



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar with introduction to scientific research [S1IBiJ1>SDzEBN]

Course

Field of study

Safety and Quality Engineering

Year/Semester

4/7

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

0

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

15

Number of credit points

2,00

Coordinators

dr inż. Roma Marczevska-Kuźma

roma.marczevska-kuzma@put.poznan.pl

dr hab. inż. Agnieszka Misztal prof. PP

agnieszka.misztal@put.poznan.pl

Lecturers

Prerequisites

Student has knowledge of business processes, design, organisation and implementation production processes as well as in area of design, evaluation, verification and implementation of safety engineering solutions. Student is able to use knowledge acquired during the studies that enables to describe, analyze, evaluate, design and verify safety problems in practice. Student is responsible, can interact with others and work in a team. Student understands need for lifelong learning and acting in accordance with the rules.

Course objective

To acquaint students with theoretical and practical problems related to development of engineering thesis, essence and principles of appropriate selection research method, proper conduct of research and analysis of data obtained, correct conduct regarding the use and reference to literature, correct interpretation results and proper preparation for presentation work.

Course-related learning outcomes

Knowledge:

1. Student knows issues in field of threats and their effects, as well as human ergonomics and ecology sufficient to undertake solution to problem of safety in business practice. [K1_W03, K1_W05]
2. Student knows issues life cycle of products, devices, objects, systems and technical systems in relation to products and processes sufficiently to take up solution to the problem of safety in business practice. [K1_W06]
3. Knows basic 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]
4. Knows basic concepts and principles of copyright protection, information security and intellectual property protection in a market economy that relate to the thesis. [K1_W12]
5. Knows problems arising from the activities of enterprises in the market environment that translate into issues analyzed in the thesis. [K1_W13]

Skills:

1. Student is able to use analytical, simulation and experimental methods for solving the diploma problem, also using information and communication methods and tools. [K1_U04]
2. Student is able to prepare necessary resources for functioning in an industrial environment while collecting data for the thesis, and knows safety principles related to this thesis and is able to force their application in practice. [K1_U05]

Social competences:

1. Student is aware of recognition importance of knowledge in solving problems posed in diploma thesis and continuous improvement. [K1_K02]
2. Student is aware of understanding non-technical aspects and effects of engineering activities, including their impact on the environment and related responsibility for making decisions. [K1_K03]
3. Student is able to initiate activities related to formulation and transfer information in field of safety engineering. [K1_K05]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Rating forming: Based on current progress in area of: formulation research problem and work objectives, selection of literature, selection and justification research methods.

Rating summary:

- written test checking skills of: proper reference to source literature, describing drawings; describing tables, formulas (50% rating),
 - presentation subject of the thesis and thesis card (form) confirmed by the supervisor (50% of the grade).
- Passing threshold: 60% of the points.

Programme content

Development of the thematic card of the diploma thesis. Recommendations for preparing a diploma thesis based on the Regulations on diploma theses.

The essence of clearly stating and justifying the research problem, the purpose and scope of work. Review of the literature. Research methodology.

Basic rules for preparing defense of thesis. Discussing course of diploma exam.

Course topics

Basic principles onstruction of work (summary, introduction, justification of the topic selection, purpose and scope of the work, literature review, practical and research part, real data of studied enterprise, suggestions for solution problem and summary). Characteristics of work structure, division text into chapters, subchapters. Basic rules for preparing defense of thesis. Discussing course of diploma exam. The essence of clearly stating and justifying the research problem, the purpose and scope of work (exercises in groups). Development of the thematic card of the diploma thesis.

Collecting, assessing and selecting literature and other materials used in thesis. Searching for sources in bibliographic databases. The correct way to refer to literature sources in text, descriptions of drawings and tables. Rules for creating a list of literature. Elements of regulation regarding copyright to works and principles of fair use. Regulations regarding anti-plagiarism checks.

The essence of reviewing research methods, establishing criteria for assessing their adequacy in relation to problem raised in thesis and justifying the choice for the needs of the practical part.

The importance of discussing research method, research plan, how to collect and save data.

Guidelines for correct analysis of data for purpose of solving research problem posed (basic analytical tools, correct creation and description of charts, tables, diagrams, drawings, photos).

The essence of interpretation results obtained in context research questions posed. Development of solution concepts, projects and other achievements based on research results.

Requirements for technical preparation and editing of work.

Requirements for proper way of preparing thesis presentation.

Presentations of theses prepared.

Teaching methods

Problem lecture, 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. Rozpondek M., Wycislik A. (2007), Seminarium dyplomowe: praca dyplomowa magisterska i inżynierska: pierwsza praca - know how, Wydawnictwo Politechniki Śląskiej, Gliwice.
3. Czakon W. (red.) (2015), Podstawy metodologii badań w naukach i zarządzaniu, Oficyna a Wolters Kluwer business, Warszawa.
4. Majchrzak J., Mendel T. (2009), 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.
5. Dudziak A., Żejmo A. (2008), Redagowanie prac dyplomowych: wskazówki metodyczne dla studentów, Centrum Doradztwa i Informacji Difin, Warszawa.
6. Kłos Z. (red.) (2011), Rozprawy naukowe, Wydawnictwo Politechniki Poznańskiej, Poznań.

Additional:

1. Borcz L. (2001), Vademecum pracy dyplomowej, Wydawnictwo WSEiA, Bytom.
2. Wójcik K. (2005), Piszę akademicką pracę promocyjną, Placet, Warszawa.
3. Szkutnik Z. (2005), Metodyka pisania pracy dyplomowej, Wydawnictwo Poznańskie, Poznań.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,50