

Faculty of Mechanical Engineering / ROAD TRAFFIC / QUALITY SYSTEM IN TRANSPORT

Course:	QUALITY SYSTEM IN TRANSPORT			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
12266	Mandatory	3	4	2+2+0
Programs	ROAD TRAFFIC			
Prerequisites	n/a			
Aims	The aim of the course is for students to master knowledge in the field of quality systems in transport, with special reference to ISO 9000 as a basic standard, but also ISO 39001 - Traffic safety management system and ISO 45000 - Occupational health and safety management system. Also, the goal is for students to master some methods and techniques with a special focus on regression analysis.			
Learning outcomes	After passing the exam in this subject, students will be able to: • Understand the principles and basics of the ISO 9000 series of standards • Understand the principles and basics of the ISO 39000 series of standards • Understand the principles and basics of the ISO 45000 series of standards • In practice, they apply the requirements of the above standards and define measures to improve organizational performance • Master the most important methods and techniques in quality and apply them in practice - They apply knowledge from the method of regression analysis for the needs of solving concrete problems from practice			
Lecturer / Teaching assistant	Aleksandar Vujovic			
Methodology	Classic lecture of each chapter, discussions and explanations with students during the presentation; short oral tests of understanding and knowledge of parts of the material covered in the lectures; demonstration of work on at least one demonstrative example, independent work on the preparation of a seminar paper			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introductory lecture, analysis of the subject matter, learning outcomes - Fundamentals of quality			
I week exercises	Introductory lecture, analysis of the subject matter, learning outcomes - Fundamentals of quality			
II week lectures	Basic principles of the ISO 9001 standard, application in practice, requirements			
II week exercises	Basic principles of the ISO 9001 standard, application in practice, requirements			
III week lectures	Annex SL – basic requirements of the integrated management system			
III week exercises	Annex SL – basic requirements of the integrated management system			
IV week lectures	ISO 39001 - Traffic safety management system			
IV week exercises	ISO 39001 - Traffic safety management system			
V week lectures	ISO 450001 - Occupational health and safety management system			
V week exercises	ISO 450001 - Occupational health and safety management system			
VI week lectures	Integrated management systems, with special reference to the three mentioned systems. An example from practice and improving organizational performance			
VI week exercises	Integrated management systems, with special reference to the three mentioned systems. An example from practice and improving organizational performance			
VII week lectures	I test			
VII week exercises	I test			
VIII week lectures	Brainstorming and brainwriting methods			
VIII week exercises	Brainstorming and brainwriting methods			
IX week lectures	Ishikawa diagram - method of cause and effect analysis. Calculation of weight coefficients			
IX week exercises	Ishikawa diagram - method of cause and effect analysis. Calculation of weight coefficients			
X week lectures	ABC analysis – identification and calculation of priority areas for improvement			
X week exercises	ABC analysis – identification and calculation of priority areas for improvement			
XI week lectures	Scatter diagram - calculation of the value of interdependence/influence of variables			

XI week exercises	Scatter diagram - calculation of the value of interdependence/influence of variables					
XII week lectures	An example from practice - the application of selected methods for solving real problems in practice and defining measures for improvement using scatter diagrams					
XII week exercises	An example from practice - the application of selected methods for solving real problems in practice and defining measures for improvement using scatter diagrams					
XIII week lectures	Visit to the chosen organization, recording and analysis of the situation, selection of potential problems and definition of measures for improvement					
XIII week exercises	Visit to the chosen organization, recording and analysis of the situation, selection of potential problems and definition of measures for improvement					
XIV week lectures	II test					
XIV week exercises	II test					
XV week lectures	Remedial I and II test					
XV week exercises	Remedial I and II test					
Student workload						
Per week			Per semester			
4 credits x 40/30=5 hours and 20 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises 1 hour(s) i 20 minuts of independent work, including consultations			Classes and final exam: 5 hour(s) i 20 minuts x 16 =85 hour(s) i 20 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 5 hour(s) i 20 minuts x 2 =10 hour(s) i 40 minuts Total workload for the subject: 4 x 30=120 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 24 hour(s) i 0 minuts Workload structure: 85 hour(s) i 20 minuts (cources), 10 hour(s) i 40 minuts (preparation), 24 hour(s) i 0 minuts (additional work)			
Student obligations			Attendance at lectures and exercises; preparation of a seminar paper			
Consultations			office 419 or 410 every working days			
Literature			[1] McNurlin, B. (2021), Information Systems Management in Practice (5th Edition) Hardcover – January 1, 2001, Prentice Hall [2] Tricker, R., (2019), Quality Management Systems: A Practical Guide to Standards Implementation, Routledge.			
Examination methods			I and II test 25 points each; Final exam 50 points			
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points