



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Industrial project

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### Course

Field of study

Safety Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

part-time

Year/Semester

4/7

Profile of study

general academic

Course offered in

Polish

Requirements

elective

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### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

60

### Number of credit points

4

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### Lecturers

Responsible for the course/lecturer:

Ph.D., Eng. Roma Marczevska-Kuźma

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Phone. 61 665 33 78

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

thesis supervisors

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

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### Prerequisites



A student starting this subject should have the knowledge, skills and competences acquired in the previous years of study in the field of Safety Engineering that can be used in conducting research in enterprises and looking for solutions to the identified problem. Student should also be able to obtain information from the indicated sources and be willing to cooperate within a team.

### Course objective

Preparation of input materials for the research part of the diploma thesis by the student.

### Course-related learning outcomes

#### Knowledge

1. Has advanced knowledge about life cycle of products, devices, objects, systems and technical systems, as well as quality engineering in relation to products and processes sufficiently to take up solution to the problem of safety in business practice [K1\_W06].
2. Knows at an advanced level methods, techniques, tools and materials used in preparation for conducting scientific research and undertaking research topic in the diploma thesis using information technology, information protection and computer aided [K1\_W11].
3. Knows at an advanced level concepts and principles of copyright protection, information safety and intellectual property protection in a market economy that relate to the thesis [K1\_W12].

#### Skills

1. Is able to properly select sources and information derived from them for purpose of their evaluation, critical analysis and synthesis for purposes of the thesis [K1\_U01].
2. Is able to use various techniques to communicate in vocational and other environments in order to obtain the data necessary to solve the problem [K1\_U02].
3. Is able to use analytical, simulation and experimental methods for solving the diploma problem, also using information and communication methods and tools [K1\_U04].
4. Is able to make a critical analysis of the way it functions and assess - in conjunction with Safety Engineering - existing technical solutions, in particular machines, devices, objects, systems, processes and services [K1\_U06].
5. Can design an object, system or process that meets the requirements of safety engineering using appropriate methods and techniques and make a preliminary economic assessment [K1\_U07].
6. Is able to plan, organize and implement individual and team work and carry out experiments, including computer measurements and simulations, interpret obtained results and draw conclusions [K1\_U11].
7. Is able to identify changes in requirements, standards, regulations and technical progress and the reality of the labour market and, on the basis of these changes, to determine the needs for completing knowledge [K1\_U12].



### Social competences

1. Is aware of the importance of knowledge for obtaining the ability to effectively solve problems in the field of Safety Engineering and to obtain opportunities for continuous improvement [K1\_K02].
2. Is aware of the understanding of non-technical aspects and effects of engineering activities, including its impact on the environment and the associated responsibility for the decisions [K1\_K03].
3. Is able to initiate activities related to the formulation and transfer of information to all interested parties and cooperate in society in the field of safety engineering [K1\_K05].
4. Is aware of behavior in a professional manner, compliance with the principles of professional ethics and respect for the diversity of views and cultures [K1\_K06].
5. The student is aware of the responsibility for own work and readiness to comply with the principles of teamwork and taking responsibility for jointly implemented tasks in the work [K1\_K07].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Rating forming: on the basis of an assessment of the current progress of tasks.

Rating summary: grade point average.

passing threshold: 60% of the points.

### Programme content

Presentation of the results of research conducted in the enterprise and the documentation obtained during the research.

Analysis of the research results with the use of various methods, techniques and tools presented in the program of studies at the 1st degree and evaluation of the usefulness of these instruments.

Identification of areas requiring improving actions.

Preparation of draft directions for the improvement of the analyzed aspects of the company's functioning.

### Teaching methods

Talk, explanation, work with a book and magazine, work with bibliographic databases, problem method, workshop method, presentation.

### Bibliography

Basic

1. Regulamin realizacji prac dyplomowych oraz przebiegu egzaminu dyplomowego (materiały wewnętrzne Wydziału inżynierii Zarządzania opublikowane na stronie internetowej).



2. Czakon W. (red.), Podstawy metodologii badań w naukach i zarządzaniu, Oficyna a Wolters Kluwer business, Warszawa 2015.
3. Majchrzak J., Mendel T., Metodyka pisania prac magisterskich i dyplomowych: poradnik pisania prac promocyjnych oraz innych opracowań naukowych wraz z przygotowaniem ich do obrony lub publikacji, Wydawnictwo Uniwersytetu Ekonomicznego, Poznań 2009.
4. According to the scope of the research.

Additional

1. According to the scope of the research.

**Breakdown of average student's workload**

	Hours	ECTS
Total workload	100	4,0
Classes requiring direct contact with the teacher	60	2,0
Student's own work (literature studies, preparation for consultation with the promoter, team project, presentation) <sup>1</sup>	40	2,0

<sup>1</sup> delete or add other activities as appropriate