POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

# COURSE DESCRIPTION CARD - SYLLABUS

Course name

Technological Processes Designing

## Course

Field of study

Logistic

Area of study (specialization)

technical sciences

Level of study

First-cycle studies

Form of study

part-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

obligatory

Requirements

compulsory

## Number of hours

Lecture

12

Tutorials

Laboratory classes

Projects/seminars

10

Other (e.g. online)

## Number of credit points

1

## Lecturers

Responsible for the course/lecturer:

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Faculty of Engineering Management

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Responsible for the course/lecturer:

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**Prerequisites**

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

**Course objective**

1. Student getting knowledge about the basics of designing technological processes in industry.

2. Student knows the basic concepts of: management, logistics, computer science, inventory management, operational and , the company's supply chain

3. Student understands the company's management mechanisms.

4. Student has the ability for to perceive, associate and interpret process occurring in organizations

5. Student s able to use basic information about industry technologies in the area of management.

6. Student has the ability for to perceive, associate and interpret process occurring in organizations

7. Student s able to use basic information about industry technologies in the area of management.

8. 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. - [ [K1A_W14]].

2. Student is able to explain the basic concepts of technological process design - [ [K1A_W15]].

3 Student is able to recognize basic phenomena covering the design logistic processes - [ [K1A_W16]].

4. Student has knowledge of the available simulation packages concerning technological processes - [ [K1A_W17]].

5. Student has knowledge of methods and techniques for improving technological processes [ [K1A_W18]].

6. Student is familiar with the concept of process design verification using simulation experiments - [ [K1A_W20]].

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) - [ [K1A_U05]].

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 - [ [K1A_U09]].

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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 - [ [K1A_U16]].

4. Student is able to identify process attributes and chose the correct tools for future process management- [ [K1A_U08]].

Social competences

 1. Student is willing to cooperate and work which team working on problems related to the design of technological processes - [ [K1A_K03]].

2. Student is able to identify cause-and-effect relationships in achieving objectives and rank the importance tasks in implementation of simulation projects course. - [ [K1A_K04]].

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture - final project

Project- passed project from technological process design  (groups 2-3 persons)

## Programme content

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.

## Teaching methods

Lectures: lecture illustrated by a presentation

Project: working with software at the computer in computer room

## Bibliography

Basic

1. Logistics An Introduction to Supply Chain Management, Waters. D., Palgrave Macmillan, 2003

2. Procesy i projekty logistyczne, Nowosielski S. (red.) , Wyd.UE , Wrocław, 2008

3. Budowa modelu przepływu procesu, (skrypt elektr.) , Pawlewski P., IIZ Poznań 2009

4. Beaverstock M., Greenwood A., Lavery E., Nordgren W. Applied Simulation, Flexsim Software Products, 2011

5. Logistics An Introduction to Supply Chain Management, Waters. D., Palgrave Macmillan, 2003

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6. Reengineering, Reformowanie procesów biznesowych w przedsiębiorstwie,, Pacholski, L., Cempel, W., Pawlewski P., WPP, Poznań, 2009

7. Procesy i projekty logistyczne, Nowosielski S. (red.) , Wyd.UE , Wrocław, 2008

8. Beaverstock M., Greenwood A., Lavery E., Nordgren W. Applied Simulation, Flexsim Software Products, 2011

9. Feld M., Podstawy projektowania procesów technologicznych typowych części maszyn, WNT, Warszawa 2003

10. Synoradzki L., Projektowanie procesów technologicznych, Wyd. Politechniki Warszawskiej, Warszawa 2006

Additional

Korzyński M., Podstawy technologii maszyn, Wyd. Politechniki Rzeszowskiej , Rzeszów 2008

Zawora J., Podstawy technologii maszyn, WSiP, Warszawa 2008

## Breakdown of average student's workload

|  | Hours | ECTS |
|---|---|---|
| Total workload | 30 | 1,0 |
| Classes requiring direct contact with the teacher | 22 | 1,0 |
| Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1] | 8 |  |

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[1] delete or add other activities as appropriate