



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Production management concepts [S1ZiIP2>KZP]

Course

Field of study

Management and Production Engineering

Year/Semester

4/7

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

Number of hours

Lecture

15

Laboratory classes

15

Other

0

Tutorials

0

Projects/seminars

0

Number of credit points

2,00

Coordinators

dr hab. inż. Krzysztof Żywicki

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Lecturers

Prerequisites

Has basic knowledge of the fundamentals of enterprise management and the design of technological processes for various manufacturing techniques.

Course objective

Learning and understanding the current challenges related to the functioning of production systems and current production management concepts

Course-related learning outcomes

Knowledge:

Has knowledge of the basic goals and challenges of operating production systems.

Has knowledge of the basics and principles of Lean Manufacturing, Quick Response Manufacturing, Theory of Constraints

Has knowledge of the basics and principles of Industry 4.0

Skills:

Is able to select methods and tools of various production management concepts adequate to a given

production system. Is able to take into account the specifics of the production system operation when implementing methods and tools of various production management concepts

Social competences:

Is aware of the need for critical analysis and evaluation of one's proposals and actions

Understands the need to make changes in production processes and in the enterprise.

Understands the need for continuous learning; is able to inspire and organize the learning process of team members

Is able to independently develop knowledge and skills related to continuous improvement of the efficiency of production processes

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Assessment based on a colloquium consisting of 10 questions 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.

Laboratory: assessment based on the completion of a report.

Programme content

Current challenges of manufacturing enterprises. Principles, methods and tools of various production management concepts.

Course topics

Lecture: Challenges and current problems of the functioning of production systems - product customization. Characteristics of the concept:

- lean manufacturing,
- quick response manufacturing,
- theory of constraints,
- Industry 4.0.

Laboratory: Practical classes conducted in a simulation format presenting selected tools of the concept: lean manufacturing, quick response manufacturing, theory of constraints.

Teaching methods

Lecture: Multimedia presentation. Solving tasks. Discussion with the group. Laboratory: workshops, discussion, teamwork.

Bibliography

Basic:

Hamrol A.: Strategie i praktyki sprawnego działania. Lea, Six Sigma I inne. Wydawnictwo Naukowe PWN, Warszawa 2017.

Rajan Suri, Zyskaj na czasie. jak zdobyć przewagę konkurencyjną wdrażając quick response manufacturing, MT Biznes, 2017.

Eliyahu M. Goldratt, Jeff Cox, Cel I - Doskonałość w Produkcji, Mint Books.

Mark J. Woepfel, Jak wdrożyć Teorię Ograniczeń w firmie produkcyjnej - Poradnik praktyka, Mint Books.

Additional:

Imai Masaaki, Gemba kaizen. Zdroworozsądkowe podejście do strategii ciągłego rozwoju, MT Biznes 2018.

Pascal Dennis, Jak przełożyć strategię na skuteczne działanie, Lean Enterprise Institute Polska 2020.

Liker Jeffrey K., Droga Toyoty. 14 zasad zarządzania wiodącej firmy produkcyjnej świata, MT Biznes.

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