## STUDY MODULE DESCRIPTION FORM

| Name of the module/subject<br>**Logistics support analysis** | | Code<br>**1011102411011117659** |
|---|---|---|
| Field of study<br>**Logistics - Full-time studies - Second-cycle** | Profile of study<br>(general academic, practical)<br>**general academic** | Year /Semester<br>**1 / 1** |
| Elective path/specialty<br>**Chain of Delivery Logistics** | Subject offered in:<br>**Polish** | Course (compulsory, elective)<br>**elective** |
| Cycle of study:<br>**Second-cycle studies** | Form of study (full-time,part-time)<br>**full-time** | |

| No. of hours<br>Lecture: **30**    Classes: **-**    Laboratory: **-**    Project/seminars: **30** | No. of credits<br>**5** |
|---|---|
| Status of the course in the study program (Basic, major, other)<br>**other** | (university-wide, from another field)<br>**university-wide** |

| Education areas and fields of science and art<br><br>**technical sciences**<br>**Technical sciences** | ECTS distribution (number and %)<br><br>**5   100%**<br>**5   100%** |
|---|---|

### Responsible for subject / lecturer:

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### Prerequisites in terms of knowledge, skills and social competencies:

| 1 | **Knowledge** | Student has general knowledge in logistics |
|---|---|---|
| 2 | **Skills** | Student has general skills in logistics |
| 3 | **Social competencies** | Student has social skills in logistics |

### Assumptions and objectives of the course:

Providing knolwedge, skills and social competences connected woth analysis of logistics support

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

**Knowledge:**

1. Student is able to identify interdependencies and relations within area of Logistics suport and their connection to Logistics  - [K2A_W02]

2. Student knows basic relations between technical and economic sphere typical for Logistics support  - [K2A_W04]

3. Student knows basic terms and definitions typical for Logistics support - [K2A_W09]

4. Student is familiar with process mapping idea and generally process approach  - [K2A_W10]

5. Student is familiar with IT systems applicable in Logistics support area   - [K2A_W12]

6. Student is able to identify and explain methods, tools and means applicable in Logistics support area   - [K2A_W13]

**Skills:**

1. Student is able to communicate with proper means in professional environment and other environments connected with Logistics support area   - [K2A_U02]

2. Student is able to develop and present in Polish or in foreign language analysis of a given problem within Logistics support area  - [K2A_U04]

3. Student is able to benefit from self-learning   - [K2A_U05]

4. Student is able to define and solve problem integrating interdisciplinary  knowledge from the disciplines within logistics  - [K2A_U10]

5. Student is able to identify areas for improvement within Logistics system    - [K2A_U16]

**Social competencies:**

1. Student is aware of responsibility for own work and ready to obey team work principles, including sharing responsibility for group tasks  - [K2A_K03]

2. Student is able to identify interdependencies and cause-effect relations in striving for goals and prioritize tasks  - [K2A_K04]

## Assessment  methods of study outcomes

Forming assessment

a) project ? discussion on solution, students developed in their project, b) answering questions discussed dusring lecture and refering to issues presented

Final assessment

project  a) public presentation of project outcomes and discussion on solutions developed b) quality of project developed

lecture: presentation of analysis of a problem defined by the coordinator, answering questions concerning subject content

## Course description

Course content: Logistic support planning. Organization of supplies of materials necessary for the implementation of logistics support. Providing control and support equipment. Packaging, storage and transport of materials necessary for the implementation of logistics support.

Providing and training of staff implementing logistic support. Creating and ensuring the availability of infrastructure necessary for the implementation of logistic support. Gathering and ensuring the availability of data necessary for the implementation of logistic support. Providing IT support for the implementation of logistics support.

Analysis of logistic support: Defining the problem, identifying available alternatives, selecting alternatives assessment criteria, selecting alternatives methods and techniques, data collection and use, performance analysis, sensitivity analysis, risk and uncertainty analysis

In the design classes, students use the analysis of logistic support in the conditions defined by the teacher.

Teaching methods: conventional specialist lecture, team project, work with literature

### Basic bibliography:

1. Fertsch M., Elementy inżynierii logistycznej ( rozdz. 1 i2), Wydawnictwo Instytutu Logistyki i Magazynowania, Poznań, 2017

2. Blanchard B., Logistics engineering and management, Pearson Education International, Upper Saddle River, New Yersey

3. Don Taylor G., Introduction to logistics engineering, CRC Pres, Taylor & Francis Group, London, New  York, 2009

4. Fertsch M., (2003), Miejsce logistyki we współczesnym zarządzaniu produkcją, [w:] Fertsch M., Logistyka produkcji, Instytut Logistyki i Magazynowania, Poznań 2003, ( ISBN 83-87344- 36-2)

### Additional bibliography:

1. Fertsch M., (2008), Rekonfigurowalne systemy logistyczne ? nowy obszar badań i zastosowań praktycznych, [w:] Foltynowicz Z., Jasiczak J., Szyszka G. (red.), Towaroznawstwo ? opakowania ? logistyka, Wydawnictwo Akademii Ekonomicznej, Poznań, 2008

2. Pawlewski P., Fertsch M., (2010), Modeling and Simulation Method to Find and Eliminate Bottlenecks in Production Logistics Systems, Proceedings of The 2010 Winter Simulation Conference; B. Johansson, S. Jain, J. Montoya-Torres, J. Hugan, and E. Yücesan, (eds).

## Result of average student's workload

| Activity | Time (working hours) |
|---|---|
| 1. lectures | 30 |
| 2. project | 30 |
| 3. consultation | 35 |
| 4. work with literature | 30 |

## Student's workload

| Source of workload | hours | ECTS |
|---|---|---|
| Total workload | 125 | 5 |
| Contact hours | 95 | 3 |
| Practical activities | 65 | 2 |