COURSE DESCRIPTION CARD - SYLLABUS

Course name
Technological Processes Designing [S1Log2>PPT]

Course

Field of study
Logistics

Year/Semester
3/6

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
15

Number of credit points

2,00

Coordinators

dr Katarzyna Kalisz-Szwedzka
katarzyna.kalisz-szwedzka@put.poznan.pl

Lecturers

Prerequisites

Student is able to explain the technological process on a simple example.

Course objective

Student getting knowledge about the basics of designing technological processes in industry. Student knows the basic concepts of: management, logistics, computer science, inventory management, operational and , the company's supply chain. Student understands the company's management mechanisms. Student has the ability for to perceive, associate and interpret process occurring in organizations. Student s able to use basic information about industry technologies in the area of management. Student has the ability for to perceive, associate and interpret process occurring in organizations. Student s able to use basic information about industry technologies in the area of management. Student is aware consequences of themselves decisions made. Is prepared to take social responsibility for the decisions which made.

Course-related learning outcomes

Knowledge:
1. Student is able to define subject scope, which includes design of technological process, also is able

define indicate basic dependencies valid in the process of designing processes [P6S_WG_01]
2. Student has knowledge of methods and techniques for improving technological processes [P6S_WG_02]
3. Student has knowledge of the available simulation packages concerning technological processes [P6S_WK_07]

Skills:
1. Student is able to design technological process as concept within the framework of an analyzed problem and to formulate the object of the problem as design task (engineering) [P6S_UW_01]
2. Student can analyze and knows the scope of knowledge necessary for to use simulation techniques to design technological processes and also can interpret and verify the results obtained from the simulation experiments [P6S_UW_03]
3. Is also able to choose the right tools and methods for to solve a given problem related to processes and design the technological process using appropriate methods and techniques [P6S_UK_01]
4. Student is able to identify process attributes and chose the correct tools for future process management [P6S_UO_02]

Social competences:
1. Student is willing to cooperate and work which team working on problems related to the design of technological processes [P6S_KO_01]
2. Student is able to use technical language about technological processes design [P6S_KO_02]
3. Student is able to identify cause-and-effect relationships in achieving objectives and rank the importance tasks in implementation of simulation projects course [P6S_KR_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: multiple choice test.
Project: passed project from technological process design (groups 2-3 persons).

Programme content

Lecture: Functional and process orientation in business management. Process approach. Definition and generic classification of processes. Models and process standardization. Process mapping. Process designing and changes implementing. Methods and techniques of process improvement. Process management. The essence and objectives of process management. Methodology of economic process management. Implementation of process approach in a company. Forms of process organization in a company. Methodology of technology processes management.
Project: Technological process design.

Course topics

none

Teaching methods

Lectures: lecture illustrated by a presentation.
Project: working with software at the computer in computer room.

Bibliography

Basic:
1. Waters. D., Logistics An Introduction to Supply Chain Management, Palgrave Macmillan, 2003.
2. Nowosielski S. (red.), Procesy i projekty logistyczne, WUE, Wrocław, 2008.
3. Pawlewski P., Budowa modelu przepływu procesu (skrypt elektroniczny), IIZ Poznań, 2009.
4. Beaverstock M., Greenwood A., Lavery E., Nordgren W., Applied Simulation, Flexsim Software Products, 2011.
6. Pacholski L., Cempel W., Pawlewski P., Reengineering. Reformowanie procesów biznesowych w przedsiębiorstwie, WPP, Poznań, 2009.
9. Feld M., Podstawy projektowania procesów technologicznych typowych części maszyn, WNT, Warszawa, 2003.

10. Synoradzki L., Projektowanie procesów technologicznych, Wydawnictwo Politechniki Warszawskiej, Warszawa, 2006.
11. Szwedzka, K., Szafer, P., Wyczółkowsk,i R., Structural analysis of factors affecting the effectiveness of complex technical systems, 30-th IBIMA Conference Proceedings, 2017.
12. Szwedzka K., Szafer P., Gruszka J., Impact of technical and technological changes on energy efficiency
of production company - case study, Mod Tech International Conference, Romania 2016, Materials Science and Engineering Organization and Management of Industrial Processes, Vol.145, 2016.

Additional:
1. Korzyński M., Podstawy technologii maszyn, Wydawnictwo Politechniki Rzeszowskiej, Rzeszów, 2008.
2. Zawora J., Podstawy technologii maszyn, WSiP, Warszawa, 2008.

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