COURSE DESCRIPTION CARD - SYLLABUS

Course name

Logistics of the operation processes of technical systems

Course

Field of study

Management and Production Engineering

Area of study (specialization)

Production enterprise logistics

Level of study

Second-cycle studies

Form of study

part-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

elective

Number of hours

Lecture

10

Laboratory classes

Other (e.g. online)

Tutorials

8

Projects/seminars

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

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Faculty of Mechanical Engineering

Piotrowo 3 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

Knowledge: The student has knowledge of logistics, inventory management, the basics of production management, basic technologies used in machine building), basic knowledge of information systems.

Skills: The student recognizes the type and form of production organization, is able to analyze the flow of materials, uses the basic techniques and methods to optimize bottlenecks in terms of logistics.

Social competences: The student is able to use engineering, logistics and IT knowledge to define specific problems in production and propose a solution to them. Understanding the need to expand your competences, readiness to cooperate as part of the team.

Course objective

Preparation of a project related to the development of the principles of operation of the technical system implemented in the production hall (or warehouse) in relation to the selected product range, taking into account engineering and technical as well as economic and organizational issues.

Course-related learning outcomes

Knowledge

1. Has detailed knowledge of production costs, especially the cost structure and classification, as well as cost monitoring and control.

2. Has general knowledge of logistic processes and systems.

3. Knows the basic principles of creating and operating small and medium-sized enterprises, as well as service companies

4. Knows the basic processes of technical systems operation

Skills

1. Is able to analyze the production capacity, interpret the results of this analysis and propose solutions aimed at minimizing the effects of limiting the production capacity.

2. Can develop a plan for the distribution of production stands, select their equipment and calculate indicators characterizing a production stand (or group of workstations). He is able to develop a plan of technical devices inspection.

3. Can manage inventory, in particular, develop a delivery plan using various tools. He can determine the most advantageous purchasing strategy, safety stock.

Social competences

1. Through synthetic knowledge of techniques and technologies, combined with the physical interpretation of the above-mentioned techniques, the student is aware of the need to convey information and opinions on the achievements of the technique in a manner commonly understandable to the general public.

2. Is able to cooperate and manage a team performing tasks in the field of production management and control (acting, inter alia, in the so-called matrix organization), and in the field of economic analyzes (including budget preparation).

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The project is carried out in groups of 3-4 people during the classes. Students develop a project of the technical system operation process on the example of a selected device.

The condition for passing the project is:

- handing over the complete version of the project during the last class

- response to min. 1 question asked by the facilitator (each person answers individually)

Grades:

3.0 the above-mentioned conditions and a satisfactory 1 answer to min. 1 question

4.0 conditions of the above-mentioned and a satisfactory 1 answer to min. 2 questions

5.0 conditions of the above-mentioned and a satisfactory 1 answer to min. 3 questions

Programme content

Implementation of the project entitled "Logistics of technical systems operation processes" in terms of the flow of materials and communication and logistics information.

PROJECT OBJECTIVE:

Consolidation of theoretical and practical issues regarding:

- basics of production technology in the following industries: foundry, plastic working, heat treatment, machining, welding, assembly

- production systems and production logistics (supply, sale)

- elements of production management, forms of production organization

- IT systems (PPC, e.g. ERP and CAx)

- designing the material flow system on a micro and macro scale

ASSUMPTIONS ON PROJECT:

- project carried out by a team (4-5 people)

- the person receives guidelines for the development of the topic or implements their own idea (after approval by the tutor)

- the most complete analysis possible with the assessment of a given solution in terms of logistics and production systems? the most optimal solution in terms of implementation costs and / or profits

- the deadline for delivering in paper form and defending the project is final

Teaching methods

Multimedia presentations with commentary, panel discussion, ongoing individual consultations

Bibliography

Basic

1. Fertsch M., Logistyka Produkcji, wyd. Instytut Logistyki i Magazynowania, Poznań 2003

2. Fijałkowski J., Transport wewnętrzny w systemach logistycznych. Wybrane zagadnienia, Oficyna Wydawnicza PW, Warszawa 2003

3. Gubała M., Popielas J., Podstawy zarządzania magazynem w przykładach, wyd. Instytut Logistyki i Magazynowania, Poznań 2002

4. Korzeń Z., Logistyczne systemy transportu bliskiego i magazynowania, wydanie I, seria: Biblioteka Logistyka, wyd. ILiM, Poznań 1998

Additional

1. Krzyżaniak S., Podstawy zarządzania zapasami w przykładach, wyd. Instytut Logistyki i Magazynowania, Poznań 2002

2. Lech P., Zintegrowane systemy zarządzania ERP/ERP II. Wykorzystanie _w biznesie, wdrażanie, wyd. DIFIN, Warszawa 2003

3. Pająk E., Zaawansowane technologie współczesnych systemów produkcyjnych, wyd. PP, Poznań 2000

4. Pfohl H.C., Systemy logistyczne, BL, wyd. ILiM, Poznań 2001

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, data collection and processing), preparation of the presentation of a given topic [1]	30	1,0

[1] delete or add other activities as appropriate