

Course unit title	Course unit code
<b>INFORMATION ARCHITECTURE DESIGN FOR AN ORGANISATION</b>	

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

Cycle	Level of course unit	Type of the course unit
First cycle	1/1	Mandatory

Mode of delivery	Semester or period when the course unit is delivered	Language of instruction
Face-to-face	5 semester	English

Prerequisites and corequisites	
<b>Prerequisites:</b> Mathematic	<b>Corequisites:</b>

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

<b>Purpose of the course unit: programme competences to be developed</b>		
To develop the ability to explain and apply classical concepts of general systems theory, regularities of complex systems and principles of systematic analysis, methods of analysis of organizational systems performance and management, qualitative methods of systems analysis, theoretical and practical methods of systematic analysis and modeling of organizational performance and management. To develop practical skills to work with activity modeling software packages used to restructure and computerize activities by implementing advanced information technologies.		
Learning outcomes of course unit	Teaching and learning methods	Assessment methods
- Will be able to explain and apply the concepts of general systems theory, regularities of complex systems, principles of system analysis (SA), qualitative methods of systems analysis. -	Lecture Practical problem solving Problem based learning. Practical use of business process modeling software.	Midterm test, Exam (open and closed questions) Individual and team assignments
- Will be able to apply in practice the methodologies of organizational activity and management analysis, will be able to professionally apply modeling methods (structural, objective, from objectives, from events and others), use them to model the information	Lecture Practical problem solving Problem based learning. Practical use of of business process modeling software	Midterm test, Exam (open and closed questions) Individual and team assignments

needs of organizations.		
Will be able to apply performance modeling software tools to analyze the processes of various types of systems (ecological, social, technical, organizational systems) and the interaction of information and technological processes.	Lecture Practical problem solving Problem based learning. Practical use of of business process modeling software	Midterm test, Exam (open and closed questions) Individual and team assignments

Course content: breakdown of the topics	Contact work hours						Individual work hours and tasks		
	Lectures	Consultations	Exam	Practice classes	Laboratory	Practice	All contact work	Individual work	Tasks
<ul style="list-style-type: none"> <li>Introduction.</li> <li>Problems of Systems Analysis from the Perspective of the Particular Enterprise.</li> <li>The Activities of Systems Analysis</li> </ul>	2						2	10	Study of literature ([4], Chapter 1).  Individual task: selection of the problem domain
2. Fundamentals of Enterprise Information Architecture (EIA). Basic Concepts of Enterprise Information Architecture.	2				2		4	20	Study of literature ([4], Chapter 2).  Exercises: Analysis of GST concepts
3. Understanding of architecture-based information systems design principles: <ul style="list-style-type: none"> <li>MDA principles</li> <li>MDD, MDE and MBE principles</li> </ul>	2				2		4	10	Study of literature ([4], Chapter 5).  Exercises: Analysis of CST concepts
4.. MODAF framework, its implementation in the Magic Draw (MD) software environment: <ul style="list-style-type: none"> <li>IDEAS methodology - the basis of the MoDAF framework</li> <li>MoDAF implementation in the MD environment of the package;</li> <li>UPDM language overview;</li> <li>MoDAF products AV, StV and OV;</li> <li>MoDAF products for TV and SV;</li> <li>MoDAF products SoV and AcV;</li> </ul>	6				20		26	20	Exercises: Modeling of information architecture of an organization from a systemic point of view.  analysis of logical relationships between models using MODAF framework (individual task).

5. Standards for organizational architecture development (from a systemic point of view): • TOGAF methodology; • TOGAF and MODAF interface; • GERAM - organizational design standard	4				8		12	18	Exercises: activity analysis by the objective method (Objective methodology), analysis of user information needs and requirements specifkavimas (individuali užduotis);
Konsultacija		2					2		
Egzaminas			2				2		
<b>Iš viso</b>	<b>16</b>	<b>2</b>	<b>2</b>		<b>32</b>		<b>52</b>	<b>78</b>	

Assesment strategy	Comparative weight percentage	Date of examination	Assesment criteria
Practical Work No.1	20%	9th week	Individual work is evaluated according to the given individual task in a specific subject area
Midterm Exam	20%	10th week	The colloquium includes the presented theoretical and practical material, evaluation on a 10-point scale.
Practical Work No.2	20%	15th week	Individual work is evaluated according to the given individual task in a specific subject area
Exam	40%	January	The colloquium includes the presented theoretical and practical material, evaluation on a 10-point scale.
The exam covers the theoretical and practical material of the whole subject, assessment on a 10-point scale according to VU assessment criteria.			
The final score is calculated according to the formula: Score = Exam * 0.4 + Colloquium * 0.2 + Practical work No.1 * 0.2 + Practical work No.2 * 0.2.			

Author	Year	Title	Number of periodical publication or publication Volume	The place of publication and publisher or online link
<b>Required reading</b>				
1. Ministry of Defence (UK)	2021	MOD Architecture Framework		<a href="https://www.gov.uk/guidance/mod-architecture-framework">https://www.gov.uk/guidance/mod-architecture-framework</a>

2. L.Von Bertalanffy	2015	General System Theory: Foundations, Development, Applications	1 edition	George Braziller Inc. ISBN-10: 0807600156
3. S.Gudas	2012	Informacijos sistemų inžinerijos teorijos pagrindai. Monografija		Vilnius: Vilniaus universiteto leidykla. ISBN978-609-459-075-7
4. L. Skyttner	2008	General Systems Theory: Problems, Perspectives, Practice		World Scientific Publishing. ISBN-10 981-256-389-X
5. S. Gudas	2008	Sistemų teorija: pagrindinės sąvokos ir elementai. Mokymo knyga (e. leidinys)		Vilniaus universitetas. ISBN 978-9955-33-191-9