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

Course:	QUALITY SYSTEM IN TRANSPORT							
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exer cises+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	l test							
VII week exercises	l 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							

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XI week exe	rcises	Scatter diagram - calculation of the value of interdependence/influence of variables								
XII week lect	tures	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 exe	ercises	An exa and de	ample from practice efining measures fo	e - the application o r improvement usin	the application of selected methods for solving real problems in practice mprovement using scatter diagrams					
XIII week lec	tures	Visit to proble	o the chosen organi ms and definition o	ization, recording and analysis of the situation, selection of potential of measures for improvement						
XIII week ex	ercises	Visit to the chosen organization, recording and analysis of the situation, selection of potential problems and definition of measures for improvement								
XIV week led	tures	II test								
XIV week ex	ercises	II test								
XV week lec	tures	Remedial I and II test								
XV week exe	ercises	Remedial I and II test								
Student wo	orkload									
Per week			Per semester							
2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises 1 hour(s) i 20 minuts of independent work, including consultations			 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			l and ll test 25 points each; Final exam 50 points							
Special remarks										
Comment										
Grade:	F		E	D	С	В	А			
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			