- Polish oblig Cycle of study: Form of study (full-time,part-time) First-cycle studies full-time			
Safety Engineering - Full-time studies - First- (general academic, practical) (brak) Elective path/specialty Subject offered in: Polish Course (computed on the second on	4 / 7 ulsory, elective)		
Elective path/specialty Subject offered in: Polish Course (compute oblige Cycle of study: Form of study (full-time,part-time) First-cycle studies full-time	ulsory, elective)		
- Polish oblig Cycle of study: Form of study (full-time,part-time) First-cycle studies full-time			
First-cycle studies full-time			
· · · · · · · · · · · · · · · · · · ·			
	full-time		
No. of hours No. of credits			
Lecture: - Classes: - Laboratory: - Project/seminars: 30	2		
atus 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 distributi and %)	ECTS distribution (number and %)		
echnical sciences 2 100%			
Responsible for subject / lecturer:			
dr hab. inż. Aleksandra Kawecka-Endler, prof. PP email: aleksandra.kawecka-endler@put.poznan.pl tel. +48(61) 665 33 70 Wydział Inżynierii Zarządzania ul. Strzelecka 11 60-965 Poznań			
Prerequisites in terms of knowledge, skills and social competencies:			
	The student has knowledge of business processes, design, organisation and implementation of the production processes as well as in the area of the design, evaluation, verification and implementation of safety engineering solutions.		
2 Skills The student is able to use the knowledge acquired during the studies that enables analyze, evaluate, design and verify problems in practice.	The student is able to use the knowledge acquired during the studies that enables to describe, analyze, evaluate, design and verify problems in practice.		
3 Social The student is responsible, can interact with others and work in a team.	The student is responsible, can interact with others and work in a team.		
competencies The student understands the need for lifelong learning and acting in accordance w	The student understands the need for lifelong learning and acting in accordance with the rules.		
Assumptions and objectives of the course:			
Familiarizing the students with theoretical and practical problems related to the development of engineering thesis, valid proceeding concerning the use and reference to the literature, appropriate preparation for the presentation of the work.			
Study outcomes and reference to the educational results for a field of study			
Knowledge:			
1. Has an ordered, theoretically knowledge of accidents and occupational diseases research - [K1A_W10]			
2. Has a detailed knowledge of ergonomics, human ecology and environmental protection - [K1A_W11]			
3. Has a detailed knowledge about organizing and functioning of the security systems - [K1A_W12]			
4. Has a detailed knowledge of the rules, the way and the scope of the occupational health and safety, first aid and a legal protection of work - [K1A_W13]			
5. Knows the risk, threat modelling, assessment methods, proceedings in the face of risks and accidents, assessment methodology, findings of the causes of accidents in the work environment and/or human life, health and safety costs - [K1A_W21]			
6. Knows the basic techniques and tools used for solving simple tasks with the use of information technology, engineering, and computer-assisted information - [K1A_W25]			
 Knows and understands the basic concepts and principles from the scope of copyright protection, information the protection of intellectual property in a market economy - [K1A_W34] 	n security and		
8. Has the basic knowledge necessary to solve the problems arising from the activities of enterprises in market environment, knows and understands the consequences of a merger for a market economy and the economic aspects of the functioning of the Organization - [K1A_W35]			
Skills:			

1. Can use information-communicative techniques for the implementation of the tasks typical of engineering activities - $[K1A_U07]$

2. Is able to use analytical, simulation, and experimental methods to formulate and solve engineering tasks - [K1A_U09]
3. Has the necessary preparation to work in industrial environments and is familiar with safety rules related to this work as

3. Has the necessary preparation to work in industrial environments and is familiar with safety rules related to well as is able to enforce their application in practice - [K1A_U11]

Social competencies:

1. Understands the need and knows means how to self-study (first, second and third cycle studies, postgraduate studies, qualification courses)- improving professional, personal and social competence; can argument the need to learn for the whole life - [K1A_K01]

2. Student is fully aware of the responsibility that he has taken for his own work and expresses readiness to comply with the rules of team work as well as responsibility for mutually realized and completed tasks - [K1A_K03]

3. Can determine some causal relationships in the process of targets implementation and rank pertinence of alternative or competitive tasks - $[K1A_K04]$

4. Is aware of the importance of behaving in a professional manner, in compliance with the rules of professional ethics and respect for the diversity of views and cultures - [K1A_K05]

5. The student is especially conscious of the need to formulate and pass on to the society, information and opinions connected with technological advancements and other aspects of engineering activity; he also takes up action to distribute such information and opinions in a commonly comprehensive way, along with the justification of different points of view - [K1A_K07]

Assessment methods of study outcomes

Formative assessment:

- on the basis of the current progress in the formulation of research problem and objectives of the work as well as methods of problem solving and documentation

Collective assessment:

- written test checking skills of: a) the proper referencing to the source literature b) describing the drawings; c) describing tables. (30%

-presentation of the thesis subject (70%)

Course description

Engineering thesis- objectives and rules for writing. The basic principles of dissertation components. introduction, development (part of practical research, the actual data, problem solutions) and conclusion (summary). Characterization of the structure of the work, the division of the text into chapters, sections etc. The collection, evaluation and selection of materials based on literature. The correct way to refer to the literature sources in the text descriptions, drawings and tables.

Basic bibliography:

1. Borcz L., Vademecum pracy dyplomowej, Wydawnictwo WSEiA, Bytom 2001.

2. Wójcik K., Piszę akademicką pracę promocyjną, Placet, Warszawa 2005.

3. Szkutnik Z., Metodyka pisania pracy dyplomowej, Wydawnictwo Poznańskie, Poznań 2005.

Additional bibliography:

Result of average student's workload

Activity		Time (working hours)	
1. participation in classes		30	
2. consultations within frames of the correctness of the framework for the preparation of the final thesis		15	
3. Preparation to the final assessment		15	
4. Assessment		2	
Student's wo	orkload		
Source of workload	hours	ECTS	
Total workload	62	2	
Contact hours	47	1	
Practical activities	30	1	