Subject code: G3.(2)	Subject name: Architecture of Computer Games		
Study load: 2 ECTS	Load of contact hours: 50	Study semester: Spring	Assessment: 5-point grade credit
Objectives:	The development of disciplines is the study of existing approaches to designing the architecture of gaming software applications, as well as complexes and tools for developing and supporting documentation of software systems. At the end of the course, the student should be able to design and evaluate the architecture of gaming applications of medium complexity.		
Course outline:	Topics covered: 1. Introduction to the basics of developing the architecture of computer games and familiarization with key concepts. 2. Introduction to the design of the architecture of computer games. 3. An introduction to the development of computer game architecture. 4. Introduction to working with computer architecture design tools. 5. Introduction to working with tools for the development of computer game architecture. 6. Design architecture for computer games. 7. Patterns of architecture of computer games. 8. Analysis of the architecture of computer games. 9. Introduction to updating, finalizing and supporting the architecture of computer games. Contact lessons will be divided into two parts: lectures and workshops with individual and team tasks.		
Learning Outcomes:	In the end of the course students have achieved following skills: 1. Knowledge, skills and basic skills of designing the architecture of computer games. 2. Knowledge, skills and basic skills of developing the architecture of computer games. 3. Basic knowledge in the field of analysis, support and refinement of the architecture of computer games. 4. The development of existing technologies, templates and tools used when working with the architecture of computer games.		
Assessment Methods:	Assessment of knowledge, skills and abilities characterizing the stages of formation of competencies in the framework of the study of discipline is carried out during the current and intermediate certification. Current certification is carried out in the form of a written-oral survey (individual). Interim certification includes theoretical questions that allow you to assess the level of knowledge		

	gained and the protection of the test, which allows you to assess the degree of formation of skills. When evaluating, quality grading scales are used.
Teacher(s):	Vyacheslav Tarasov
Prerequisite subject(s):	1. The architecture of information systems. 2. Operating systems
Compulsory Literature:	Andrew Rollings, Dave Morris, Game Architecture and Design, 2005 Jason Gregory, Game Engine Architecture, 2009 Robert Nystrom, Game Programming Patterns, 2011
Replacement Literature:	Mike McShaffry, Game Coding Complete, 2003 Andy Harris, Game Programming: The L Line, The Express Line to Learning, 2007
Participation requirements:	None.
Independent work:	None.
Grading criteria scale or the minimal level necessary for passing the subject:	**Points distribution:** Excellent - Adequate knowledge of the material: correct and specific answers, without gross errors, to basic questions, with possible inaccuracies in individual answers; Good - Adequate knowledge of the material: correct and specific, no gross errors answers to basic questions, two or three gross errors. Satisfactory - There are a number of errors in the student's response, but there is orientation in the subject Unsatisfactory - Poor ownership of the material: the answer is incorrect, lack of orientation in the subject
Information about the course:	Room ___, on ___ at ___
1) Date 1	**Lecture 1** Classroom presentation: analyze the purpose and materials of the course, the need to study the course Homework: learning course objectives
2) Date 2	**Architecture of Computer Games Workshop 1** Classroom test: test on the goals and the need to study the course

3) Date 3	**Architecture of Computer Games Workshop 2**
	Students presentations:
	present a vision of architecture to be developed by a student
4) Date 4	**Lecture 2**
	Classroom presentation:
	introduction to computer architecture design
	Homework:
	learn basic design concepts
5) Date 5	**Architecture of Computer Games Workshop 3**
	Classroom test:
	test on the basic concepts of designing the architecture of computer games
6) Date 6	**Architecture of Computer Games Workshop 4**
	Students presentations:
	indicate which design concepts will be applied in project design
7) Date 7	Lecture 3
	Classroom presentation:
	introduction to the development of computer game architecture
	Homework:
	learning basic architecture design concepts
8) Date 8	**Architecture of Computer Games Workshop 5**
	Classroom test:
	development concept test
9) Date 9	**Architecture of Computer Games Workshop 6**
	Students presentations:
	indicate which development concepts and why will be used in the project
10) Date 10	**Lecture 4**
	Classroom presentation:
	introduction to computer architecture design tools
	Homework:
	learning design tools
11) Date 11	**Architecture of Computer Games Workshop 7**
	Classroom test:
	design tool test
12) Date 12	**Architecture of Computer Games Workshop 8**
	Students presentations:
	indicate which design tools and why will be used in the project
13) Date 13	**Lecture 5**
	Classroom presentation:
	Introduction to working with computer game architecture development tools
	Homework:
	learning development tools
14) Date 14	**Architecture of Computer Games Workshop 9**

	Classroom test: development tool test
15) Date 15	Architecture of Computer Games Workshop 10 Students presentations: indicate which development tools and why will be used in the project
16) Date 16	**Lecture 6** Classroom presentation: computer game architecture design and computer game architecture patterns Homework: learning design and architecture patterns
17) Date 17	**Architecture of Computer Games Workshop 11** Classroom test: design and architecture patterns test
18) Date 18	**Architecture of Computer Games Workshop 12** Students presentations: demonstrate implemented architecture patterns, indicate which and why will be used in the project
19) Date 19	**Lecture 7** Classroom presentation: analysis of the architecture of computer games Homework: study of analysis methods and tools
20) Date 20	**Architecture of Computer Games Workshop 13** Classroom test: test on analysis methods and tools
21) Date 21	**Architecture of Computer Games Workshop 14** Students presentations: existing computer game architectures research
22) Date 22	**Lecture 8** Classroom presentation: Introduction to updating, updating and supporting the architecture of computer games Homework: study of methods for updating, finalizing and supporting architecture
23) Date 23	**Architecture of Computer Games Workshop 15** Classroom test: test methods for updating, finalizing and supporting architecture
24) Date 24	**Architecture of Computer Games Workshop 16** Students presentations: indicate how the update and support of the developed project architecture will occur
25) Date 25	**Architecture of Computer Games Workshop 17** Students presentations: presentation and protection of the developed project