



Digarted project – the Digital Art Courses in Higher Education Institutions
(2021-1-PL01-KA220-HED-000029379)

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Co-funded by
the European Union

Digital Art Courses in Higher Education Institutions

Digarted project



*R3-A2 Curriculum for a short-duration learning course on
the basics of digital art leading to micro-credentials*



Akademia
Humanistyczno
Ekonomiczna
w Łodzi



Center for Technology
Research & Innovation





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The Short- Duration Learning Course Title: *3D Design and Motion Graphics Mastery*

Course Overview:

This comprehensive course is designed to immerse participants in the dynamic world of 3D design and motion graphics. Students will acquire the skills necessary to create visually stunning and engaging content from foundational concepts to advanced techniques. The course culminates in attaining micro-credentials, recognising participants' expertise in the field.

Course Content:

Module 1: Introduction to 3D Design

- Understanding 3D space and objects
- Navigating 3D software platforms
- Introduction to 3D modeling techniques

Module 2: Fundamentals of Motion Graphics

- Principles of animation
- Keyframe animation and timing
- Introduction to motion graphics software

Module 3: Advanced 3D Modeling

- Complex object creation and manipulation
- Texturing and materials in 3D design
- Lighting and rendering techniques

Module 4: Advanced Motion Graphics Techniques

- Expressive typography in motion
- Advanced motion tracking
- Integrating 3D elements into motion graphics

Module 5: Visual Effects (VFX) Integration



- Green screen compositing
- Particle systems and simulations
- Adding realism through VFX

Module 6: Portfolio Development

- Crafting a professional 3D design and motion graphics portfolio
- Project-based learning to apply acquired skills
- Peer and instructor feedback sessions

Micro-credentials Assessments:

Participants will undergo assessments at the end of each module, including practical projects, quizzes, and peer evaluations. The final assessment involves the creation of a comprehensive portfolio showcasing the skills acquired throughout the course.

Micro-credentials:

Upon successful completion of the course and passing the assessments, participants will receive micro-credentials in the following areas:

- Foundations of 3D Design
- Motion Graphics Proficiency
- Advanced 3D Modeling Techniques
- Expert Motion Graphics Integration
- Visual Effects (VFX) Mastery
- 3D Design and Motion Graphics Portfolio

Addendum: Higher education institutions face several challenges in adopting microcredentials, namely the recognition of microcredentials within existing curricula. Micro-credentials are a relatively new tool and the lack of standardization and clear national regulations causes difficulties in their implementation by DIGARTED project partner institutions.

Course Format:

Duration of the course: 12 weeks

Delivery: Online with interactive live sessions, video tutorials, and hands-on projects



Prerequisites: Basic understanding of graphic design concepts and access to 3D design and motion graphics software.

Instructors:

Experienced industry professionals with a background in 3D design, motion graphics, and visual effects, providing real-world insights and guidance.

Learning outcome:

Graduates of this course will possess a comprehensive skill set in 3D design and motion graphics, enabling them to pursue careers in animation studios, advertising agencies, game development, and other related industries. The micro-credentials attained will serve as a recognised validation of their expertise in specific 3D design and motion graphics areas.

Evaluation of the students' skills

The evaluation of the candidate's work resulting in validation and obtaining micro-credentials certificate (suggested tasks for the student completing the course as a self-study):

The student must include in the project at least five original and unique objects (in any style) selected from the list:

- amulet of destiny (3D model): An object that enables the bearer to manipulate events.
- astral magnifier (3D model): An item that allows one to see astral beings or places.
- Phantom Glove (3D model): a glove that allows the bearer to pass through objects or walls.
- Luminous Gem (3D model): a stone emanating light that clears or reveals hidden pathways.
- Lute of Time (3D model): a musical instrument capable of manipulating time or evoking memories.
- Stinging flower (3D model): a flower whose thorns can unlock secret places or transform enemies.
- Key to Whispers (3D model): a key that opens access to hidden conversations between characters.

In the motion graphics module:



The student must use the DIGARTED logo and weave it into an animation/ or graphic design.

Design must include:

- morphing animation (subtitle-in-title, or character changing into subtitle, or character changing into character)
- at least one of the effects presented in the course

Evaluation quiz

The attached quiz should be proposed to the participant before and after the course to check the students progress in gaining new skills.

1. What are the key actions involved in the animation process that enable the creation of realistic movement, actions, and interactions within a three-dimensional space?

- A. The animation process in 3D primarily involves using physical puppets and stop-motion techniques to create movement.
- B. Animating in 3D relies solely on pre-made templates and doesn't involve any manipulation of digital models.
- C. In 3D animation, movement is generated by capturing real-life actors and transferring their motions directly onto digital characters.
- D. The animation process typically involves manipulating digital models, called meshes, by altering their position, rotation, and scale over time to simulate realistic movement, actions, and interactions. **T**

2. What is the main purpose of keyframe animation and timing in 3D animation?

- A. Keyframe animation and timing in 3D refers to the process of setting specific key poses or positions for an object or character at key points in time within an animation timeline. **T**
- B. Keyframe animation and timing in 3D involves randomly placing objects or characters at different positions throughout the animation timeline without specific planning.



C. In 3D animation, keyframe animation and timing are irrelevant as the software automatically generates movement based on predefined algorithms.

D. Keyframe animation and timing in 3D entails manually adjusting the lighting and colour settings of scenes to create dynamic visual effects within the animation timeline.

3. What is the meaning of timing in animation, particularly in terms of frame count and the spacing between frames, and how does it impact the portrayal of speed, weight, and movement intensity?

A. Timing in animation refers to the process of selecting the appropriate background music to accompany the visual elements, enhancing the overall viewer experience.

B. In animation, timing refers to the duration of each frame, which remains constant throughout the entire sequence, regardless of the action being portrayed.

C. Timing refers to the number of frames used to create an action and the spacing between those frames. It is crucial for conveying speed, weight, and movement intensity. **T**

D. Timing in animation solely focuses on the chronological order of events within the storyline, without considering the pacing or rhythm of the movement.

4. What do keyframe animation and timing involve in 3D animation

A. In 3D animation, complex and dynamic animations are achieved solely through manual frame-by-frame drawing without using any specialized tools or techniques.

B. Various tools and techniques such as rigging, inverse kinematics, and particle systems are often employed to achieve more complex and dynamic animations in 3D. **T**

C. Advanced 3D animations are typically created by outsourcing the work to other studios or freelance artists rather than using in-house tools and techniques.

D. To achieve complex animations in 3D, animators primarily rely on basic software functions such as moving, rotating, and scaling objects, without utilizing any additional tools or techniques.



The course evaluation tool

The evaluation tool should be implemented after the course to measure feedback from teachers, students, and industry stakeholders. In this way, the course will remain open to continuous improvement by making changes. Based on the responses, it will be possible to determine whether the course meets the expectations of the target groups. The assumed overall satisfaction level for the course should be over 80%.

A sample course evaluation tool in the form of a questionnaire is presented below:

3D Design and Motion Graphics Mastery - The course evaluation tool

Thank you for participating in the 3D Design and Motion Graphics Mastery course. Your feedback is essential to ensure the quality and effectiveness of the course.

Please take a few moments to answer the questions below:

A. RESPONDENT PROFILE

What was your role in the course? *

- a course participant/a student
- a course tutor/a teacher (Go to Section C)
- a member of the exam board (Go to Section C)
- other:

B. SELF-ASSESSMENT (This section is dedicated only to the course participants)

1. How would you rate your level of knowledge of 3D design and motion graphics before starting the course?

1 2 3 4 5

Very poor Excellent



2. To what extent has your knowledge of 3D design and motion graphics improved after completing the course?

1 2 3 4 5

Not much Very much

3. How would you rate the level of difficulty of the final credit/exam?

1 2 3 4 5

Very easy Very difficult

4. Do you feel that the course has improved your professional competencies?

- Yes, definitely.
- Maybe, to a small extent
- No, not at all
- Other: _____

C. COURSE EVALUATION

1. How would you rate the overall organization and structure of the course?

1 2 3 4 5

Very poor Excellent

2. Did the course adequately cover the topic of 3D Design and Motion Graphic?

- Yes, it covered all the necessary aspects.
- Yes, but some important areas were missing.
- No, it did not cover the topic adequately.



3. Were the learning objectives clearly defined and communicated at the beginning of the course?

- Yes, they were clearly defined.
- Partially, some objectives were not well-defined.
- No, the learning objectives were unclear or missing.

4. Did the course include practical demonstrations or hands-on exercises related to the topic?

- Yes, there were practical demonstrations and exercises.
- Partially, but more practical components could have been included.
- No, there were no practical demonstrations or exercises
- Other:

5. Did the course provide sufficient opportunities for interaction or engagement with the content?

- Yes, there were interactive elements that kept participants engaged
- Partially, but more interactive components would have been beneficial.
- No, there were minimal opportunities for interaction or engagement.
- Other:

6. Was the duration of the course adequate to cover the course topic?

- Yes, the duration of the course was adequate
- No, the course was too long.
- No, the course was too short.
- Other:



7. How would you rate the detail and comprehensiveness of the content covered in the course?

1 2 3 4 5

Very poor Excellent

8. How would you rate the quality of visuals and multimedia elements used in the course?

1 2 3 4 5

Very poor Excellent

9. How do you rate the content of the particular modules?

Module 1: Introduction to 3D Design

1 2 3 4 5

Very poor Excellent

Module 2: Fundamentals of Motion Graphics

1 2 3 4 5

Very poor Excellent

Module 3: Advanced 3D Modelling

1 2 3 4 5

Very poor Excellent

Module 4: Advanced Motion Graphics Techniques

1 2 3 4 5

Very poor Excellent

Module 5: Visual Effects (VFX) Integration



1 2 3 4 5

Very poor Excellent

Module 6: Portfolio Development

1 2 3 4 5

Very poor Excellent

10. Would you recommend this course to others?

- Yes, definitely.
- Maybe, with some improvements
- No, I would not recommend it
- Other: _____

11. What specific improvements or changes would you suggest to make the course more effective?

Thank you for your time and valuable input!