STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Process - Product Integration**	Code **1011101241011117816**

Field of study **Logistics - Full-time studies - First-cycle studies**	Profile of study (general academic, practical) **(brak)**	Year /Semester **2 / 4**

Elective path/specialty **-**	Subject offered in: **Polish**	Course (compulsory, elective) **elective**

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

No. of hours Lecture: **15** Classes: **-** Laboratory: **-** Project/seminars: **15**	No. of credits **2**

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

Education areas and fields of science and art **technical sciences**	ECTS distribution (number and %) **100 2%**

Responsible for subject / lecturer:

dr inż. Paweł Pawlewski
email: pawel.pawlewski@put.poznan.pl
tel. 61 6653413
Wydział Inżynierii Zarządzania
ul. Strzelecka 11 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of manufacturing, logistics, economics
2	**Skills**	Student has the ability to associate and interpret the phenomena occurring in the enterprise
3	**Social competencies**	Student is aware of the consequences of the decisions

Assumptions and objectives of the course:

- Analysis of the paradigms of production from the point of view of technical and business
- Show the need for integration between engineering and business

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

Knowledge:

1. Can define the content and scope of the integration process and product - [K1A_W16]

2. Can point out the basic formulas applicable in the area of integration of product and process - [K1A_W14]

3. Can explain in detail specific concepts for the integration of process and product - [K1A_W17]

4. Has a basic knowledge of the life cycle of socio-technical systems in the context of the integration process and product - [K1A_W21]

5. Has a basic knowledge of the life cycle of industrial products - [K1A_W22]

Skills:

1. Can design a process analysis for the integration of product and process   - [K1A_U05]

2. Can present with appropriate personal problem with the product lifecycle   - [K1A_U02]

3. Able to prepare and present an oral presentation concerning the specific issues of logistics in Polish and foreign language - [K1A_U03]

4. Able to independently develop a given issue, which forms part of this item   - [K1A_U05]

5. It can make a critical analysis of the phenomenon of falling within the integra process and product [- [K1A_U13]

Social competencies:

1. Student is sensitive to the non-technical aspects and effects of engineering activities, including its impact on the environment, and the related responsibility for decisions - [K1A_K02]

2. Student is willing to cooperate and work in teams to resolve problems - [K1A_K03]

3. Able to plan and manage in an entrepreneurial - [K1A_K06]

Assessment methods of study outcomes

-Assessment of the project, colloquia

Course description

- manufacturing paradigms - mass production. production of "lean", mass customization and personalization of production - models and principles

-Product design in the global environment - creativity in product design, modular architecture

- Production systems and supply chains - dedicated systems, flexible and reconfigurable, supply chain of the global market

- Business Issues - business model, financial, preparing a business plan

Basic bibliography:

1. Projektowanie produktu, Richard Morris, PWN, Warszawa, 2009

2. Nowoczesne wzornictwo od A do Z Nowoczesne wzornictwo od A do Z, Wydawnictwo Olesiejuk, 2010

3. Inżynieria zarządzania część 1, Ireneusz Durlik, Placet, 2007

4. The Global Manufacturing revolution, Yoram Koren, Wiley 2010

Additional bibliography:

1. Prawdziwe historie nowych produktów, Robert J. Thomas, Prószyński i S-ka, 2001

2. Steve Jobs, Walter Isaacson, Insignis Media , 2011

Result of average student's workload

Activity	Time (working hours)

Student's workload

Source of workload	hours	ECTS
Total workload	60	2
Contact hours	15	0
Practical activities	15	0