



RTU Course "Quality, Risk and Security Technologies"

12306 Lietišķo datorzinātņu katedra

General data

Code	DPI704
Course title	Quality, Risk and Security Technologies
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Academic
Field of study	Computer Science
Responsible instructor	Uldis Sukovskis
Academic staff	Renāte Strazdiņa
Volume of the course: parts and credits points	1 part, 4.0 Credit Points, 6.0 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Maximum auditorium capacity	36
Maximum number of students per semester	36
Abstract	A modern enterprise's operations are closely related to the application of information and communications technology. For the most part, enterprises cannot remain competitive and viable without resorting to ICT. However, selecting the most appropriate technologies for a specific company requires an understanding of ICT. Some of the most crucial prerequisites for successful deployment of ICT in an enterprise is the quality of technologies chosen, understanding of the risks associated with such technologies and security of the selected technologies. The main topic of the course is an overview of the existing quality, risk and security technologies from the following viewpoints: 1) Process; 2) Activities; 3) Standards; 4) Methods applied; and 5) 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. During the practical part of the course, narratives of quality, risk and security management processes are created, existing methods and standards are applied to real-life enterprises' situation examples and existing technologies are applied in practice.
Goals and objectives of the course in terms of competences and skills	Upon completion of the study course the student can discuss and support his / her views on the basic principles, and limitations thereof, of IT quality, risk and security management; the student is aware of IT quality, risk and security management processes and applicable standards. The student can deploy appropriate tools to designing a quality and / or risk and / or security process in an enterprise (in a certain environment), perform a risk assessment and design improvements.
Structure and tasks of independent studies	Independent studies are integrated with theoretical and practical classes. Every theme has a theoretical part, a practical exercise and independent studies.
Recommended literature	E - grāmata Handbook of Research on Information Security and Assurance (pieejama caur ORTUS) E - grāmata Quality management essential// David Hoyle. Amsterdam ;London : Butterworth-Heinemann, 2007. Quality systems and standards for a competitive edge / J. Luis Guasch ... [et al.] Washington, D.C. : World Bank, c2007. Risk management for IT projects : how to deal with over 150 issues and risks / Bennet P. Lientz, Lee Larssen. Amsterdam [etc.] : Elsevier/Butterworth-Heinemann, c2006.
Course prerequisites	Information system life cycle, knowledge about ICT infrastructure, knowledge about project management.

Course outline

Theme	Hours
Introduction to quality, risk and security technologies	4
IT quality management process, activities and standards	12
IT risk management process, activities and standards	4
IT risk assessment process and methods	4
IT risk mitigation process and methods	4
IT security management process, activities and standards	12
IT quality management support technologies	8
IT risk management support technologies	8
IT security management support technologies	8

Learning outcomes and assessment

Learning outcomes	Assessment methods
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Can discuss and support his / her views on the basic principles, and limitations thereof, of IT quality, risk and security management; The student is aware of IT quality, risk and security management	Exam with both theoretical and practical part. The practical part is related to suggestions regarding the improvement areas in an enterprise described in the case study.
Can support his/her view on necessity of implementation of the IT quality, risk, and security management process and the most effective way depending on organization goals and structure.	Developed IT quality, risk and security process for the particular case study.
Can deploy appropriate tools to designing a quality and / or risk and / or security process in an enterprise (in a certain environment).	Individually performed practical exercises
Can perform a risk assessment and design improvements.	Individually performed practical exercises

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	4.0	6.0	2.0	1.0	1.0		*	