

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Quality engineering 1</b>		Code <b>1011101251011123823</b>
Field of study <b>Safety Engineering - Full-time studies - First-</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>3 / 5</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>full-time</b>	
No. of hours Lecture: <b>15</b> Classes: <b>15</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>3</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b>		ECTS distribution (number and %) <b>4 100%</b>
<b>Responsible for subject / lecturer:</b> dr inż. Hanna Gołaś email: hanna.golas@put.poznan.pl tel. 00 48 61 665 33 65 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. 00 48 61 665 33 65 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 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	<b>Skills</b>	Student can assess whether any requirements have not been met. Student can interpret and describe his observations.
3	<b>Social competencies</b>	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.
<b>Assumptions and objectives of the course:</b> Developing understanding of theoretical aspects and practical ability to use quality engineering in relation to products and processes.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
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 - [-]		
<b>Skills:</b>		
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 - [-]		
<b>Social competencies:</b>		
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 - [-]		

<b>Assessment methods of study outcomes</b>		
Formative assessment: a) Classes: current/ongoing evaluation of the tasks which are correlated with lectures b) Lectures: evaluations based on questions relating to the presented materials during the current and previous lectures  Collective assessment: a) Classes: 1. Reports presentation (based on classes); 2. oral answer to the set of questions (based on classes) b) Lectures: written test (3 open questions presented during the lecture; each question is scored 2-5 points; final result is an average of partial grades; the final test pass equals at least 3.0		
<b>Course description</b>		
Fundamental approach to the problem of quality. Problematic aspect of normalization and certification. Fundamentals of pro quality management (concepts, rules, systems). Pro quality approach to products and processes including their existence process. Economic aspect of quality. The concept of constant improvement and its precursors. Methods and tools for quality improvement.		
<b>Basic bibliography:</b> 1. Hamrol A. (2008), Zarządzanie jakością z przykładami (Quality managements with examples), Wyd. Naukowe PWN, Warszawa 2. Jasiulewicz-Kaczmarek M., Prussak W. (2010), Inżynieria systemów pro jakościowych (Pro quality system engineering), Wyd. PP, Poznań		
<b>Additional bibliography:</b> 1. Prussak W. (2003, 2006), Zarządzanie jakością. Wybrane elementy (Quality management. Selected elements), Wyd. PP, Poznań		
<b>Result of average student's workload</b>		
Activity	Time (working hours)	
1. lecture	15	
2. classes	15	
3. preparation for credits (based on lectures)	30	
4. preparation for classes	40	
<b>Student's workload</b>		
Source of workload	hours	ECTS
Total workload	100	4
Contact hours	50	2
Practical activities	15	1