

ΑΝΑΛΥΤΙΚΗ ΠΡΟΔΙΑΓΡΑΦΗ ΠΡΟΓΡΑΜΜΑΤΟΣ ΚΑΤΑΡΤΙΣΗΣ

1. Τίτλος προγράμματος κατάρτισης:

3D Modelling for real time applications and VR Visualization

2. Σύνδεση με Πρότυπα Επαγγελματικών Προσόντων:

Δεν εφαρμόζεται

3. Διάρκεια κατάρτισης (ώρες): 30

4. Ανάγκη κατάρτισης:

This course addresses the need for hands-on experience in producing high-quality low-poly 3D assets and environments, bridging the gap between conceptual design and practical application in fields such as gaming, architecture, and digital media.

5. Στόχοι:

Upon the completion of the program, participants will be able to:

- Describe and classify the principles of 3D design, texturing, and lighting
- Construct detailed 3D models and develop immersive virtual environments
- Apply VR visualization techniques to create interactive experiences
- Operate industry-standard software effectively
- Engage in collaborative efforts to foster creativity and innovation in virtual design.
- Adopt a proactive attitude toward embracing new technologies and promoting high-quality visual storytelling

6. Περιγραφή υποψηφίων για συμμετοχή:

The course is designed for architects, interior designers, game designers, 3D modelers, and real-time application designers. However, participants without these backgrounds can still follow the course principles and ideas. Some experience with CAD software is desirable.

**Participants are kindly requested to bring their own laptops for the training.*

7. Περιεχόμενο κατάρτισης:

Α/Α Ενότητας	ΑΝΑΛΥΣΗ ΠΕΡΙΕΧΟΜΕΝΟΥ ΕΝΟΤΗΤΩΝ	ΔΙΑΡΚΕΙΑ (ΩΡΕΣ)
Ενότητα 1	<p>3D modelling Learning Autodesk 3DS MAX*. From basic and to industry standard principles of how to create low polygonal 3D geometry which will be efficient in a real time application. Manual 3D modelling using MAX’s interface and tools.</p> <ul style="list-style-type: none"> • Self Intro and discussion with class • Intro to VR. Presentation of Khirokitia VR as an example of the pipeline approach we take with such projects. • Touring and understanding the 3DS MAX user interface • Standard Primitives and their parameters • First Constructions using Standard and Extensive Primitives • Learning more tools and modifiers and the first constructions with box modelling • Sub-Objects and Shapes, Layers, more tools and more low-poly box modelling • Research and development of the final constructions 	15
Ενότητα 2	<p>Texture Mapping and Texture Creation Learning the principles of Physical Based Rendering (PBR) materials and how to unwrap 3D models to be properly textured. Learning of basic tools of Adobe Photoshop* or equivalent and Materialize.</p> <ul style="list-style-type: none"> • PBR Materials • Texture Mapping 	6
Ενότητα 3	<p>Off-line Rendering, real time rendering, interactivity and presentation Learning to use MAX’s Lights and cameras for conceptual rendering and intro to Epic’s Twinmotion*** to create basic interactive applications for desktop and Virtual Reality Environments.</p> <ul style="list-style-type: none"> • Importing Geometry from external libraries • Lights, Cameras and Render settings • Importing everything into Twinmotion and creating interactivity • Tete-a-tete meetings for fine tuning individual projects • Final touch-ups and Presentations 	9
	<p>* Autodesk 3ds MAX is a professional 3D modelling, animation and rendering software. It is widely used in industries like gaming, film, architecture, and product design to create high quality 3D content such as characters, geometric and organic objects and environments. It is a very popular choice for professionals and studios around the globe.</p> <p>**Adobe Photoshop (or something equivalent) is a powerful image-editing tool, which allows the user to edit existing photographs, created graphics and illustrations from scratch as well as textures and digital paintings. It has been an industry standard since the 90s.</p> <p>***Twinmotion is a real-time 3D visualization software designed for architects and designers to create immersive visualizations, animations, and virtual reality experiences. It offers an intuitive interface for producing high-quality renders quickly. It is a simple solution instead of using game engines such as Unity 3D or Unreal</p>	