SYLLABUS

Basic information of the course	
University:	**University "Ukshin Hoti" - Prizren**
Academic unit:	**Faculty of Computer Science**
Study program:	**Information Technologies and Telecommunication**
Course:	**Quality Management**
Study level:	**Bachelor**
Course status:	**Elective**
Study year:	**3**
Number of hours per week:	**2+2**
Credit value - ECTS:	**6**
Time / location:	**It will be published in the university web site!**
Lecturers:	**Assoc. Prof. Dr. Samedin Krrabaj** **Ass. Arbër Beshiri, Ph. D. c.**
Contact details:	**samedin.krrabaj@uni-prizren.com** **arber.beshiri@uni-prizren.com**
Course description:	The course includes in detail the use of different methods and the latest developments in quality management and control (through QA, QC, Deming and TQM techniques). Quality in planning and design is as important as quality in project development, in the production of IT goods and services. This course enables students to learn and study quality control techniques, quality assurance issues, and methods for managing quality.
Course objectives:	- To provide basic concepts about quality management as a whole, especially in Information Technologies. Six sigma and its application of these concepts, philosophies and strategies for their application in the IT industries. - To enable students to understand the complexities of statistical analysis and the interpretation of control diagrams and their application in the workplace. - To provide opportunities and capabilities for diagnosing and analyzing problems that cause

	changes in manufacturing and IT service industry processes. - Students understand IT techniques and tools for quality analysis, enabling knowledge acquisition in terms of managing quality problems and solving them through techniques for such issues.
Learning outcomes:	The main objectives of this course are to provide knowledge of quality management, quality control techniques, quality assurance issues and quality management methods in IT. The course aims: - To encourage students to work in groups and to acquire general knowledge and skills on developing basic techniques for quality management in IT services. - To provide students the knowledge to diagnose and analyze problems that cause changes in manufacturing and IT service industry processes. - Students understand IT techniques and tools for quality analysis, enabling knowledge acquisition in terms of managing quality problems and solving them through techniques for such issues.

Contribution on student load (must correspond with learning outcomes)			
Activity	**Hours**	**Days/week**	**Total/hours**
Lectures	2	15	30
Exercise theoretical/laboratory	2	15	30
Practice work	1	2	2
Contact with lecturer/consultations	1	5	5
Field exercises	1	1	1
Midterms	2	2	4
Laboratory exercises	2	2	4
Individual time spent studying (at the library or home)	3	10	30
Final preparation for the exam	5	6	30
Time spent in evaluation (tests, quiz, final exam)	2	3	6
Projects, presentations, etc.	4	2	8
Total			**150**

Notice: 1 ECTS credits = 25 hours commitment, e.g. if the course has 6 ECTS credits student must have 150 hours during the semester.	
Teaching methods:	The course is a combination of lectures, discussions, numerical and laboratory exercises, while the assignments are presented by the laboratory course lecturers!
Assessment methods:	- Attendance in lectures and exercises: 5% + 5%. - Lab assignments: 20%. - Midterm 1: 35%. - Midterm 2: 35%. - Or final exam: 100%.

Assessment and grading:	**Vlerësimi në %**	**Nota përfundimtare**
	91% - 100%	10
	81% - 90%	9
	71% - 80%	8
	61% - 70%	7
	51% - 60%	6
	0% - 50%	5

Literature	
Basic literature:	1. Donna C. S. Summers. Quality, 6th edition, Prentice-Hall, 2018. 2. Tilo Pfeifer, Quality Management - Strategies, Methods, Techniques, Hanser Fachbuchverlag, 2002.
Additional literature:	1. Graeme Knowles. Quality Management, 1st edition, Bookboon, 2014. 2. Barrie G. Dale. Managing Quality, 5th edition, Wiley, 2009. 3. Jack Woodall, Deborah K. Rebuck and Frank Voehl. Total Quality in Information Systems & Technology, St. Lucie Press, 1997.

Study plan	
Week	**Lectures**
First week:	• Introduction to course organization – syllabus (about lectures) • Quality basics and history (chapter 1)
Second week:	• Total quality management (chapter 2)
Third week:	• Quality improvement techniques (chapter 3)
Fourth week:	• Quality tools - the seven quality control tools

	(chapter 3)
Fifth week:	• Quality metrics (chapter 4) • Statistics in quality (chapter 4)
Sixth week:	• Statistics in quality (chapter 4) • Central limit theorem (chapter 4)
Seventh week:	• Variable control charts (chapter 5)
Eighth week:	• First midterm
Ninth week:	• Control chart interpretation and analysis - process capability (chapter 6)
Tenth week:	• Other variable control charts (chapter 8) • Sun microsystems and their best practices (chapter 9)
Eleventh week:	• Fundamentals of probability (chapter 13) • Control charts for attributes (chapter 14)
Twelfth week:	• Quality systems: six sigma (chapter 12)
Thirteenth week:	• Reliability - product life cycle and measures of reliability (chapter 10) • Advanced topics - quality function deployment (chapter 10) • Quality costs - quality cost measurement and utilizing quality costs for decision-making (chapter 10)
Fourteenth week:	• Quality systems: ISO 9000 (chapter 12) • Benchmarking and auditing (chapter 13)
Fifteenth week:	• Second (final) midterm

Exercises

Study plan	
Java	**Exercises**
First week:	• Introduction to course organization – syllabus (about exercises). • Quality basics and history.
Second week:	• Total quality management in IT.
Third week:	• Quality improvement techniques in IT.
Fourth week:	• Quality tools - the seven quality control tools.
Fifth week:	• Quality metrics. • Statistics in quality (1).
Sixth week:	• Statistics in quality (2).
Seventh week:	• Lab assignment 1.
Eighth week:	• Consultations about midterm 1.
Ninth week:	• Failure modes and quality effects analysis (FMEA).
Tenth week:	• A quality management system implementation (1).
Eleventh week:	• A quality management system implementation (2). • Statistical process control (SPC).

Twelfth week:	• Lab assignment 2.
Thirteenth week:	• Quality function deployment (QFD). • Quality costs - quality cost measurement and utilizing quality costs for decision-making.
Fourteenth week:	• Quality systems: ISO 9000 • Benchmarking and auditing
Fifteenth week:	• Second (final) midterm

Academic policies and rules of conduct
• Generally lecture presentations will be made through MS PowerPoint, tables, material usage, computer programs and numeric exercises. • Additional resources (scientific papers, publications, national bulletins, as well as recent discoveries and research) will be provided by professors. • In the absence of the opportunity for practical work to be organized weekly, in cooperation with the management of the university, this activity will be organized on certain days in: organizations, companies, etc. • During each session will be organized the conversation and co-participation with the students! • Students are required to be regular in lectures and exercises! • It will be evaluated when the students collaborate and participate in the lectures and course exercises! • Timely arrival in lectures and exercises is mandatory!