



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Quality tools in production engineering [S1ZiIP2>NJwIP]

Course

Field of study	Year/Semester
Management and Production Engineering	4/7
Area of study (specialization)	Profile of study
–	general academic
Level of study	Course offered in
first-cycle	Polish
Form of study	Requirements
full-time	elective

Number of hours

Lecture	Laboratory classes	Other
15	0	0
Tutorials	Projects/seminars	
15	0	

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

The student has knowledge of the basics of management and quality (and safety) management; the ability to select and apply management methods and techniques in practice; awareness of the role and importance of quality categories in the functioning of manufacturing enterprises.

Course objective

Students will acquire knowledge and skills in the selection and application of quantitative and qualitative quality tools for solving problems and improving processes in manufacturing enterprises.

Course-related learning outcomes

Knowledge:

The student distinguishes between quality management instruments.

The student knows the classification divisions of quality management instruments.

The student knows the spectrum of basic quality tools used to solve quality problems and increase the ability of processes to meet requirements.

Skills:

The student is able to select quality tools appropriate to the problem.
 The student is able to interpret and use in practice information obtained as a result of using basic quality tools.
 The student is able to combine individual tools into methodical sequences.
 The student is able to use computer support in using quality tools (office software, dedicated software, software packages).

Social competences:

The student is aware of the role and importance of quality categories in engineering activities. The student actively participates in pro-quality activities.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Passing in the case of correct answers to at least 3 questions/written tasks out of 5: <3 ndst, 3 dst, 3.5 dst+, 4 db, 4.5 db+, 5 vdb), conducted at the end of the semester.

Assignment of grades to percentage ranges of results: <90-100> very good; <80-90) good plus; <70-80) good; <60-70) satisfactory plus; <50-60) satisfactory; <0-50) unsatisfactory.

Programme content

Quality management techniques and methods

Course topics

Subject terminology. Components of quality management instruments. Classifications of quality management instruments. Representatives in the group of principles, approaches, methodologies, methods and tools. Quality tools and techniques. Traditional, new and additional quality tools. Tools for describing and modeling manufacturing enterprise processes. Process analysis tools. Process improvement tools.

Teaching methods

Lecture:

Multimedia presentation illustrated with examples given on the board, solving tasks.

Exercises: solving practical problems, searching for sources, teamwork, discussion.

Bibliography

Basic:

Starzyńska B., Hamrol A., Grabowska M., Poradnik menedżera jakości. Kompendium wiedzy o narzędziach jakości, Wydawnictwo Politechniki Poznańskiej, Poznań 2010

Additional:

Hamrol A., Zarządzanie i inżynieria jakości, PWN, Warszawa 2017

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00