba modelu teoretycznego, WPP, Poznań 2001
4. Mateja B., Ekologia. Wybrane zagadnienia, WPP, Poznań 2011

#### Additional bibliography:

1. PN - EN ISO 14001:2015, Systemy Zarządzania Środowiskowego

### Result of average student's workload

Activity	Time (working hours)
1. Lectures	15
2. Classes	15
3. Consultations	10
4. Preparation of the presentation	10
5. Preparation for the colloquium	6
6. Colloquium	2
7. Discussing conclusions of the colloquium	2

### Student's workload

<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	60	6
Contact hours	44	3
Practical activities	15	3