

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Quality engineering 1		Code 1011101151011123823
Field of study Safety Engineering - Full-time studies - First-	Profile of study (general academic, practical) general academic	Year /Semester 3 / 5
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 2
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 100 2% 100 2%
Responsible for subject / lecturer: dr inż. Małgorzata Jasiulewicz-Kaczmarek email: malgorzata.jasiulewicz-kaczmarek@put.poznan.pl tel. 00 48 61 665 33 65 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		Responsible for subject / lecturer: dr inż. Anna Mazur email: anna.mazur@put.poznan.pl tel. 00 48 61 665 33 65 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student defines and describes basic concepts in safety engineering. Student knows rudimentary methods, techniques, tools and materials that are applied in dealing with simple engineering tasks within safety engineering.
2	Skills	Student can assess whether any requirements have not been met. Student can interpret and describe his observations.
3	Social competencies	Student is aware of the meaning of quality for potential addressees and creators of its level. Student is aware of the need to develop products and processes with respect to quality.
Assumptions and objectives of the course: The aim of the course is to provide students with theoretical aspects and practical skills in the application of quality engineering in relation to products and processes.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Students knows advanced dependencies that are present within the framework of quality engineering of products and processes - [-] 2. Student knows concepts for quality engineering of products and processes - [-] 3. Students knows phenomena characteristic for quality engineering of products and processes - [-] 4. Student knows fundamental methods, techniques, tools and materials that are applied when solving elementary engineering tasks in quality engineering of products and processes - [-] 5. Student knows basic dependencies that exist in dealing with easy engineering tasks within the framework of quality engineering of products and processes - [-] 6. Student has basic knowledge concerning management, including the realm of quality engineering in respect to products and processes - [-] 7. Student has basic knowledge of running his own business - [-]		
Skills:		
1. Student can identify and formulate a specification of simple engineering tasks that are of practical nature, and are characteristic of quality engineering in respect to products and processes - [-]		
Social competencies:		
1. Understands the need to make progress, gain knowledge and acquire new skills on the professional, personal and social level; can argument the need to learn for the whole of his life - [-]		

Assessment methods of study outcomes		
<p>Forming assessment:</p> <p>a) exercises:</p> <ul style="list-style-type: none"> - assessment of the current progress of the implementation of tasks correlated with the content of lectures, - assessment of reports made by students during classes, - assessment of the correctness of conducting and reasoning of the methods learned. <p>b) lectures:</p> <ul style="list-style-type: none"> - answers to questions about the content of previous lectures, - discussion about the material to be read by yourself. <p>Summary assessment:</p> <p>a) exercises:</p> <ul style="list-style-type: none"> - in the case of 100% attendance during classes, the arithmetic mean of the partial marks obtained during the implementation of individual exercises. - if there is no turnout, the grade entered in the index is 60% of the arithmetic average of the partial marks obtained during the implementation of the individual and 40% of the oral answer to the drawn set of questions from the content covered by the exercises. <p>b) lectures: written test in the form of a test - each question scored on a scale from 0 to 1 point; colloquium is included after obtaining at least 51% of correct answers.</p>		
Course description		
<p>The concept of quality and the basis of approach to quality issues. Precors of quality management and their contribution to quality development in Poland and in the world. Problems of standardization and certification. Basics of pro-quality management (concept, principles, systems). A pro-quality approach to products and processes, taking into account the life cycle of the product. The concept of continuous improvement. Selected methods and tools for quality improvement.</p> <p>DIDACTIC METHODS:</p> <p>Lecture: informative lecture, problem lecture, work with the book, lecture. Exercises: lecture with explanation and explanation, case study, situational method, exercise method, demonstration method.</p>		
Basic bibliography:		
<ol style="list-style-type: none"> 1. Prussak W., Jasiulewicz-Kaczmarek M., Elementy inżynierii systemów zarządzania jakością, WPP 2010 2. Zymonik Z., Hamrol A., Grudowski P., Zarządzanie jakością i bezpieczeństwem Polskie Wydawnictwo Ekonomiczne, 2013 3. Starzyńska B., Hamrol A., Grabowska M., Poradnik menedżera jakości. Kompendium wiedzy o narzędziach jakości Wydawnictwo Politechniki Poznańskiej, Poznań 2010 4. Gołaś H., Mazur A., Zarządzanie Jakością, Wydawnictwo Politechniki Poznańskiej, Poznań, 2011. 		
Additional bibliography:		
<ol style="list-style-type: none"> 1. Prussak W., Zarządzanie jakością. Wybrane elementy, WPP 2006 2. ISO 9000:2015 Systemy Zarządzania Jakością. Podstawy i terminologia. 		
Result of average student's workload		
Activity	Time (working hours)	
1. lecture	15	
2. classes	15	
3. preparation for credits (based on lectures)	10	
4. preparation for classes	20	
Student's workload		
Source of workload	hours	ECTS
Total workload	60	2
Contact hours	30	1

Practical activities	30	1
----------------------	----	---