Macrosoft

Vzdelávanie s trvalým efektom

DOCUMENT

Course syllabus

CATEGORY

3D graphics, CAD courses

TRAINING FORMAT

In Bratislava or online with a lecturer

PRICE EXCL. VAT

750,00 €

PRICE INCL. VAT

922,50 €

including 23 % VAT

Macrosoft školiace centrum

Aktuálne informácie na Macrosoft.sk

PDF SYLLABUS

Animation and Visualization in 3DS Max

Clear overview of course topics, training scope and key information.

Overview of the software and its use, familiarization with the interface, workspace setup and basic navigation in 3D space.

COURSE CONTENT

01 **Introduction to 3ds Max**

Overview of the software and its use, familiarization with the interface, workspace setup and basic navigation in 3D space.

02 **Modeling Basics**

Working with different types of objects, creating and editing basic shapes, introduction to polygon modeling and object manipulation.

03 **Advanced Modeling Techniques**

Modeling complex objects, using modifiers, creating organic shapes and optimizing models.

04 **Texturing and Materials**

Working with the material editor, applying textures, using UVW mapping and creating different types of surfaces.

05 **Light and Scene Lighting**

Types of lights, setting lighting for a realistic effect, working with shadows and techniques for lighting interiors and exteriors.

06 **Basics of Creating 3D Animation**

Working with the timeline, creating animations using keyframes, motion animation and dynamic effects.

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07 **Basics of Working in the Curve Editor**

application of new keys motion dynamics

08 **Linear and Nonlinear Interpolation**

changing interpolation and its use in practice according to type

09 **Creating a Skeleton-Rig for a Character**

editing bones (length, width, separate extrusion of grips for more effective work)

10 **Application of Inverse Kinematics**

skeleton-rig of a character and setting kinematics angles

11 **Application of Helpers**

Dummy objects for inverse kinematics manipulators

12 **Skinning a Character**

skinning to the created skeleton setting deformation zones, envelope sizes and their positions on given bones according to the length of limbs, fingers, torso, head, etc. skin mirroring

13 **Animating a Character**

static animation - breathing, looking around... activity according to course participant requirements with achieving real motion dynamics

14 **Working in the Dope Sheet Editor**

application of new keys, animation reverse

15 **Basics of Working with Animation Keys**

copying (separately rotation, translation and scaling)

16 **Animating Visibility**

object transparency

17 **Animating the Camera**

animating along a trajectory representing a separate object through controllers

18 **Particle Systems**

animating snow and rain (creating texture for snow and rain) creating animation of blood cells through particle systems using instant geometry and deflectors to achieve real physical laws of collisions between objects

19 **Animating Geometric Shapes Through Path Deform**

modifier for achieving movement along a given trajectory and adapting object bending in the world of animation, also known as Stroke

20 **Animating Wind and Gravity**

when using Particle Systems

21 **Rendering and Export**

Setting rendering parameters, using different rendering engines, setting render quality and exporting projects in high resolution.

22 **Working with Lights**

basic - omni light, target, free, skylight, mental ray Area Light and Area Spot setting light intensity, shadow types (soft and hard shadow) and their use according to type in practice setting light color and implementing a bitmap on the projector - light parabola

23 **Working with Photometric Lights**

Target/Free Point, Target/Free Linear, Target/Free Area

24 **Implementation of Photometric Lights**

IES Sun and IES Sky into exterior visualization of a family house with land. Setting intensities of additional lights to achieve a photorealistic image

25 **Application of Post-Production Effects**

Video Post (Glow, Lens Flare, Highlight)

26

Creating Object Grass

setting values for grass and hair, color, gloss, physics - collisions editing - combing and cutting in real time to required values for grass and hair placing grass in required places in the scene and its additional modification

27

Implementation of a 3D Object

implementation (building/house) into a photograph with placement in the required place, scene lighting and application of a special type of texture to achieve a photorealistic image

28

Rendering

description of components of the render settings dialog window of basic types

29

Scanline Render

detailed description of setting values for Radiosity, Light Tracer, types of output filters, image resolution settings, saving the resulting render to the required format

30

Mental Ray Render

description of items, setting caustics and global illumination values, photons, Final gather, depth of field, use of appropriate light types for Mental Ray render, their light intensity and shadow value settings

31

Working with Post-Production Effects

volumetric light: setting intensity and colors of sun rays, bitmap implementation to achieve a realistic image of rays, setting shadowing types for this type of effect with differences for use in practice

32

Depth Of Field

depth of field (blurring and focusing objects through camera view to the required result)

33

Lens Effect

implementation of the Lens Flare effect on the required light in the scene to achieve a shining sun in the background of the whole scenery

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34

Final Project

Creating a complex project from design to final render, application of acquired skills, finalization and presentation of outputs. Each part contains practical exercises and projects for acquiring skills that you can use in real projects.

This document serves as an informational overview of the course syllabus. Current dates, venue and availability are listed at Macrosoft.sk.

https://www.macrosoft.sk/en/courses/animation-visualization-3ds-max