SYLLABUS

Name: Quality Control Systems in Production Processes
Name in Polish:
Name in English:

Information on course:

Course offered by department:	Faculty of Organisation and Management
Course for department:	Silesian University of Technology
Study level and form:	Master's degree/Bechelor's degree, Full-time, Semester I
Term:	winter semester 2019/2020
Coordinator of course edition:	Dr hab. inż. Patrycja Hąbek, prof. PŚ

Default type of course examination report:

Language:

English

Course homepage:

https://platforma.polsl.pl/roz/

ECTS

3

Short description:

Course objectives: Acquiring knowledge and skills in the field of quality control of industrial processes and product quality control. Obtaining basic knowledge on the organization and analysis of quality control systems. Acquiring skills in the use of up-to-date tools for analyzing and assessing the quality of processes and products in an industrial enterprise.

Description:

The content of course ensuring learning outcomes (according to the study programme):

Lectures: quality management, quality assurance, quality control systems, methods and types of quality control of products and processes, variability in processes, statistical quality control, supervision of non-conforming product, quality control planning.

Exercises:

1. Quality control process in chosen company – case study
2. Process approach in industrial enterprises – identification and mapping the processes of quality control
3. Developing a control plan
4. Statistical process control - analysis using control charts

Number of hours of classes with direct participation of academic teachers or other persons conducting classes and students

- Lecture: 15h
- exercises: 15h

Number of hours devoted to the student's own work

- Preparation to pass the lecture: 30h
- Preparation for classes and preparation of reports from classes: 30h

Total Hours: 90h

Number of ECTS credits: 3

Bibliography:

1. Chandrupatla T. R. (2009). Quality and reliability in engineering, New York : Cambridge University Press
2. Pyzdek T. (2003). Quality engineering handbook, edited by Paul A. Keller, Marcel Dekker, Inc. New York
3. Besterfield D. (2001). Quality Control, Prentice Hall, Columbus, OH
4. Jain P.L. (2001). Quality Control and Total Quality Management, Tata McGraw-Hill, New Delhi
5. Zairi M. (1991). Total Quality Management for Engineers, Woodhead Publishing limited, Cambridge
6. Lyonnet P. (1991). Tools of Total Quality. An introduction to statistical process control, Springer Netherlands
7. Tapiero Ch.S. (1996). The Management of Quality and its Control, SPRINGER SCIENCE+BUSINESS MEDIA, B.V.
8. Tague N. R. (2005). The Quality Toolbox, Second Edition, American Society for Quality, Quality Press, Milwaukee
9. Stamatis D. H. (2003). Failure Mode and Effect Analysis - FMEA from Theory to Execution, American Society for Quality, Milwaukee, Wisconsin
10. ISO 7870:2006 Control Charts - General Guide And Introduction

Learning outcomes:

Knowledge. Knows and understands:
K2A_W02 Main trends of development in the discipline of mechanical engineering in connection with other disciplines.
K2A_W08 Ordered and theoretically-grounded key issues of quality management, the principles of implementation and operation of integrated management systems, and organization of complex production systems.

Skills. Is able to:
K2A_U02 Perform tasks as well as formulate and solve problems using new knowledge, including the knowledge from other fields.
K2A_U04 Make a critical analysis of the functioning of existing technical solutions and evaluate them.

Social competences. Is ready for:
K2A_K06 Creating and developing patterns of proper conduct in the work and life environment, taking initiatives, critically assessing him/herself, the teams and organizations in which he/she participates, as well as leading a group and taking responsibility for it.

Assessment methods and assessment criteria:

1. Passing the lecture is based on a positive grade in the written test. Passing threshold: 50% of points
2. A positive assessment of each report is required to pass the exercises. The reports are assessed in terms of technical and content.
The final grade for the course is the value of the arithmetic mean of the lecture grade and the grade for the exercises classes.

Practical placement: