

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Normalization and Quality management in logistics</b>		Code <b>1011104461011102998</b>
Field of study <b>Logistics - Part-time studies - First-cycle</b>	Profile of study (general academic, practical) <b>general academic</b>	Year /Semester <b>3 / 6</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time,part-time) <b>part-time</b>	
No. of hours Lecture: <b>14</b> Classes: <b>14</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>5</b>
Status of the course in the study program (Basic, major, other) <b>other</b>		(university-wide, from another field) <b>university-wide</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>5 100%</b> <b>5 100%</b>
<b>Responsible for subject / lecturer:</b> prof. dr hab. inż. Józef Fraś email: jozef. Fras@put.poznan.pl tel. +48 61 665 34 17 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		<b>Responsible for subject / lecturer:</b> dr inż. Anna Mazur email: anna.mazur@put.poznan.pl tel. -+48626653365 -Faculty of Engineering Management -ul. Strzelecka 11 60-965 Poznań
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Student knows and understands basic notions and rules within the rudiments of logistics and management
2	<b>Skills</b>	Student can apply and use basic knowledge of elementary logistics and management
3	<b>Social competencies</b>	Student is aware of the need to develop products along with requirements
<b>Assumptions and objectives of the course:</b> Acquiring competence of understanding fundamental notions and acquiring practical skills to solve problems within normalization and quality management		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. knows the basic dependencies of logistics and its specific issues (inventory management, distribution logistics, production and supply logistics, operation logistics, environmental management) and supply chain management (T1A_W03) - [K1A_W14]		
2. it can explain in detail the qualitative concepts for logistics and its specific issues (inventory management, distribution logistics, production and supply logistics, operation logistics, environmental management) and supply chain management (T1A_W04) - [K1A_W17]		
3. can formulate the basic principles of quality management in logistics and its specific issues (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) as well as supply chain management(T1A_W04) - [K1A_W18]		
4. it can identify modern trends in quality development within logistics and its specific issues (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) as well as supply chain management (T1A_W05) - [K1A_W19]		
5. it can characterize the best practices of managing and improving quality within logistics and its specific issues (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) and supply chain management(T1A_W05) - [K1A_W20]		
6. knows basic methods, techniques and tools used in quality management of logistic processes(T1A_W07) - [K1A_W24]		
7. basic knowledge of quality engineering in relation to logistics products and processes(T1A_W09) - [K1A_W27]		
<b>Skills:</b>		

1. can search based on the literature of the subject and other sources and in an orderly manner to present information on quality issues within the framework of logistics and its specific issues (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) and supply chain management(T1A\_U01) - [K1A\_K01]
2. can be presented with appropriate measures of quality management within the framework of logistics and its specific issues (inventory management, distribution logistics, production and supply logistics, logistics, ecologistics) and supply chain management(T1A\_U02) - [K1A\_K02]
3. he is able to solve problems within the studied subject - normalization and quality management in logistics (T1A\_U05) - [K1A\_K05]
4. can formulate with analytical, simulation or experimental methods within the studied subject the design task and solve this task in the field of logistics and its specific issues and supply chain management (T1A\_U09) - [K1A\_K09]
5. It can recognize systemic and non-technical aspects as well as socio-technical, organizational and economic aspects when formulating and solving engineering tasks (T1A\_U10 - [K1A\_K10]

#### **Social competencies:**

1. Student is aware of the need for lifelong learning; inspiring and organizing the learning process of other persons within the framework of the issues falling in the subject matter of the studied field(T1A\_KO1) - [K1A\_K01]
2. Student is sensitive to non-technical aspects and effects of engineering activities, including its impact on the environment and connected with it, responsibility for decisions in respect of a part of the logistics and supply chain management(T1A\_KO2) - [K1A\_K02]
3. Student is willing to cooperate and work in a group over the solutions to the problems that fall within the studied subject(T1A\_KO3) - [K1A\_K03]
4. Student is able to plan and manage in an entrepreneurial way(T1A\_KO6) - [K1A\_K06]

#### **Assessment methods of study outcomes**

##### Formative assessment:

- a) in the area of exercises: current checking of knowledge and skills during the accounting and graphic exercises,
- b) in the scope of the project: on the basis of evaluation of the implementation of the next stages of the project and knowledge of the issues necessary for its implementation, work within the project group
- c) in lectures: on the basis of answers to questions about the material assimilated at the current and previous lectures,

##### Collective assessment:

- a) within the scope of the exercises: on the basis of the results of the average score of the formative assessment, passing the examination after obtaining at least an assessment of 3.0,
- b) in the scope of the project: public (within the Dean Group) presentation of the project completed by discussion, project completion after obtaining at least 3.0,
- c) in the scope of lectures: examination in the form of written work. The examination is awarded after obtaining at least an assessment of 3.0.

#### **Course description**

The concept of quality and quality management. Development of quality in the product lifecycle. Definition and types of standards. The legal bases for normalization. Conformity assessment System. European directives and harmonised standards. Principles of quality management. Management systems standards (with particular regard to the aspect of logistics). The quality management system and its elements. Customer service in logistics processes. Monitoring and measuring compliance with the requirements of logistics processes. The selected methods and tools of quality management and improvement of logistic processes

##### Didactic methods:

- 1) lectures - teaching method: a monographic lecture with problem elements.
- 2) exercises - auditorium exercises with elements of the project.
- 3) project - team performance of the project task.

#### **Basic bibliography:**

1. Frań J. Normalizacja i zarządzanie jakością w logistyce, Wydawnictwo Naukowe Ploitechniki Poznańskiej, Poznań 2015
2. Hamrol A., Zarządzanie jakością z przykładami, Wyd. Naukowe PWN, Warszawa 2008
3. Ładoński W., Szołtysek K. (red.), Zarządzanie jakością. Część 2. Ochrona jakości wyrobów w łańcuchu logistycznym (Quality management. Part 2. Protection of the products quality in the logistic chain), Wyd. AE Wrocław 2007.
4. Golaś H., Mazur A., Zarządzanie Jakością, Wyd. PP, Poznań 2011
5. Karaszewski R., Skrzypczyńska K., Zarządzanie jakością, Wydawnictwo TNOiK, Toruń, 2013

<b>Additional bibliography:</b>		
1. Fraś J., Kompleksowe zarządzanie jakością w logistyce, Wydawnictwo Naukowe Instytutu Technologii Eksploatacji w Radomiu, Radom 2013		
2. Łunarski J., Zarządzanie jakością w logistyce, Oficyna Wydawnicza Politechniki Rzeszowskiej, Rzeszów 2012		
3. Coyle J.J., Bardi E.J., Langley Jr. C.J., Zarządzanie logistyczne, PWE, Warszawa 2010		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. lecture	14	
2. preparation for exam	50	
3. classes	15	
4. preparation for classes	42	
5. project	0	
6. preparation of project work	0	
7. consultations	3	
8. carrying out an examination	2	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	125	5
Contact hours	33	3
Practical activities	14	2