

# SYLLABUS

## Course description

Course description				
Course code		Course	QUALITY MANAGEMENT SYSTEMS	
MB/O/I/NST/C2B.4			QUALITY MANAGEMENT SYSTEMS	
Language of instruction		English		
Academic year		2023 /2024		
<b>field of study:</b>		Mechanics and machine construction		
<b>field of specialisation:</b>		Designing and Manufacturing of Machines		
Educational level		first-cycle studies		
Education profile		General academic		
Mode of study		Part-time studies		
Semester(s)		7		
Affiliation with a group of classes		Specialization module		
Course status		Eligible		
Types of classes, instruction hours, ECTS credits		Types of classes	Number of instruction hours	Number of ECTS credits
		Lecture	8 [h]	3 ECTS
		Classes	8 [h]	
		Laboratory	12 [h]	
Linkage of the course	with the education profile	related to the scientific activity carried out in the discipline to which it relates		3 ECTS
	with qualifications	serves the student to acquire engineering competencies		3 ECTS
	with science discipline	of mechanical engineering		3 ECTS
Form of teaching		Traditional – classes organized at the University /classes conducted using online learning methods and techniques		
Prerequisites		has the ability to self-educate, has experience working in a team		
Department		Faculty of Mechanical Engineering		
Coordinator		dr inż. Zbigniew Siemiątkowski, prof. UTH Rad		
The website of the basic organizational unit		www.wm.uniwersytetradom.pl		
E-mail address, phone number of the coordinator		z.siemiatkowski@uthrad.pl		

## LEARNING OUTCOMES, CURRICULUM CONTENT, TEACHING CLASSES, VERIFICATION OF LEARNING OUTCOMES

Learning Objective:	<p>C1-study of basic knowledge in the field of quality management systems.</p> <p>C2-acquisition of basic skills in creating basic documents of quality management systems.</p> <p>C3-study of the basic laws and principles of the organization of quality management systems.</p>
Curriculum Content:	<p>origin and evolution of quality management.</p> <p>New Approach Directives.</p> <p>Requirements of standardized control systems.</p> <p>Main issues of general quality, methods and tools of quality, functions of the enterprise.</p> <p>TQM.</p> <p>Quality management system according to PN-EN-ISO 9001 standards; 2001</p> <p>organization of quality management systems.</p> <p>Certification of products and quality management systems.</p> <p>Internal audit.</p> <p>Quality audit.</p> <p>Documentation of quality management systems.</p> <p>Exercise content:</p> <p>perception and quality assessment.</p> <p>Methods that help quality management</p> <p>development of a qualitative</p> <p>QFD function analysis of the causes and consequences of defects</p> <p>FMEA</p> <p>experiments DOE</p> <p>Statistic receiving Control</p> <p>SKO study of the qualitative ability of machines and processes.</p> <p>X-R maps</p> <p>Pareto chart</p> <p>Brainstorming session</p> <p>brainstorming book quality:</p> <p>creating quality management system instructions</p> <p>creating quality management system procedures</p>
Didactic (educational) methods:	<p>informational lecture, problem lecture, conversational lecture</p> <p>case method, situational method, didactic games, didactic discussion,</p> <p>accounting exercises</p>
Course assessment type, the criteria for assessing the achieved learning outcomes, and the method of calculating the final grade:	<p>the condition for passing the subject is to achieve 51% of the required learning outcomes.</p> <p>Final assessment of the lecture-a prerequisite is the achievement of at least 51% of the learning outcomes evaluated on the basis of the colloquium.</p> <p>The final grade for exercises is a subjective sum of grades, 20% of the project, 80% of the activity in the classroom.</p>

Learning outcomes for the course in relation to the field of study learning outcomes and the type of classes				Methods of verifying learning outcomes	
Learning outcome number	Description of the learning outcomes for the course (PEU) A student who has passed the course ( W ) knows and understands / ( U ) can / ( K ) is ready to:	Field of study learning outcome (KEU)	Types of classes	Form of verification (credits)	Methods of testing and assessment
W1	Has knowledge in the field of building a quality management system and applying individual quality	tools	K_WK10 Lecture, project exercises	passing for evaluation	Written exam, insults Assessment
W2	Knows what tasks the quality assurance authority has and what internal audit	is K_WK10	Lecture, project exercises	passing for evaluation	Written exam, insults Assessment

U1	Can conduct brainstorm and apply other quality tools like: real fish herringbone chart, Pareto chart, etc	K_UW01 K_UW02, K_UW03 K_UW09	Lecture, Exercises Project	Grade Passing	Exam Written, Insults Score
U2	Can conduct an internal audit and demonstrate incompatibility with entries in the Quality Book	K_UW01, K_UU21, K_UW06	Lecture, exercises project	assessment	Written exam, insults Assessment
K1	Has the ability to work in a team and has a consciousness of professional behavior in accordance with the principles of professional ethics	K_KK01 K_KO03	Lecture, exercises project	assessment	Written exam, Verbal assessment
K2	Has an awareness of the impact of implementing a quality management system on the quality of the product and the economic impact of the company and understands the social role of the engineer in transmitting information and opinions nt. technology development and possible risks	associated with it	K_kk01 K_KO03 lecture, project exercises	assessment credit	written test, oral assessment

Literature and teaching aids
1. ISO 9001:2000. Systemy zarządzania jakością wymagania. 2. Kuzioła A. : Zarządzanie jakością w przemyśle maszynowym. Wyd. PR 2004. 3. Kuzioła A. : Zarządzanie jakością w przemyśle maszynowym . Ćwiczenia Wyd. PR 2006. 4. Szczepańska K.: Podstawy zarządzania jakością. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2012. 5. Szczepańska K.: Kompleksowe zarządzanie jakością. Przeszłość i terażniejszość. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2010. 6. Urbaniak M.: Kierunki doskonalenia systemów zarządzania jakością. Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2010. 7. Wawak S.: Zarządzanie jakością .Teoria i praktyka. Wyd. Helion One Press Gliwice 2002. 8. Borys T., Rogala P. (red.): Doskonalenie sformalizowanych systemów zarządzania. Difin, Warszawa 2011. 9, Hamrol A.: Zarządzanie jakością z przykładami. PWN 2008.

Student workload required to achieve the assumed learning outcomes – the balance of ECTS credits			
Attendance, participation	Student workload [h].		
	Other contact hours (IGK)	Student's self- study hours Classes without a teacher (ZBN)	Classes
Participation in ... lectures	X	X	8 [h]
Participation in .... classes/laboratory classes	X	X	20 [h]
Meeting with teachers during their duty hours	5 [h]	X	X
Preparation for lectures/classes/.... , Preparation for ... credit / exam	X	30 [h] 12 [h]	X
Total student workload	5 [h] / 0,2 ECTS	42 [h] / 1,7 ECTS	28[h] / 1,1 ECTS
ECTS credits for the course	75 [h] / 3 ECTS		

Additional information, comments
<p>In the case of students with special needs, including disabilities, and chronic illnesses, the methods and forms of verification of learning outcomes specified above (in the syllabus) are adapted to the individual needs of these students, as appropriate.</p> <p>Detailed rules and forms of support for students with special needs, including those with disabilities and chronically ill, during classes, credits, and exams are specified in: University Regulations (Regulamin Studiów Uniwersytetu Technologiczno-Humanistycznego w Radomiu), Study Regulations (Zasady Studiowania), and Procedure for Ensuring</p>

Accessibility of the Educational Process to Students with Special Needs, Including Those with Disabilities and Chronically ill (Procedura dotycząca zapewnienia dostępności procesu kształcenia studentom ze szczególnymi potrzebami, w tym: z niepełnosprawnością, przewlekle chorych).

