

COURSE GUIDE

<u>Subject name</u>	Environmental management systems
<u>Course of study</u>	Quality and Production Management
<u>The form of study</u>	Full-time
<u>Level of qualification</u>	First
<u>Year</u>	I
<u>Semester</u>	I
<u>The implementing entity</u>	Katedra Innowacji I Systemów Zarządzania Bezpieczeństwem
<u>The person responsible for preparing</u>	Assoc. prof. Wioletta Bajdur PhD Jaroslaw Jasinski
<u>Profile</u>	General academic
<u>Course type</u>	Basic
<u>ECTS points</u>	3

TYPE OF TEACHING – NUMBER OF HOURS PER SEMESTER

LACTURE	CLASS	LABORATORY	PROJECT	SEMINAR
15	15			

COURSE AIMS

- C1.** To familiarize students with the concepts related to environmental management
- C2.** To acquaint students with the theory, implementation and functioning of environmental management systems
- C3.** Providing students with the practical knowledge and skills in the implementation techniques of environmental management systems in the analyzed industrial plants

ENTRY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES

- 1. The student knows the basic concepts and has general knowledge in the field of environmental protection
- 2. The student has general knowledge of the basics of management
- 3. The student has the basic ability to analyze cause and effect relationships in the range of impact of various factors on the environment

LEARNING OUTCOMES

- EU1 - Student is able to identify environmental threats related to different production processes
- EU2 - Student is able to analyze hazards in the production process and determine the impact of these threats on the environment
- EU3 - Student is able to create an environmental policy, as well as define environmental aspects
- EU4 - Student is able to analyze activities in the field of environmental management systems in industrial plants

COURSE CONTENT

Type of teaching – LECTURE	Number of hours
W 1 - Introduction, basic concepts and terminology.	1
W 2 - Current state of legal regulations regarding environmental protection	1
W 3, W4 - Environmental hazards in production processes	2
W5, W6 - Global threats and their forecasts in the environment	2
W7, W8 - Indirect and direct environmental management instruments	2
W 9, W10 - Production technologies and environmental responsibility	2
W 11, W12 - Selected tools for environmental management	2
W 13 - Environmental Management Systems ISO 14001, EMAS	1
W 14 - Audit of Environmental Management Systems	1
W 15 - Main directions of ecological policy in the country	1
Type of teaching – CLASSES	Number of hours
C1 - Introduction, basic concepts, organization of students' own work	1
C2, C3 - Analysis of ISO 14001 standard	2
C4 - Analysis of legal acts - Environmental Protection Law, selected regulations and directives	1
C5, C6 - Analysis of threats and its impact on the design of Environmental Management Systems	2
C7 - Development of environmental policy for a selected industrial plant	1
C8 - Determination of indirect and direct environmental aspects	1
C9, C10 - Implementation and functioning of Environmental Management Systems	2
C12, C13 - Monitoring of environmental management systems	2
C14 - Audit and corrective actions of systems	2
C15 - Knowledge verification	1

TEACHING TOOLS

- 1. Manual
- 2. Legal acts and standards
- 3. CIOP studies and materials
- 4. Audio-visual equipment
- 5. Internet

WAYS OF ASSESSMENT (F – FORMING, P – SUMMATIVE)

- F1. Active participation in classes
- F2. Evaluation of elaborations of selected topics
- P1. Check test

STUDENT WORKLOAD

Form of activity		Average number of hours for realization of the activity		
		[h]	ECTS	ECTS
Contact hours with the teacher	LECTURE	15	0.6	1.2
Preparing to test		15	0.6	
Contact hours with the teacher	CLASSES	15	0.6	1.08
Preparing to classes		12	0.48	
Getting Acquainted with the indicated literature		13	0.52	0.52
Consultation		5	0.2	0.2
TOTAL NUMBER OF HOURS / ECTS CREDITS FOR THE COURSE		75	3	

BASIC AND SUPPLEMENTARY RESOURCE MATERIALS

Basic resources:

1. Whitelaw Ken, ISO 14001 Environmental Systems Handbook - 2004
2. Stephen Tinsley, Ilona Pillai Environmental Management Systems: Understanding Organizational Drivers and Barriers - 2006
3. Philipp Weiß and Jörg Bentlage, Environmental Management book series The Baltic University 2006
4. PN-EN ISO 14001:2005 Standard

Supplementary resources:

1. Christopher Sheldon, Mark Yoxon Installing Environmental Management Systems: A Step-by-step guide - 2002
2. Wayne C. Turner, Energy Management Handbook - 2001

TEACHERS (NAME, SURNAME, E-MAIL ADDRESS)

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MATRIX OF LEARNING OUTCOMES REALISATION

Learning outcome	Reference of given outcome to outcomes defined for whole program (PRK)	Course aims	Course content	Teaching tools	Ways of assessment
EU1	K_W01, K_W02, K_U01, K_U02, K_U03, K_U11, K_K02, K_K03	C1, C3	W1, W3, W4, C1, C5, C6	1, 2,3, 4,5	F1, F2
EU2	K_W01, K_W02, K_U01, K_U02, K_U03, K_U11, K_K02, K_K03	C1, C3	W1, W3, W4, W5-W8, C1, C5, C6,	1, 2,4,5	F1, F2
EU3	K_W01, K_W02, K_U01, K_U02, K_U03, K_U11, K_K02, K_K03	C2, C3	W1, W2, W3, W4-W14, C2-C7	1, 2, 3,4	F1, F2
EU4	K_W01, K_W02, K_U01, K_U02, K_U03, K_U11, K_K02, K_K03	C2, C3	W1, W7-W15, C8-C15	1, 2, 3,4,5	F1, F2, P1

FORM OF ASSESSMENT - DETAILS

	grade 2	grade 3	grade 4	grade 5
EU1	The student can not identify environmental hazards associated with different production processes	The student is able to identify the main risks associated with typical production processes	The student is able to identify the hazards associated with various production processes	Student is able to identify hazards associated with various production processes and occurring in the environment and classify hazards
EU2	The student is able to analyze hazards in the	The student is not able to analyze the basic	The student is able to analyze types	The student is able to analyze types

	production process and determine the impact of these threats on the environment	types of environmental threats in production processes	environmental threats and can make a division due to individual industries	environmental threats and can make a division due to individual industries. Student can determine the relationship between particular types of pollution
EU3	The student is able to create an environmental policy, as well as define environmental aspects	The student is able to develop an environmental policy	Student is able to develop environmental policy and define environmental aspects	The student is able to develop an environmental policy and identify direct and direct environmental aspects
EU4	The student is able to analyze the activities in the field of environmental management systems in industrial plants	The student is able to partially analyze the activities in the field of environmental management systems in industrial plants	The student is able to analyze the activities in the field of environmental management systems in industrial plants	The student is able to analyze activities in the field of environmental management systems in industrial plants taking into account activities in the event of an industrial accident

ADDITIONAL USEFUL INFORMATION ABOUT THE COURSE

1. Information where presentation of classes, instruction, subjects of seminars can be found, etc. - presented to students during first classes, if required by the formula classes are sent electronically to the e-mail addresses of individual dean groups.
2. Information about the place of classes - Information can be found on the website of the Faculty of Management.
3. Information about the timing of classes (day of the week / time) - Information can be found on the website of the Faculty of Management
4. Information about the consultation (time + place) - Information can be found on the website of the Faculty of Management

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Coordinator