STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
(-)	**1011102211011105166**

Field of study	Profile of study (general academic, practical)	Year /Semester
Engineering Management - Full-time studies -	**(brak)**	**1 / 1**
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	**full-time**

No. of hours	No. of credits
Lecture: **15** Classes: **-** Laboratory: **-** Project/seminars: **15**	**3**

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 %)

Responsible for subject / lecturer:

prof. dr hab. inż. Stefan Trzcieliński, prof. nadzw.
email: stefan.trzcielinski@put.poznan.pl
tel. +48 61 665 3373
Faculty of Engineering Management
ul. Strzelecka 11 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	The student Has knowledge about organization science, basis of management and basis of production organization.
2	**Skills**	He is able to identify the forms of organizational structures and is skilled in calculation of basic parameters used to design production system structure (manufacturing cells and lines).
3	**Social competencies**	He presents the readiness to update and develop his knowledge and skills. Is open for team based working.

Assumptions and objectives of the course:

-The goal of the course is to become familiar with the lean toolbox and to be able to improve the organization of lean enterprise.

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

Knowledge:

1. The student has the knowledge about the methods and tools used to balance the production systems. - [K2A_W03]
2. He has knowledge about organization of materials flow in production systems. - [K2A_W05]
3. He knows the methods of modeling of the information-decision processes (the dynamic of management systems). - [K2A_W08, K2A_W14, K2A_W15]
4. He knows the methods supporting the innovation processes (TRIZ). - [K2A_W09]

Skills:

1. The student is able to diagnose the sources of wastes in manufacturing systems - [K2A_U02, K2A_U03]
2. Taking into consideration the social and cooperative relations he is able to estimate the forms of production system structure. - [K2A_U05]
3. He is able to choose and use proper methods and tools to eliminate or reduce the wastes in manufacturing systems. - [K2A_U06, K2A_U07]

Social competencies:

1. The student is conscious about the Leeds to play variety of roles in designing and implementing the methods and tools of lean management. - [K2A_K02]
2. He is able to perceive the cause and effect relations in the process of achieving the goals and rank the importance of alternative or competitive tasks. - [K2A_K03]
3. He is conscious about the necessity of interdisciplinary knowledge and skills to resolve complex problems of the organization and about the usefulness of creating the interdisciplinary teams for designing and implementing methods and tools of lean management. - [K2A_K06]

http://www.put.poznan.pl/

Assessment methods of study outcomes

-Forming appraisal:

a) Project activities: on the base of current progress in performing the tasks concerning the implementation of lean manufacturing tools (Kanban, SMED).

b) Lectures: on the base on oral or written answers for the questions concerning the current and previously studied material.

Final appraisal:

a) Project activities: the average from the grades for particular projects.

b) Lectures: the average from the particular forming grades.

Course description

-The genesis of the paradigm of the lean enterprise. The tools of lean production: the typology of the lean production tools; the tools for new product development and introducing into the market; the system analysis and value stream mapping; quality - chosen tools; production; improvement.

Basic bibliography:

1. Trzcieliński S. (2007,Ed.). Agile enterprise. Concepts and some results of research. IEA Press, Madison.

2. Womack J.P., Jones D.T., Roos D. (1990). The machine that changed the world, New York, Rawson Associates.

3. Bicheno J. (2000). The lean toolbox, Buckingham, PICSIE Books.

Additional bibliography:

1. Trzcieliński S., Włodarkiewicz-Klimek H., Pawłowski K. (2013). Współczesne koncepcje zarządzania. Wydawnictwo Politechniki Poznańskiej, Poznań.

2. Pawłowski E., Pawłowski K., Trzcieliński s. (2010). Metody i narzędzia lean manufacturing. Materiały dydaktyczne. Wydawnictwo PP: Poznań

Result of average student's workload

Activity	Time (working hours)
1. Lecture	15
2. Preparation before the lecture: 6x2h	12
3. Project activities	15
4. Preparation before the project - outdoor work: 2x15h	30
5. Consult of the project tasks: 2x2h	4

Student's workload

Source of workload	hours	ECTS
Total workload	76	3
Contact hours	38	2
Practical activities	38	1

http://www.put.poznan.pl/