STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Risk analysis	**1011104221011122936**

Field of study	Profile of study (general academic, practical)	Year /Semester
Safety Engineering - Part-time studies - First-	**(brak)**	**1 / 2**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**part-time**

No. of hours	No. of credits
Lecture: **10** Classes: **8** Laboratory: **-** Project/seminars: **8**	**3**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)

Responsible for subject / lecturer:

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Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Rudimentary knowledge of probability theory and technology fundamentals
2	**Skills**	Solving easy exercises in probability
3	**Social competencies**	Ability to work in a group

Assumptions and objectives of the course:

Understanding of certain concepts such as: threat and risk, ability to identify and assess the criticality of events that exist in working environment.; ability to assess risk by means of quality and quantity methods (selection of an appropriate method)

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Knows risk assessment methods - [K1A_W09]

Skills:

1. When formulating and solving engineering tasks, a student can discern their systemic and non-technical aspects - [K1A_U10]
2. Knows safety rules connected with work in an industrial environment - [K1A_U11]

Social competencies:

1. Understands the need to make progress, gain knowledge and acquire new skills - [K1A_K01]
2. Understands the influence of engineering activity on an environment - [K1A_K02]

Assessment methods of study outcomes

Formative assessment:

a) Classes: current/ongoing evaluation of the tasks

b) Lectures: evaluations based on questions relating to the presented materials during the current and previous lectures

Collective assessment:

a) Classes: reports presentation (based on classes);

b) Lectures: written test (4 open questions presented during the lecture; the final test pass equals at least 3.0

Course description

Concepts of risk, misfortunes, initiating events, critical events. Classification of threats. Potential threats. Workplace accidents, failures. Threat assessment and inconveniences in a workplace, industry and services. Occupational risk, process risk, environmental risk. Heuristic methods of risk assessment. Risk estimation. Risk assessment by means of matrix, indicative and graphic methods. Delineating safety loss. Multidimensional risk assessment. Assessment of risk acceptability based on probabilistic methods.

Basic bibliography:

1. Jajuga Krzysztof (red.), Zarządzanie ryzykiem (Risk management), Wydawnictwo Naukowe PWN, Warszawa 2007

2. Kaczmarek T., Ćwiek G.: Ryzyko kryzysu a ciągłość działania. (The risk of crisis and continuity of action) The Business Continuity Management, Warszawa 2009

3. Kaczmarek T.: Ryzyko i zarządzanie ryzykiem. Ujęcie interdyscyplinarne, (Risk and risk management. Interdisciplinary approach) DIFIN, Warszawa 2004

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. lecture	15
2. classes	30
3. consultation with a lecturer	10

Student's workload

Source of workload	hours	ECTS
Total workload	55	3
Contact hours	40	2
Practical activities	30	1