# 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 Resource management for the products production

#### Course

Field of study	Year/Semester <b>2/4</b>	
Management and production engineering		
Area of study (specialization)	Profile of study	
Production systems	general academic	
Level of study	Course offered in	
Second-cycle studies	polish	
Form of study	Requirements	
part-time	elective	

## **Number of hours**

Lecture	Laboratory classes
8	8
Tutorials	Projects/seminars

Other (e.g. online)

#### Number of credit points

2

#### Lecturers

Responsible for the course/lecturer: PhD Robert Sika email: robert.sika@put.poznan.pl ph. +48 61 665 24 59 Faculty of Mechanical Engineering Piotrowo 3, 60-965 Poznań Responsible for the course/lecturer: PhD Monika Knitter email: monika.knitter@put.poznan.pl ph. +48 61 665 28 94 Faculty of Mechanical Engineering Piotrowo 3, 60-965 Poznań

#### Prerequisites



# POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS) pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

Basic knowledge of the basics of machine building, material processing technology, production management.

# **Course objective**

Understanding the basics of material security for the production of industrial products made of metal and plastic materials.

# **Course-related learning outcomes**

Knowledge

1. Student should characterize the materials used in processing and involved in the production process.

2. Student should describe the materials necessary for the implementation of the production process in the area of material technology.

3. The student should present the application (meaning) for the implemented process in the field of material technology.

#### Skills

1. Student is able to analyze the course of the manufacturing process.

2. Student can select the appropriate material for the implementation of the assumed process in the field of material technology.

2. Student can control the production process.

#### Social competences

1. Student is aware of the role of manufacturing processes in economy and human life.

- 2. Student shows active attitude in creation of product manufacturing processes.
- 3. Student is able to evaluate the quality and economics of product manufacturing processes.

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows: Lecture:

Pass based on a case study performed during the course and a test.

## **Programme content**

#### Lecture:

1. Review of materials used in industrial production processes.

2. Manufacturing processes used in plastics processing and foundry technologies.

3. Assessment of suitability of materials for related technological processes and operations with processing.



# POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS) pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

4. Economic and organizational criteria, taking into account the purchase price, delivery date, transport, storage.

5. Technical and economic criteria, eg unit consumption, quantity and form of production waste.

6. Selection of materials for the production of cast products and plastics.

7. The course of the production of products from the inquiry, through the preparation of the offer, order, production to shipment of the product to the customer.

# **Teaching methods**

Lecture: multimedia presentation illustrated with examples given on the board, solving problems.

## **Bibliography**

Basic

1. Joint guidebook - Plastics, WNT, Warsaw 2006.

2. A. Tabor, Foundry, Wyd. Of the Krakow University of Technology, Krakow 2007.

3. Plastic processing, Erbel S., Kuczyński K., Marciniak Z., PWN, Warsaw, 1981.

Additional

1. M.Perzyk et al., Materials for the design of foundry processes, PWN Warszawa 1990.

2. Guide. Tworzywa Sztuczne, Collective work, WNT, Warsaw, 2006.

3. Haponiuk J.T.; Plastics in practice; Ed. Verlag Dashofer, Warsaw 2008.

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	20	1,0
Student's own work (literature studies, preparation for	30	1,0
laboratory classes/tutorials, preparation for tests/exam, project		
preparation) <sup>1</sup>		

<sup>&</sup>lt;sup>1</sup> delete or add other activities as appropriate