### POZNAN UNIVERSITY OF TECHNOLOGY



#### EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

### **COURSE DESCRIPTION CARD - SYLLABUS**

Course name

Level of study

Theoretical basics of quality

**Course** 

Field of study Year/Semester

Engineering Management 3/5

Area of study (specialization) Profile of study

general academic
Course offered in

First-cycle studies Polish

Form of study Requirements part-time compulsory

**Number of hours** 

Lecture Laboratory classes Other (e.g. online)

10

Tutorials Projects/seminars

**Number of credit points** 

1

Lecturers

Responsible for the course/lecturer: Responsible for the course/lecturer:

Ph.D., D.Sc., Eng. Agnieszka Misztal, University Ph.D., Eng. Maciej Szafrański

Professor

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#### **Prerequisites**

Student has basic knowledge of set theory, has ability to translate numerical data into imaging of real processes, and conversely understands importance of saving product quality

### **Course objective**

Getting to know methodology of qualitative approach in researching and shaping reality.

## **Course-related learning outcomes**

Knowledge

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The student discusses the history and pioneers of quality, basic quality terminology, and the concept of a qualitological approach to reality [P6S\_WG\_01].

The student describes the quality features of a product, including goods, services, non-conformities, defects, and components of comprehensive product quality [P6S WG 03].

The student analyzes processes for determining and specifying quality requirements, basic quality operations, and the principles of standardization and standardization of quality requirements [P6S WG 07].

#### Skills

The student applies theoretical knowledge of quality to analyze and assess quality management processes in organizations [P6S\_UW\_01].

The student analyzes the causes and processes of quality management, using analytical, simulation, and experimental methods [P6S\_UW\_07].

The student correctly uses normative systems and selected standards and rules in the context of quality management [P6S UW 08].

### Social competences

The student identifies cause-and-effect relationships in quality management and applies this knowledge to managerial decision-making [P6S\_KK\_02].

The student utilizes theoretical knowledge about quality in the practical context of managing organizations, integrating different aspects of quality [P6S KK 02].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment: current assessment in class, partial points for participating during discussion

Collective assessment: oral form (end of semester) from material processed during lectures, 4-5 open questions, positive assessment 51%; partial points increase final grade

#### **Programme content**

Precursors of quality. Basic quality terminology. Qualitological approach to reality. Product quality features (product, service, incompatibilities and defects). Components of comprehensive product quality. Specifying and specifying requirements. Basic qualitative operations. Normalization and standardization of quality requirements.

#### **Teaching methods**

Didactic methods - problem lecture with multimedia presentation, video presentation, discussion, case study

#### **Bibliography**

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#### **Basic**

- 1. Mantura W., Zarys kwalitologii, Wydawnictwo Politechniki Poznańskiej, Poznań 2010.
- 2. Kolman R., Kwalitologia: wiedza o różnych dziedzinach jakości, Wydawnictwo Placet, Warszawa 2009.
- 3. Prussak W., Jasiulewicz-Kaczmarek M., Elementy inżynierii systemów zarządzania jakością, Wyd. PP, Poznań 2010.
- 4. Kolman R., Inżynieria jakości, PWE, Warszawa 1992.

### Additional

- 1. Gołaś H., Mazur A., Piasek P., Czajkowski P., Zastosowanie standaryzacji w procesie kontroli jakości wyrobów, Problemy Jakości 2/2017, s. 10-14.
- 2. Lisiecka K., Kreowanie jakości, Wyd. Akademii Ekonomicznej w Katowicach, Katowice 2002.
- 3. Kindlarski E., Jakość wyrobów, PWN, Warszawa 1988.

### Breakdown of average student's workload

|  | Hours | ECTS |
|--|-------|------|
| Total workload   | 25    | 1,0  |
| Classes requiring direct contact with the teacher                | 10    | 0,5  |
| Student's own work (literature studies, preparation for tests) 1 | 15    | 0,5  |

3

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