



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Product standardization and certification

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### Course

Field of study

Safety Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/5

Profile of study

general academic

Course offered in

Polish

Requirements

elective

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### Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

15

Projects/seminars

### Number of credit points

2

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### Lecturers

Responsible for the course/lecturer:

Ph.D., D.Sc., Eng. Małgorzata Jasiulewicz-Kaczmarek, University Professor

Mail to: malgorzata.jasiulewicz-kaczmarek@put.poznan.pl

Phone.:61 665 33 65

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:



## Prerequisites

Basic knowledge of defining and assessing the fulfillment of technical requirements for products and systems

## Course objective

The aim is to familiarize students with the elements that make up the process of standardization and certification of products, services, personnel and the acquisition of skills to prepare a standardization document and documents for product certification.

## Course-related learning outcomes

### Knowledge

1. The student has advanced knowledge of quality engineering in relation to products and processes [K1\_W07].

h2. The student knows the fundamental dilemmas of modern civilization and development trends as well as the best practices in the field of security engineering [K1\_W10]

### Skills

1. The student is able to design, using appropriate methods and techniques, an object, system or process that meets the requirements of safety engineering and make its initial economic assessment [K1\_U07]

2. The student is able to apply standards and norms in solving practical engineering tasks in the field of Safety Engineering [K1\_U08]

### Social competences

1. The student is able to see the cause-effect relationships in the implementation of the set goals and use the ranks in relation to the significance of alternative or competitive tasks [K1\_K01]

2. The student is aware of the understanding of non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for decisions made [K1\_K03]

3. The student is aware of the responsibility for their own work and readiness to submit to the rules of working in a team and bearing responsibility for jointly performed tasks [K1\_K07]

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:

a) tutorials: assessment of current progress of task implementation

b) lectures: answers to questions about the content of previous lectures,

Summative rating:



- a) tutorials: presentation of reports on exercises performed (arithmetic average of partial grades);
- b) lectures: Tests consist of test questions, scored on a two-point scale of 0, 1. Passing threshold: 50% of points.

### **Programme content**

#### Lecture:

The concept and scope of standardization activities. History of standardization. Documents regulating the standardization activity. Types of standards. National standardization. Standardization Act. Standards in a market economy. Principles of development. Approval of standards. Classification and marking of standards. Factory standardization. The role and place of standardization in management systems. International and European standardization. Technical harmonization and standardization in the EU. Structure and content of standards. ISO guides on test methods, evaluation and certification. Principles of accreditation of laboratories, personnel, units certifying products and quality systems. Accreditation procedure. Powers and obligations resulting from accreditation. Principles of product certification. Certification procedure. Technical Directives of the EU's New Approach. Mandatory and voluntary certification. Marking with the CE mark. Mutual recognition of certificates.

#### tutorials:

Development of an example of a standard (company or PN) for a selected or indicated product. Marks and certificates placed on products.

### **Teaching methods**

1. Lecture: multimedia presentation, illustrated with examples on the board.
2. tutorials: multimedia presentation illustrated with examples given on a blackboard and performance of tasks given by the teacher - practical exercises.

### **Bibliography**

#### Basic

1. Łunarski J., Normalizacja i standaryzacja, OW PRz, Rzeszów., 2014
2. Łunarski J., Certyfikacja w działalności gospodarczej i rozwojowej, IMBGS Warszawa, 2015

#### Additional

1. Kionka H., Poradnik normalizatora zakładowego, PKN Warszawa, 2001
2. Ustawa o normalizacji z dnia 12 września 2002 r.



### Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for tutorials, preparation for tests/exam) <sup>1</sup>	30	1,0

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