

TITLE OF THE COURSE	Code
Audit and Certification according to ISO (module)	

Teacher(s)	Department
Coordinating: Natalya V. Konyzheva	Software Tools

Study cycle	Level of the course	Type of the course
First cycle	MSc	total

Form of delivery	Duration	Language(s)
Full-time	1 term (5 year 1 semester)	Rus

Prerequisites	
Prerequisites: bachelor's degree	Co-requisites (if necessary):

Credits of the course	Total student workload	Contact hours	Individual work hours
	22	12	10

Aim of the course: competences foreseen by the study programme		
<p>The aim of the Audit and Certification according to ISO (module) is to provide students with both theoretical knowledge and practical skills in quality assurance, quality management and quality engineering. This course guidance students through quality management philosophy, quality management systems, quality control methods and quality metrics in order to broad backgrounds in quality engineering preparing students for future careers in engineering as project managers, software testers or quality engineers.</p>		
Learning outcomes of course (course unit)	Teaching/learning methods	Assessment methods
Students will demonstrate in-depth knowledge in understanding the principles of quality management	lectures, self-studying	test, essay
Students will demonstrate the ability to use quality standards for quality assurance	lectures, self-studying	test, case-study
Students will be able to analyse quality process using the quality control methods.	lectures, practical works	test, applied task
Students will be able to analyse the quality of the software projects, software code, software documentation using specific software tools and metrics	lectures, practical works	test, practical reports

Themes	Contact work hours						Time and tasks for individual work		
	Lectures	Consultation	Seminars	Practical work	Laboratory work	Placements	Total contact work	Individual work	Tasks
Module 1. Software Quality	6			6			12	10	
1.1. Software quality Management (SQM). Software Quality Assurance (ISO9001)									working with standards
1.2. Software quality system organization.									
1.3. Software quality models and metrics.									Working on individual tasks and preparing reports
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Assessment strategy	Weight in %	Deadlines	Assessment criteria
Products and performance assessments	50		All practical works should be passed
Written and Oral Test	50		Pass a test– excellent, confident delivery, good, thoughts and ideas clearly expressed, well-placed, delivery is fluctuate, practical tasks – full done. Fail a test – poor, delivery is fluctuate, practical tasks done with mistakes.

Author	Year of issue	Title	No of periodical or volume	Place of printing. Printing house or internet link
Compulsory literature				
Hoyle, D.	2009	ISO 9000 Quality Systems Handbook		sixth edition, Elsevier
Kan H.N.	2002	Metrics and Models in Software Quality Engineering,		Addison-Wesley Professional; 2 edition
Additional literature				
Липаев В.В.	2006	Процессы и стандарты жизненного цикла программных средств		М.: Синтег
Архипов А.М.	2009	Метрология. Стандартизация. Сертификация.		М.: ЮНИТИ-ДАНА