COURSE CONTENT

Course Code	DT3004
Course Title	Rigging for Animation
Pre-requisites	DT2001
No of AUs	3
Contact Hours	39 hours studio contact

Course Aims

This advanced level course will give you a practice-based overview to the art of 3D character rigging, which you will apply to the creation of original character and props in your own 3D digital animation projects. You will also learn the role of the technical artist in the 3D pipeline and explore problem solving strategies that will advance your knowledge and further your skills in handling complex 3D production.

Intended Learning Outcomes (ILO)

By the end of the course, you should be able to:

1. Identify techniques used to create a technically rigorous character pipeline.
2. Develop your own processes in order to solve a range of technical challenges.
3. Apply your skills to create your own rigged characters.
4. Present, evaluate and reflect on the effectiveness of technical solutions for specific situations.
5. Constructively discuss and critique rigging concepts and techniques employed by peers.

Course Content

In this course you will be introduced to the advanced techniques of character set-up and rigging as used in computer animation. You will be familiarized with concepts such as skeleton setup for characters and creatures of different forms and shapes, blend shape creation for facial animation, character driven simulations, and the establishment of a specific 3D pipeline. You will learn to explore practical scripting techniques used for rigs to be used in an animation scenario and become skilled in using these techniques for your own characters.

How should a character be to be ready for animation?

The course begins with an introduction to the elemental units that constitute the basis for every rigging task. This includes understanding of anatomy and proper topology. This is then applied to various case studies; technical aspects such as skeleton and joint layout, interface creation, pipeline set up and technical choices will be discussed in class.

Building various part of a rig

You will be introduced to various techniques that can help you to identify different anatomical parts and you will be guided in the understanding of commonalities between different creatures. Concepts such as the puppet rig and the deformation rig will be identified and discussed through practical examples. You will be encouraged to create simple automatic solutions and explore scripting to ease repetitive tasks. You will explore the need for dynamic solutions to create convincing character deformations and secondary motions.

Beyond traditional rigging

You will receive an introduction to newly emerging and evolving rigging ideas that can be adapted to different animation formats such as video games VR and traditional key animation. The aim of this section is to illustrate the ever changing technological scenarios that continue to emerge as computer animation evolves due to increased sophistication and research development in the field.

Class assignments

You will produce two projects and a final reel presentation that demonstrate how you can rig your own character using concepts explored in class and how that translates into animation. Classes will include lectures, demonstrations, and activities that may be included in the assessment.