Course Syllabus

I. General Information

Course name	Computer animation
Programme	Infromatics
Level of studies (BA, BSc, MA, MSc, long-cycle MA)	BA
Form of studies (full-time, part-time)	full-time
Discipline	Informatics
Language of instruction	English

Course coordinator	dr Armen Grigoryan, PhD

Type of class *(use only the types mentioned below)*	Number of teaching hours	Semester	ECTS Points
lecture			3
tutorial			
classes			
laboratory classes	30	VI	
workshops			
seminar			
introductory seminar			
foreign language classes			
practical placement			
field work			
diploma laboratory			
translation classes			
study visit			

Course pre-requisites	Mathematical basics for computer graphics Basics of (mainly three dimensional) computer graphics

II. Course Objectives

Acquainting students with the methods and techniques of computer graphics animation (mainly three-dimensional).
Acquainting students with the use of programs that enable the creation and editing computer animations.

III. Course learning outcomes with reference to programme learning outcomes

Symbol	Description of course learning outcome	Reference to programme learning outcome
KNOWLEDGE		
W_01	The student has in-depth knowledge of the creation process computer animation.	K_W11
W_02	The student knows the animation processing software.	K_W11
SKILLS		
U_01	The student freely uses the tools to create computer animation	K_U02
U_02	The student is able to create animated special effects.	K_U02
U_03	The student is able to compose animated films using video sequence editor	K_U02
SOCIAL COMPETENCIES		
K_01	The student is aware of the importance of computer animation and its numerous applications in the modern information world	K_K01
K_02	The student is open to new animation techniques and is able to apply them animation projects	K_K01

IV. Course Content

Working with computer animation creation and editing software. Applications of the grease pencil in 2D animation. Interpolated animation. Movement of objects along a curve. Object shape animation. Camera animation. Physical properties of objects in the animation. Applications of particle systems in animation. Forward and inverse kinematics. Basics of video editing (compositing). Green screen. Motion tracking.

V. Didactic methods used and forms of assessment of learning outcomes

Symbol	Didactic methods *(choose from the list)*	Forms of assessment *(choose from the list)*	Documentation type *(choose from the list)*
KNOWLEDGE			
W_01	Metaplan method	Test	Protocol
W_02	Metaplan method	Test	Protocol
SKILLS			
U_01	Laboratory classes design thinking	Test	Protocol
U_02	Laboratory classes design thinking	Test	Protocol
U_03	Laboratory classes design thinking	Test	Protocol
SOCIAL COMPETENCIES			
K_01	Laboratory classes design thinking	Test	Protocol
K_02	Laboratory classes design thinking	Test	Protocol

VI. Grading criteria, weighting factors.....

Graded pass of the classes based on a test result:
91 – 100% - 5,
81 – 90% - 4.5,
71 – 80% - 4.0,
61 – 70% - 3.5,
50 – 60% - 3.0,
0 – 49% -2.0

Detailed assessment rules are given to students with each subject edition.

VII. Student workload

Form of activity	Number of hours
Number of contact hours (with the teacher)	Laboratory 30 Consultations 30
Number of hours of individual student work	30

VIII. Literature

Basic literature
1. Flavell, L., ”Beginning Blender Open Source 3D Modeling, Animation, and Game Design”, Berkeley, CA : Apress : Imprint: Apres, 2012. 2. Vince, J., “Essential Computer Animation fast How to Understand the Techniques and Potential of Computer Animation”, London: Springer London : Imprint: Springer, 2000. 3. blender.org
Additional literature
1. Foley, J., Van Dam, A., et al, “Computer graphics: principles and practice”, Addison-Wesley; 2014. 2. Vince, J., “Handbook of Computer Animation”, London: Springer London: Imprint: Springer; 2003.