Unfold your talent
VIA University College

The Animation Workshop
VIA University College

Extract from
OPEN EDUCATION COURSES UNDER BACHELOR IN GRAPHIC STORYTELLING
AND BACHELOR IN ANIMATION

COURSE AND EXAM CATALOGUE
2024

1. 3D Character Animation (25 ECTS)

Introduction
The 3D Character Animation course combines the following program elements from the BA in Character Animation into a semester course of 30 ECTS points: "Animation Basics 3", and "Advanced Animation". The 3D Character Animation course takes participants through a series of lectures, assignments and mini productions, increasing in complexity, in the field of 3D character animation - from concept to polish. Participants are introduced to the industry standard modelling and animation software Autodesk Maya and to 3D character animation. Participants will be guided through a series of exercises designed to transfer the classical animation principles into 3D character animation. The curriculum places a strong focus on understanding body mechanics and physical action during animation basics, gradually advancing into more sophisticated concepts including parkour, and interaction, and finishing with an introduction to 4-legged character animation.

1.1. 3D Character Animation: Course contents
The course consists of the following modules and exams from the Bachelor in Character Animation degree program:
• Animation Basics 3 (15 ECTS)
• Advanced Animation (10 ECTS)

1.1.1 Animation Basics 3
This programme element aims to familiarize the student with 3D working methods while re-visiting the basic principles of animation. Eventually the programme leads to analyzing and applying a simple bi-pedal character

in physics-based assignments. There will be a focus on physics and truth to materials and the advantages of working in 3D software.

This programme element relates to the core area for the Character Animation Line: "3D Character Animation".

1.1.1.1 Content
The program element covers:
• Basic principles of 3D animation
• Turn, swing, bow, walk, run
• Weight shift, lift.

1.1.1.2 Learning objectives

Knowledge
Students should acquire knowledge of:
• basic animation principles applied in 3D animation
• Various animation workflows for 3D including the various phases: planning, blocking, splining and polishing.
• how physicality translates into 3D animation
• the Cartesian coordinate system
• the basic operations an animator performs on a 3D object
• forward (FK) and inverse kinematics (IK)
• how to create and use video reference
• the basics of modelling and rigging, lighting, and rendering.

Skills
Students should acquire the skills to:
• Plan, block, spline and finish bi-ped character animations in 3D
• implement the 12 animation principles in a 3D animated scene
• Understand and apply constraints, parenting and the graph editor
• switch between inverse kinematics (IK) and forward kinematics (FK)
• analyse and apply the relevant 3D animation workflow
• apply and explore basic physicality and acting principles relevant for 3D animation
• analyse their work in relation to the applied theory and practice of 3D animation.

Competences
Students should develop competences to:
• Apply animation principles and techniques to create expressive and engaging characters in 3D animation
• Follow a 3D workflow
• Use interaction with a prop to add character-specific traits and add to the character's performance
• Create a convincing character with clear gesture and attitude
• To effectively tell a story without dialogue
• Apply basic lighting and render out a basic shot.

1.1.1.3 ECTS Credits
The programme element is equivalent to 15ECTS credits.

1.1.1.4 Exams
The learning objectives of the program element are tested at the exam at the end of the course.
It is a prerequisite for participating in the exam that the student has completed minimum 75% of the exercises handed out in this program element.

1.3.1 Advanced Animation
In this programme element, students begin working with more complex animation tasks and continue to expand on the work methods in 3D animation. The purpose of this element is to provide students with the competencies to independently create advanced animation assignments that mirror an animation shot in a production.

Students learn to analyse and apply references to bi-ped and multi-legged characters and/or creatures using more advanced 3D tools and techniques.
This programme element relates to the core area for the Character Animation Line: "3D Character Animation".

1.3.1.1 Content
The program element covers:
• Parkour
• Interaction animation.
• Animation of multi-legged characters and/or creatures.

1.3.1.2 Learning objectives
Knowledge
Students should acquire knowledge of:
• Advanced 3D animation tools and techniques
• How to develop and adapt to a specific animation style
• Advanced physicality and body mechanics
• The anatomy, movement and behaviour of the multi-legged characters and/or creatures
• Working with multiple characters in 3D animation scenes
• Acting and character-specific traits.
• Polishing techniques in animation.

Skills
Students should acquire the skills to:
• Analyse the movement of characters including multi-legged characters and/or creatures
• Break down an action into its sub-parts
• Polish animation, adding secondary actions and nuance.
• Animate a scene with interacting characters
• Develop contrasts and clear staging in the characterisation of the emotion of each character, making it clear who is the lead in the interaction
• Use weight, momentum and balance correctly
• Understand the physics of the interaction and how it affects each character
• Use inverse kinematics or forward kinematics when appropriate.

Competences
Students should develop competences to:
• Animate complex animation scenes
• Animate multi-legged characters and/or creatures
• Portray a character's movement and acting, taking animation style into consideration
• Animate a character in full action
• Animate scenes with multiple characters.

1.3.1.3 ECTS credits
The programme element is equivalent to 10 ECTS credits.

1.3.1.4 Exams
The learning objectives of the program element are tested at the exam at the end of the course.
It is a prerequisite for participating in the exam that the student has completed minimum 75% of the exercises handed out in this program element.

1.2 Exams

1.2.1 Animation Basics 3

1.2.1.1 Area
At this exam the subject "Animation Basics 3" is tested.

1.2.1.2 Competences
Students should demonstrate their knowledge of the methods and workflows of 3D character animation.

Students should develop competences to:
• Apply animation principles and techniques to create expressive and engaging characters in 3D animation
• Follow a 3D workflow
• Use interaction with a prop to add character-specific traits and add to the character's performance
• Create a convincing character with clear gesture and attitude
• To effectively tell a story without dialogue
• Apply basic lighting and render out a basic shot.

There should be a focus on physics and truth to materials. Furthermore, the students should reflect on their own learning, process and areas of development.

1.2.1.3 Exam form
This is an individual, written exam

1.2.1.4 Basis for exam
The exam is based on a written report and an exercise showreel.

1.2.1.5 Scope, project and written product
Students are required to hand in a written paper of 1-2 standard pages and a showreel consisting of selected assignments produced during the course. This program element should be represented in the showreel to serve as the visual reference for the written report.
The showreel and written exam paper must be handed in within the deadline and following the standards outlined in section 19 unless otherwise stipulated.

1.2.1.6 Basis for assessment
The emphasis for the assessment will be focused on how well the students have understood the learning objectives. The assessment is based on the written report using the showreel as a visual reference for the report.

1.2.1.7 Assessment
The exam is assessed according to the 7-point grading scale by an internal examiner.

1.2.2 Advanced Animation
1.2.2.1 Area
At this exam the subject "Advanced Animation" is tested.

1.2.2.2 Competences
Students should develop competences to:
• Animate more complex animation scenes
• Animate multi-legged characters and/or creatures
• Portray a character's movement and acting, taking animation style into consideration
• Animate a character in full action
• Animate scenes with multiple characters.

1.2.2.3 Exam form
This is an individual, written exam

1.2.2.4 Basis for exam
The exam is based on a written report and an exercise showreel.

1.2.2.5 Scope, project and written product
Students are required to hand in a written paper of 1-2 standard pages and a showreel consisting of selected assignments produced during the course. This program element should be represented in the showreel to serve as the visual reference for the written report.

The showreel and written exam paper must be handed in within the deadline and following the standards outlined in section 19 unless otherwise stipulated.

1.2.2.6 Basis for assessment
The emphasis for the assessment will be focused on how well the students have understood the learning objectives. The assessment is based on the written report using the showreel as a visual reference for the report.

1.2.2.7 Assessment
The exam is assessed according to the 7-point grading scale by an internal examiner.