STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Production Planning and Control	**1011105331011110287**

Field of study	Profile of study (general academic, practical)	Year /Semester
Engineering Management - Part-time studies -	**(brak)**	**2 / 3**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
Production and Operations Management	**Polish**	**elective**

Cycle of study:	Form of study (full-time,part-time)
Second-cycle studies	**part-time**

No. of hours	No. of credits
Lecture: **12** Classes: **12** Laboratory: **10** Project/seminars: **-**	**4**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**4 100%**
Technical sciences	**4 100%**

Responsible for subject / lecturer:

dr inż. Łukasz Hadaś
email: lukasz.hadas@put.poznan.pl
tel. (61) 665 34 01
Wydział Inżynierii Zarządzania
ul. Strzelecka 11 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	The student knows the basic concepts related to the management of production
2	**Skills**	The student has the ability to perceive and interpret the facts taking place in the sphere of production
3	**Social competencies**	The student understands the responsibility for decisions related to planning and shop floor control of production

Assumptions and objectives of the course:

Getting to know the basics of the issues relevant to the field of production planning, presentation methods of production planning and shop floor control, and their conditions of use. Realization of the project system for planning and the system of production planning and shop floor control

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. He has knowledge of the methods production planning and shop floor control - [K2A_W01]
2. He has expanded knowledge of organizational relationships existing between organizational units of the company in production area - [K2A_W05]
3. He knows the methods and tools for modeling decision-making processes, algorithms, and their inter-action of cause and effect in a hierarchical system of production planning and time relations - [K2A_W09]
4. He has expanded knowledge about the mechanisms of creation business-organizing at the level of creation of production units - [K2A_W12]

Skills:

1. He is able to use theoretical knowledge to describe and analyze the processes in production planning system and can formulate their own opinions and choose the critical data and analysis - [K2A_U02]

2. He is able to properly analyze the causes and course of the processes in production planning system to formulate their own opinions on the subject and formulate simple hypotheses and verify them - [K2A_U03]

3. He is able to modeling complex phenomena involving processes in area of production planning using advanced methods and tools in the field of economics and management science discipline - [K2A_U04]

4. He has the ability to use the knowledge gained in the field of production planning and control, enhanced by a critical analysis of the effectiveness and suitability of applied knowledge - [K2A_U06]

5. He has the ability to self-propose solutions to the specific problem of the management in the production planning and shop floor control - [K2A_U07]

Social competencies:

1. He has a sense of responsibility for their own work and the willingness to comply with the rules of work in a team and to take responsibility for collaborative tasks - [K2A_K02]

2. He can see cause and effect depending on the system design production planning and shop floor control, and able to prioritize their importance - [K2A_K03]

3. He is aware of the interdisciplinary nature of knowledge of production management and have the skills required to solve complex problems of organization - [K2A_K06]

Assessment methods of study outcomes

Formative assessment:

a) For the project: on the basis of progress in the implementation stages of the project, and knowledge of the issues necessary to carry b) for the lecture: on the basis of answers to questions about the topics covered in previous lectures

Recapitulative assessment:

a) For the project: on the basis of (1) the quality of the project (2) answers to questions about the project b) for the lecture: on the basis of exam - written work on the issues discussed during the lecture. The exam can be applied after obtaining the ratings of the project and the laboratory. The exam is passed, after giving the correct answers to most questions

Course description

Lecture: presentation of three basic concepts of production planning: global, hierarchical and successive. Planning decisions at the level of production: strategic, tactical and operational level. Planning decisions at the level of production: finished goods, components and operations.

Presented is the basic model of planning: a model MRP and MRPII. Presented is the concept of Lean Production with the 5-phase implementation process. Discussed is the idea of shop floor control of the production, base control model and control principles (rules) and methods of interdepartmental and inter-departmental production control.

Project: Project: Creation of the planning and shop floor control system for the fixed production and organizational conditions including the planning at the level of finished goods, components and operations. Creation of a system of indicators (controlling) for the manufacturing process.

Basic bibliography:

1. Hadaś Ł., Fertsch M., Cyplik P., Planowanie i sterowanie produkcją, Wydawnictwo Politechniki Poznańskiej, Poznań, 2012

2. Senger Z., Sterowanie przepływem produkcji, Wydawnictwo Politechniki Poznańskiej, Poznań, 1998

3. Fertsch M., Podstawy zarządzania przepływem materiałów w przykładach, Biblioteka logistyka, Wydawnictwo ILiM, Poznań, 2003

Additional bibliography:

1. Brzeziński M., Organizacja i sterowanie produkcją. Projektowanie systemów produkcyjnych i procesów sterowania produkcją, Agencja Wydawnicza Placet, Warszawa 2002.

2. Liker J. K., Droga Toyoty. 14 zasad zarządzania wiodącej firmy produkcyjnej świata, MT Biznes, Warszawa 2005

3. Goldratt E., Cox J., Cel. Doskonałość w produkcji, WERBEL, Warszawa 2000

Result of average student's workload

Activity	Time (working hours)
1. Lecture	30
2. Project	30
3. Own work	5
4. Preparing to pass exam	10

Student's workload

Source of workload	hours	ECTS
Total workload	100	4

Contact hours	60	2
Practical activities	30	2