

# Course description

## 1 General information

Course name	Metrology in manufacturing processes
Course code	
Level of study (B.Sc, M.Sc., Ph.D.)	B. Sc.
ECTS	5
Course manager	eng. Marcin Krawczyk PhD
Course length	One (1) semester
Coordinator for international programs	<a href="mailto:erasmus@mech.pk.edu.pl">erasmus@mech.pk.edu.pl</a>

## 2 Prerequisites

- Completed course of the Fundamentals of Metrology

## 2 Program

Type	Lectures	Classes	Labs	Computer labs	Project	Seminar
Hours	15		30			

## 3 Contents

Proszę usunąć niepotrzebne tabele

Lectures		
No.		Hours
1	Statistical methods of manufacturing supervising (SPC, AQL etc...)	4
2	Principles of selection, assessment and supervision of measuring tools and systems	4
3	Coordinate metrology	5
4	Metrology in manufacturing processes	2

Labs		
No.		Hours
1	Supervising in manufacturing according to AQL and SPC – methods	7
2	Assessment of measuring systems	9
3	Coordinate measurement technique	7
4.	Measurement of threads and gears	7

## 3 Learning Outcomes (skills and knowledge):

- Knowledge of methods of controlling deliveries according to AQL
- Knowledge of Statistical Process Control (SPC) methods
- Knowledge of selection and assessment of measuring methods, tools and systems
- Knowledge and ability to perform of Coordinate Measuring Systems measurements (manual mode)
- Cooperation in labor-group

## 4 Assessment policy (examination):

- test of laboratories
- exam

## 5 Literature

1. Burke, Sarah E. Silvestrini, Rachel T.. (2017). Certified Quality Engineer Handbook (4th Edition). American Society for Quality (ASQ). Retrieved from <https://app.knovel.com/hotlink/toc/id:kpCQEHE011/certified-quality-engineer/certified-quality-engineer>
2. Peña-Rodríguez, Manuel E.. (2013). Statistical Process Control for the FDA-Regulated Industry. American Society for Quality (ASQ). Retrieved from <https://app.knovel.com/hotlink/toc/id:kpSPCFDAR2/statistical-process-control/statistical-process-contro>
3. Jerzy Sładek - Coordinate Metrology Accuracy of Systems and Measurements - Springer-Verlag Berlin Heidelberg 2016