

NAME OF THE COURSE		Digital Service Quality Management				
Code	EUBD33	Year of study	2			
Course teacher	Assistant Professor Tea Mijač, PhD Full professor Mario Jadrić, PhD Full professor Daniela Garbin PRaničević, PhD	Credits (ECTS)	5			
Associate teachers		Type of instruction (number of hours)	L	S	E	F
			26		26	
Status of the course	Elective	Percentage of application of e-learning	30%			
COURSE DESCRIPTION						
Course objectives	• Gain a comprehensive insight into the concepts, approaches, standards, methods, tools, and technologies required for effective digital service quality management					
Course enrolment requirements and entry competencies required for the course	There are no prerequisites for enrollment.					
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Learning Outcome of the Course:					
	Critically evaluate available methodologies and technologies and manage the quality of digital services.					
	Individual Expected Learning Outcomes of the Course:					
	- Examine the concepts and methodologies of digital service quality management (Topics 1-3). - Develop a digital service quality management plan that integrates the principles of continuous improvement (Topics 3-5). - Critically assess different approaches, models, and technologies that ensure the quality of digital services and analyze their application (Topics 6-10). - Evaluate the impact of implementing specific technologies for ensuring digital service quality and formulate recommendations for improvement (Topics 11-13).					
Course content broken down in detail by weekly class schedule (syllabus)	Lectures		Exercises			
	Topic	Hours	Topic		Hours	
	Topic 1: Classification of digital services based on web 3.0 technologies: fundamentals of quality in digital services – definitions, concepts, and significance	2	Assignment. Analysis of digital services – identification of key information and service quality factors through practical examples.		2	
	Topic 2: Overview of theoretical models for managing the quality of information systems.	2	Assignment. Analysis of digital services – identification of key system quality factors		2	

			through practical examples.	
	Topic 3: Approaches to quality management in digital services: different software development methodologies (agile and traditional methods)	2	Assignment. Defining key performance indicators (KPIs) for chosen digital services.	2
	Topic 4: Quality Assurance (QA) in the development of digital services: differences between Quality Assurance (QA) and Quality Control (QC).	2	Assignment. Case study with the expert.	2
	Topic 5: Quality planning in digital business: strategies for planning and setting quality objectives.	2	Assignment. Creating a QA strategy for a specific digital service.	2
	Topic 6: Principles and methods of testing digital services: functional, regression, smoke testing, security, and user testing.	2	Assignment. Practical application of tools for testing digital services.	2
	Topic 7: Quality of user Experience (UX) and end-user satisfaction.	2	Assignment. Evaluation of user experience – heuristic analysis.	2
	Topic 8: Security and vulnerability of digital services: cybersecurity, risk management, and data protection.	2	Assignment. Practical application of tools for testing digital services.	2
	Topic 9: Types of testing: manual testing and quality control.	2	Assignment. Implementation of basic automated tests.	2
	Topic 10: Types of testing: test automation and quality control.	2	Assignment. Automated testing using a selected specialized tool.	2
	Topic 11: Measuring and reporting on the quality of digital services: KPIs, analytics, and reporting tools.	2	Assignment. Automated testing using a selected specialized tool.	2
	Topic 12: Measuring and reporting on the quality of digital services: creating recommendations.	2	Assignment. Case study with the expert.	2
	Topic 13: The future of digital service quality management: artificial intelligence, big data, and emerging technologies in QA. Final considerations.	2	Assignment. Presentation of the final assignment.	2

Format of instruction	x lectures x seminars and workshops x exercises ☐ <i>on line</i> in entirety x partial e-learning ☐ field work			x independent assignments x multimedia ☐ laboratory ☐ work with mentor ☐ (other)		
Student responsibilities	Requirements for the exam are completed and orally discussed final assignment, as well as participating in at least 50% of all class meetings (25% for the part-time students).					
Screening student work (<i>name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course</i>)	Class attendance	1 ECTS	Research		Final assignement	2 ECTS
	Experimental work		Report		Tests (Other)	
	Essay		Seminar essay		(Other)	
	Tests	2 ECTS	Oral exam		Workshop attendance (Other)	
	Written exam		Project		(Other)	
Grading and evaluating student work in class and at the final exam	As a method of continuous student progress evaluation, the model of point accumulation is chosen as it enables the collecting of points through different activities. The goal is that every student collects a sufficient number of points to get a grade for their work during the semester. The total of 100 points can be collected through following activities: 2 theory tests (each 18 points), 13 practical assignments during Exercises (every 3 points), final assignment preparation (25 points). Bonus points can be collected by solving additional tasks. The written exam can be waived by students who get 66 points and more. Written and oral exam can be waived by students who get 71 points and more. In the case of exam exemption, the score is based on the total number of points where every five points equals a higher grade. If a student does not have enough points from the assessment activities during the semester, written and oral exam are required.					
Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Stephan Goericke (2019):The Future of Software Quality Assurance				10	e-book available
	Kevin Reyes (2023): A Beginner's Guide to Understanding Test Cases and Automation in Quality Assurance					
	Laporte, C.Y. and April, A. (2017). Front Matter. In Software Quality Assurance (eds C.Y. Laporte and A. April). https://doi.org/10.1002/9781119312451.fmatter					
	Lecture materials (2025)					
Optional literature (at the time of submission of study programme proposal)	Mijač, T., Jadrić, M. & Čukušić, M. (2023) The role of user experience and co-creation in measuring the success of digital services in higher education. Behaviour and Information Technology, TBD, 1-22 doi:10.1080/0144929x.2023.2206924. Mijač, T., Jadrić, M. & Čukušić, M. (2022) Information Quality of Digital Services in Higher Education: Higher Order Construct Analysis. U: Vrček, N., Guàrdia, L. & Grd, P. (ur.)Proceedings of the Central European Conference on Information and Intelligent Systems.					

	Mijač, T. (2021) QUALITY ASPECTS OF DIGITAL SERVICES IN HIGHER EDUCATION: STUDENT-ORIENTED PERSPECTIVE. U: Baracskai, Z., Vukovic, D. & Janjusevic, J. (ur.)73rd International Scientific Conference on Economic and Social Development - "Sustainable Tourism in Post-pandemic World" – Dubrovnik, 21-22 October, 2021. Certified Tester Foundation Level Syllabus (2019), International Software Testing Qualifications Bord Mark Winteringham (2025): Software Testing with Generative AI
Quality assurance methods that ensure the acquisition of exit competences	• Monitoring attendance and performance of other student obligations (teacher) • Teaching Supervision (Vice-dean for Teaching) • Analysis of the success of studies in all subject studies (Vice-dean for Teaching) • Student Survey on the Quality of Teachers and Teaching for Each Subject Study (UNIST, Center for Quality Improvement) • The exam conducted by the subject teacher examines all learning outcomes of the subject. Periodic examination of the content of the exam is conducted on the basis of the appropriateness of the method of checking the learning outcomes (Vice-dean for Teaching)
Other (as the proposer wishes to add)	