

Course unit title	Course unit code
Analysis and Specification of IS Requirements	

Lecturer (s)	Department where course unit is delivered
Prof. Audrius Lopata	Kaunas Faculty Institute of Social Sciences and applied Informatics

Cycle	Level of course unit	Type of the course unit
First	1/1	Compulsory

Mode of delivery	Semester or period when the course unit is delivered	Language of instruction
Auditorial	English	Lithuanian

Prerequisites and corequisites	
Prerequisites: -	Corequisites: -

Number of ECTS credits allocated	Student's workload	Contact work hours	Individual work hours
5	130	52	78

Purpose of the course unit: program competences to be developed		
To develop the skills of identifying, specifying and validating the user requirements for information systems as well as develop the ability to evaluate and select the necessary methods and tools in order to complete user requirements acquisition and specification process successfully.		
Learning outcomes of course unit	Teaching and learning methods	Assessment methods
Will be able to apply the user requirements specification techniques in information systems development lifecycle, evaluate their results, apply the necessary principles, methods and tools to information systems development process.	Lectures, Individual Work	Final Exam
Will be able to analyze and assess the various needs of the information system user according to various criteria, as well as methods and tools for identifying these needs and specifying requirements; Will be able to analyze, evaluate, interpret and solve IS consumer needs identification and requirements specification problems; Will be able to apply creatively the acquired knowledge for specification of user requirements; Will be able to work effectively in a group; Will be able to communicate effectively with IT specialists and fieldworkers; will be able to organize their work and plan work time.	Individualus darbas (projektas), dėstytojų paskaitos, kviestinių (praktikų)	Egzaminas, atliktų individualių darbų rezultatų gynimas, rezultatų pristatymas pateikiant ataskaitą.
Upon successful completion of this course, students will understand: <ul style="list-style-type: none"> the need for requirements for large-scale systems. the stakeholders involved in requirements engineering. user requirements engineering processes. models of requirements. functional requirements, non-functional 	Practical Work, Case studies	Individual project

requirements as well as scenario analysis • object-oriented and goal-oriented requirements engineering issues.		
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Course content: breakdown of the topics	Contact work hours							Individual work hours and tasks	
	Lectures	Consultations	Seminars	Practice classes	Laboratory	Practice	All contact work	Individual work	Tasks
Requirements for information systems engineering concept. Requirements hierarchy. Technical task.	2						2	2	Individual studies of Literature ([1] Chapter No.1), Practical work.
Functional and Non- Functional Requirements. Reuirements fos system's maintenance.	2			4			6	8	Individual studies of Literature ([1] Chapters No. 10, 11), Labs in computer classroom.
Composition of functional and non-functional requirements. Participants of requirements specification process.	2			6			8	6	Individual studies of Literature ([1] Chapter No. 3), Individual project, labs in computer classroom.
Methods and techniques of user requirements acquisition and documentation procedures. User requirments acquisition and specification templates. Linking requirements to project decisions.	2			4			6	8	Individual studies of Literature ([1] Chapter No. 2), Individual project, labs in computer classroom.
Requirements analysis. Prioritization of user requirements. Identification of user requirements using objects of activity. Requirements overlap and ambiguity. Validity of requirements. Requirements testability.	2			6			8	8	Individual studies of Literature ([1] Chapter 17), Individual project, labs in computer classroom.
Validation of user requirements, the review of user requirements. Prototyping and user requirements. Approvement of user requirements.	2			6			8	8	Individual studies of Literature ([1] Chapter No. 5), Individual project, labs in computer classroom.
Requirements management. Constant and changing requirements. Requirements change management. Requirement traceability.	2			4			6	8	Individual studies of Literature ([1] Chapter No. 9), Individual project, labs in computer classroom.
Computer-aided requirements specification tools and technologies	2			2			4	12	Individual project, labs in computer classroom. atlikimas.

Consultation					2		2	8	
Final Exam						2	2	10	
	Iš viso	16			32	2	2	52	78

Assesment strategy	Comp arative weigh t perce ntage	Date of examina tion	Assesment criteria
Practical works, Individual project (PW)	40%	9th and 13th week	Laboratory works and their defense; practical exercises performed by the lecturer's instructions in the class. Each work is graded. At the end of the semester prepared workshops report. Assessed in grades 1-10 rating scale: 10-9: Excellent knowledge and skills. Evaluation level. 90-100% correct answers. 8-7: Good knowledge and skills may be minor errors. Synthesis level. 70-89% of correct answers. 6-5: The average knowledge and skills, there are errors. Level of analysis. 50-69% of correct answers. 4-3: Knowledge and skills are below average, the (material) errors. Knowledge application level. 20-49% of correct answers. 2-1: Does not meet minimum requirements. 0-19% of correct answers.
Midterm exam (M)	20%	9th week	1-4 Topics from the list of topics listed above. Assessed in grades 1-10 rating scale: 10-9: Excellent knowledge and skills. Evaluation level. 90-100% correct answers. 8-7: Good knowledge and skills may be minor errors. Synthesis level. 70-89% of correct answers. 6-5: The average knowledge and skills, there are errors. Level of analysis. 50-69% of correct answers. 4-3: Knowledge and skills are below average, the (material) errors. Knowledge application level. 20-49% of correct answers. 2-1: Does not meet minimum requirements. 0-19% of correct answers.
Exam (E)	40%	At session time	The exam consists of questions from all the course material. Assessed in grades 1-10 rating scale: 10-9: Excellent knowledge and skills. Evaluation level. 90-100% correct answers. 8-7: Good knowledge and skills may be minor errors. Synthesis level. 70-89% of correct answers. 6-5: The average knowledge and skills, there are errors. Level of analysis. 50-69% of correct answers. 4-3: Knowledge and skills are below average, the (material) errors. Knowledge application level. 20-49% of correct answers. 2-1: Does not meet minimum requirements. 0-19% of correct answers.

Final mark: $PW*0.4+M*0.2+E*0.4$			

Author	Year	Title	Number of periodical publication or publication Volume	The place of publication and publisher or online link
Required reading				
S. Robertson, J. Robertson	2012	Mastering the Requirements Process: Getting Requirements Right (Third edition)	ISBN: 0321815742	Addison-Wesley Professional.
R. R. Young	2007	The Requirements Engineering Handbook	ISBN: 1580532667	Artech House Publishers.
Additional sources				
G. Kotonya, I.Sommerville	2001	Requirements Engineering: Processes and Techniques.	ISBN-10: 0471972088	Wiley.
D. C. Hay	2011	Requirements Analysis. From Business Views to Architecture		Prentice-Hall PTR.
E. Gottesdiener	2002	Requirements by Collaboration: Workshops for Defining N	ISBN-10: 0201786060	Addison-Wesley Professional.