



Subject card

Subject name and code	Quality management systems, environmental and safety, PG_00050259						
Field of study	Management and Production Engineering, Management and Production Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	6	ECTS credits			6.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Manufacturing and Production Engineering -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Sławomir Szymański				
	Teachers		dr inż. Sławomir Szymański dr hab. inż. Grzegorz Rogalski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	15.0	0.0	75
	E-learning hours included: 0.0						
	Systemy Zarządzania Jakością Srodowiskiem i Bezpieczeństwem - Moodle ID: 28745 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=28745						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	75		9.0		66.0	150
Subject objectives	Theory: The aim of the course is to provide basic knowledge of quality and safety management, especially modern system solutions used in the world; Skills: Learn how to make effective use of modern model solutions in the field of integrated management system in the organization.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	K6_U06	The student is able, when formulating and solving engineering tasks, to see systemic aspects of management, taking into account the human factor, using the skills in solving problems related to the profession acquired in previous courses. The student is able to assess the occupational risk in a selected workplace, is able to identify threats and select methods and means of risk reduction and elimination.	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
	K6_W08	The student is able to select and apply specific quality control tools for processes and products in order to detect and eliminate losses and increase the efficiency and quality of processes and products. The student is also able to identify the areas of integration of the quality management system with the safety management system and with the environmental management system.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
	K6_K03	The student follows the rules of ethics of the engineering profession. The student adopts a responsible attitude. The student is aware of his potential leadership role and is able to choose the methods and means of communication with the environment accordingly, significantly influencing the shaping of social attitudes in the local environment.	[SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills

Subject contents	<p>The lectures:</p> <p>The first block - Cost of Quality</p> <p>The second block - Costs of Safety and Security Management System</p> <p>The third block - Rules for Construction Quality Management System</p> <p>The fourth block - Systemic management of the work environment: Human capital; Organizational Culture; Total Quality Management, Motivating; Mobbing;</p> <p>The fifth block - Environmental Management Systems and OHS Management Systems and their integration</p> <p>The sixth block - System Audits</p> <p>Exercise Topics:</p> <p>The first block: (Quality management) methods of diagnosing qualitative problems Quality control methods (statistical quality control) Waste prevention methods in the enterprise motivating as a form of improving the effectiveness of the enterprise standardization of the workplace with elements of ergonomics</p> <p>The second block: (environmental management) ways of managing production waste in accordance with environmental standards methods of reducing harmful factors (dust), noise, radiation, temperature)</p> <p>The third block: (security management) occupational risk assessment at the workplace (RISK SCORE method) The Labor Code and the resulting health and safety regulations</p> <p>Topics of the project classes:</p> <ol style="list-style-type: none"> 1. FMEA analysis 2. A3 report 3. 8D report 4. Audit + post-audit report 								
Prerequisites and co-requisites	Knowledge of subjects: Production Management and Services, Marketing								
Assessment methods and criteria	<table border="1" data-bbox="448 1317 1490 1395"> <thead> <tr> <th data-bbox="448 1317 794 1357">Subject passing criteria</th> <th data-bbox="794 1317 1139 1357">Passing threshold</th> <th data-bbox="1139 1317 1490 1357">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 1357 794 1395">exam</td> <td data-bbox="794 1357 1139 1395">61.0%</td> <td data-bbox="1139 1357 1490 1395">100.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	exam	61.0%	100.0%
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Recommended reading	Basic literature	<p>[1] Quality Management. Vol. 1. Quality systems in the organization. Ed. Ładoński W. and K. Szołtysek, Ed. AE Wrocław, 2005.[2] Quality Management. Vol. 2. Protection of the quality in the logistics chain. Ed. Ładoński W. and K. Szołtysek, Ed. AE Wrocław 2007.[3] Quality Management. Vol. 3. Methods of shaping the quality of the organization. Ed. Ładoński W. and K. Szołtysek, Ed. EU Wrocław, 2008.</p> <p>[4] Safety and ergonomics. Vol. 1 and Vol. 2, Ed. D. Koradecka, CIOP, Warsaw 1999.[5] W. Zawieska, Occupational hazards, Vol. 1 and Vol. 2, CIOP, Warsaw 2002.[6] J. Karczewski, work safety management, ODDK, Gdańsk, 2002.[7] Hamrol, Mantur, Quality Management. Theory and examples, PWN 2010[8] Quality Management. Concepts, methods, case studies. Ted. Ewa Konarzewska - Gubała, WAE, Wrocław 2003</p>							

	Supplementary literature	[1] Fundamentals of total quality management TQM. Ed. J. Łańcucki. Ed. AE Poznan 2006.[2] M. Urbaniak, management systems in business practice. Ed. Difin, 2006.[3] literature recommended by the teacher after each theme.
Example issues/ example questions/ tasks being completed	Resources addresses Topics of student papers - proposals 1. Quality circles. 2. Quality culture. 3. Basic requirements for Safety Management contained in the Labour Code. 4. Consumer rights. 5. Determining the quality of products. 6. Signs of quality, environmental and safety. 7. Loss of quality. 8. Product life cycle. 9. Principles of conducting an interview. 10. Risk analysis on the selected workstation. 11. Quality assurance system. 12. Knowledge Management. 13. Methods of creative thinking and the use of quality systems. 14. Methods for the quantitative determination of the quality. 15. Customer satisfaction survey methods.	
Work placement	Not applicable	