Methods of Organizaing Production Processes - course description

General information

Course name	Methods of Organizaing Production Processes
Course ID	06.1-WM-ER-MiBM-03_18
Faculty	Faculty of Mechanical Engineering
Field of study	WM - oferta ERASMUS
Education profile	-
Level of studies	Erasmus programme
Beginning semester	winter term 2022/2023

Course information

Semester	2
ECTS credits to win	2
Course type	obligatory
Teaching language	english
Author of syllabus	• dr inż. Joanna Cyganiuk

Classes forms

The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	15	1	-	-	Exam
Laboratory	15	1	-	-	Credit with grade

Aim of the course

The aim of the course is to familiarize students with production systems, parameters and indicators of production processes, with their control, management and productivity.

Prerequisites

Manufacturing Processes

Scope

The content of the lecture:

Basic notions, manufacturing systems and processes, Parameters of production processes. Types, forms and variants of the organization of production. Duty of production, possibilities and production reserves. Production control and planning. Rules of the control of production flow. Methods of intercellular and intracellular production flow control. Modern methods of production control. Production management. Methods and techniques of organization and management. Styles of management. Information in management. Rating of productivity - notions and indicators. Factors improving productivity.

The content of the laboratory:

Ordering vertexes in operation networks. Calculations in the network activities. Production costs. Determining the size of the production batch. The parameters of work and work means: machine and worker. Parameters of workstation: output parameters– simple and complex. Output parameters: production cycle: serial, serial-parallel and parallel run of details creating. Production stock in progress – determination. Determining types of production. Calculations of parameters of details and details in operation. Scheduling work in a company. Preparation of parameters for production scheduling - calculations. Develop work schedules for machines and workers. Linear programming.

Teaching methods

Lecturers are given with the use of multimedia technics. Work with specialist literature – textbooks, professional journals.

Laboratory are given with the use of computer software and in the written way. Individual and group job during the realization of classes exercises.

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
The student can properly determine priorities for implementation of tasks specified by themselves or others.		• carrying out laboratory reports	• Laboratory
The student can identify and choose appropriate indicators describe the production process in the range of production organization, he can interpret the results and draw conclusions. He can also suggest improvements and enhancements to existing organizational solutions in the manufacturing plant.		• a test • carrying out laboratory reports	• Laboratory
The student can integrate knowledge of the field of science relevant to Mechanical Engineering, and taking into account non-technical aspects.		• a test • carrying out laboratory reports	• Laboratory

Outcome description	Outcome symbols	Methods of verification	The class form
The student can identify factors affecting the economic aspect of making decision- in a manufacturing company.		• a test • carrying out laboratory reports	• Laboratory
The student can interact and work in a group as well as independently, he can work as a leader or as a member of a larger group.		• carrying out laboratory reports	• Laboratory
The student has a basic knowledge of the methods of organizing production processes, determining production and economic indicators related to running a production.		• an exam - oral, descriptive, test and other	• Lecture
The student has knowledge necessary to understand determinants of organizational and non-technical engineering activities related to the production processes and the knowledge of how to consider determinants in engineering practice.		• an exam - oral, descriptive, test and other	• Lecture
The student can use analytical and computer methods to formulate and solve problems of organization of production processes.		• carrying out laboratory reports	• Laboratory

Assignment conditions

To get a credit the student has to pass all course forms.

Recommended reading

1. Kiran D.R., Work Organization and Methods Engineering for Productivity, Butterworth-Heinemann, USA 2020,
2. Creese R., Introduction to Manufacturing processes and materials, Taylor and Francis, USA 1999,
3. Gerwin D, Kolodny H., Management of Advanced Manufacturing Technology: Strategy, Organization, and Innovation, New York 1992,

Further reading

Notes

Modified by dr inż. Joanna Cyganiuk (last modification: 28-04-2022 21:51)

Generated automatically from SylabUZ computer system