



RTU Course "Quality and Environmental Management"

22603 Kvalitātes tehnoloģiju katedra

General data

Code	IKI761
Course title	Quality and Environmental Management
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Academic
Field of study	Business Management and Administration
Responsible instructor	Jānis Mazais
Academic staff	Inga Lapiņa Guntis Tribis
Volume of the course: parts and credits points	1 part, 2.0 Credit Points, 3.0 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Maximum auditorium capacity	30
Maximum number of students per semester	30
Abstract	The study course embraces acquisition of theoretical principles and practical skills in quality and environmental management. After familiarization themselves with the quality and environmental management technologies the students are continuing to explore cases reflecting issues on practical implementation of supply chain, logistics and environmental quality management systems. The main topic of the course is an overview of the existing supply chain quality, environmental management and risk and security technologies from the following viewpoints: Process; Activities; Standards; Methods applied; and Best practice examples. To ensure that the aim of the course is successfully attained, theoretical studies are complemented with practical deployment and analysis of the technologies discussed.
Goals and objectives of the course in terms of competences and skills	Upon completion of the study course the student comprehends the principles, systems and methods of Quality and Environmental Management and their application in enterprises, organizations, governmental bodies and their supply chains, logistics and environmental management systems. The student is aware of the principles of efficient management of resources, in sourcing, manufacturing, distribution and transportation taking into account quality, ethical and environmental requirements. Can apply his knowledge to integrate aspects that relate to different levels of decision-making. Comprehends basics of the risk management in environmental management systems.
Structure and tasks of independent studies	Independent studies are integrated with theoretical and practical classes. Every theme has a theoretical part, a practical part and independent studies or teamwork exercise. Students have to independently analyze the given cases or articles from periodicals and to deliver presentation in auditorium. The objectives of independent study tasks – to assess the quality characteristics of the given object/process, to identify and evaluate quality and environmental aspects of the case object, to perform a risk analysis of the object and to improve the level of student's theoretical knowledge and his/her presentation skills.
Recommended literature	Pamatliteratūra: 1. Foster, S.,T. Managing Quality: Integrating the Supply Chain. Third edition, New Jersey: Pearson Education, 2007. 2. Inga Belmane, Karls Dalhammars Rokasgrāmata vides pārvaldības sistēmas ieviešanai atbilstoši ISO 14001 standarta prasībām. Praktiski padomi un standarta prasību skaidrojumi., Lunda, 2002 3. Lennart Piper, Sven-Olof Ryding, Curt Henricson Continual improvement with ISO 14000 IOS Press, 2003. 4. Studiju materiāli RTU ORTUS vidē https://ortus.rtu.lv . Papildliteratūra: 5. Gardner, R.A. The Process-Focused Organization: A Transition Strategy for Success. - Milwaukee WI: ASQ Quality Press, 2004. 6. Besterfield D.H. Quality Control. 7th ed. - Pearson Prentice Hall, 2004. 7. Oakland, J.S. Oakland on Quality Management. Oxford: Elsevier Butterworth- Heinemann, 2004.
Course prerequisites	Kknowledge in management at bachelor's level

Course outline

Theme	Hours
Quality concepts and terminology Evolution of Quality. Quality system models.	2
Quality standards. Business Excellence models, quality self-assessment methodology.	4
Quality improvement methods and tools.	4
Leadership, strategic quality planning. Quality costs.	2
Principles of supply chain management. Process focused organization.	4
Environmental management systems and their components, standards. Series of ISO 14000 standards.	4
Environmental aspects, their interconnection with product manufacturing and delivery of services.	2

Risk analysis. Characteristics. Procedure.	4
Risk analysis of hazardous industrial objects. Software for modeling of spread of dangerous events consequences.	4
Risk management.	2

Learning outcomes and assessment

Learning outcomes	Assessment methods
Comprehends quality terminology. Understands TQM, process management and quality improvement principles and methodologies. Comprehends Six Sigma, Lean and benchmarking methodologies.	Test of understanding – weighted average assessment of multiple choice and open-ended answers. A component of an exam.
Can perform individually and in teams a real-life case analysis related to non-conforming quality of supply chains problem, is able to identify causes of the problem and to suggest possible improvement scenarios.	Case analysis in the workgroups and group presentations in the class assessed according to 10-point grading scale. Peer assessment. A component of an exam.
Is able to explain the use of ISO 14000 series standards and their interconnection with ISO 9000 and EMAS systems.	Test of understanding – weighted average assessment of multiple choice and open-ended answers. A component of an exam
Is able to apply risk assessment methods for resolution of practical problems, to clarify possible causes of risks and to assess consequences and their riskiness.	Case analysis in the workgroups and group presentations in the class assessed according to 10-point grading scale. Peer assessment. A component of an exam.
Is able to select software, appropriate for possible dangerous events consequences spread models and to apply it for the cosequences spread modelling.	Test of understanding – weighted average assessment of multiple choice and open-ended answers. A component of an exam.
Is able to perform security risk analysis of the logistics system and to develop a risk mitigation plan.	Practical assignment performed on security risk evaluation case study. A component of an exam.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	2.0	3.0	1.0	1.0	0.0		*	