

SYLLABUS

Name:**Name in Polish:** Zarządzanie produkcją i usługami**Name in English:** Production and services management**Information on course:**

Course offered by department:	Faculty of Organisation and Management
Course for department:	Silesian University of Technology
Study level and form:	Bachelor's degree, Full-time
Term:	summer semester 2022/2023
Coordinator of course edition:	Grzegorz Stozik PhD, professor of SUT

Default type of course examination report:
EXAM (EGZ)
Language:
English
Course homepage:
https://platforma.polsl.pl/roz/
ECTS
5
Short description:
The subject focuses on providing knowledge of concepts and methods, as well as tools used in Production and Services Management (PaSM)
Description:
Lectures on the PaSM subject include following topics: 1. Production system and its environment. The concept of a production system and its elements. Productivity. Productivity metrics. Production process. The essence of the production process. Components of the production process. Classifications of the production process. 2. Types, forms and varieties of production organization 3. Management of production capacity 4. Production cycle. The essence of the production cycle. Structure and length of the production cycle. Methods for determining the length of the production cycle. Duration of the production cycle. Indicators of the structure of the production cycle. Production cycle of a complex product. Shortening the production cycle and its importance 5. The course of a production batch of products in the production process. Methods of production of batches of products. Serial course of production of a batch of products. Parallel production of batches of products. Serial-parallel production of batches of products. Comparison of variants of the production cycle of a production batch of products 6. Introduction to production control. Strategic and tactical planning. Operational planning of one-off (projects) and repetitive activities. Structure and cycle of production scheduling. 7. Production planning and control techniques. Quantitative planning and control. Control methods and principles. 8. Systems for operational production control. 9. The latest trends in production control. Japanese production control systems. Toyota system, JiT, Kanban, continuous improvement. 10. Lean Manufacturing - the essence of lean manufacturing. 11. Assessment and improvement of the flow of materials and semi-finished products using the value stream mapping method. 12. Production control models. Exercises: – Gozinto graph, – Coding and optimal batch size, – Workstation and labor intensity, – Production line balancing method, – Brown forecasting method.
Bibliography:
In Polish: 1. Pasternak K., Zarys zarządzania produkcją. Wyd. PWE, Warszawa 2005

2. Pająk E., Zarządzanie produkcją. Produkt, technologia, organizacja, PWN, Warszawa 2006
3. Hollins B., Shinkins S., Zarządzanie usługami. Projektowanie i wdrażanie, PWE, Warszawa 2009
4. Durlik, Inżynieria wytwarzania, cz. I i II, Placet, Warszawa 2004/2005.

In English:

1. Avlonitis G.J., Papastathopoulou P.: Product and Services Management. SAGE Publication, 2006.
2. Bryson R., Sundbo J., Fuglsang L., Daniels P.: Service Management. Theory and practice. Springer, 2020.
3. Chase R.B., Aquilano N.J., Jacobs F.R.: Production and Operations Management. Manufacturing and Services. Richard Irwin, 1998.
4. Kumar Anil S., Suresh N. Production and Operations Management. New Age International Publishers, 2008.
5. Puckett W.: Production Management. CreateSpace Independent Publishing Platform, 2014.
6. Sushil Gupta, Starr Martin. Production Operations Management Systems. CRC Press Taylor & Francis Group, 2014.

Learning outcomes:

K1A_W06 – The student knows and understands to an advanced degree - selected facts, objects and phenomena, as well as the methods, theories and conditions related to them explaining the complex relationships between them, constituting basic general knowledge of mechanical engineering

K1A_W12 – The student knows and understands principles and methods of design and optimization of production, systems and processes, production planning and control, and the basics of flexible production systems

K1A_U08 – The student is able to make a critical analysis of how existing technical solutions work and evaluate the solutions

K1A_U17 – The student is able to communicate with the public using specialized terminology

K1A_K05 – The student is ready responsible performance of professional roles, including adherence to professional ethics and demanding it of others, as well as caring for the achievements and traditions of the profession

Assessment methods and assessment criteria:

Form and criteria of passing:

- developing tasks and obtaining positive grades for all tasks,
- the grade for the exercises is the average of the grades for all tasks,
- obtaining at least 50% of points in the written exam,
- rules of resit examination - obtaining at least 50% of points in the written resit examination.
- the final grade is the sum of 50% of the grade for passing the lecture and 50% of the grade for passing the exercises,
- student's presence at classes is obligatory,
- the student is not obliged to participate in lectures.

Practical placement:

None