

Vocational English  
III (Mesleki Yabancı  
Dil III)  
Week 13

17.12.2024



Engineering Faculty  
Computer Engineering

Prepared by: Dr Ercan Ezin

This week we will work on

# ENGLISH FOR COMPUTER GRAPHICS & READING-LISTENING ACTIVITIES

# INTRODUCTION TO COMPUTER GRAPHICS LEARNING-I

**Rendering (noun)** → .....

- Example:** "Rendering converts 3D models into realistic 2D images."

**Rasterization (noun)** → **Rasterleştirme**

- Example:** "Rasterization converts vector data into pixel-based images."

**Vector Graphics (noun)** → .....

- Example:** "Vector graphics are ideal for scalable images without quality loss."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-2

**Pixel (noun)** → .....

•**Example:** "Each pixel represents a tiny part of the digital image."

**Resolution (noun)** → .....

•**Example:** "High resolution images have more pixels and finer details."

**Frame Rate (noun)** → .....

**Example:** "A higher frame rate results in smoother animations."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-3

**Texture (noun)** → .....

•**Example:** "Textures add surface details to 3D models."

**Shading (noun)** → .....

•**Example:** "Shading techniques help create realistic lighting effects."

**Lighting (noun)** → .....

•**Example:** "Lighting defines how objects appear under various light sources."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-4

**Shadow (noun)** → .....

•**Example:** "Shadows add depth and realism to rendered scenes."

**Anti-Aliasing (noun)** → **Kenar Yumuşatma**

•**Example:** "Anti-aliasing smooths jagged edges in computer graphics."

**Shader (noun)** → .....

•**Example:** "Shaders are programs that define how pixels are rendered."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-5

**3D Model (noun)** → .....

- Example:** "3D models are used in video games and animations."

**Wireframe (noun)** → **Tel Kafes**

- Example:** "A wireframe is the basic structure of a 3D model."

**Mesh (noun)** → .....

- Example:** "The mesh of a model consists of interconnected vertices and polygons."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-6

**Polygon (noun)** → .....

•**Example:** "Polygons form the building blocks of 3D models."

**Vertex (noun)** → .....

•**Example:** "Vertices define the corners of a polygon in a 3D model."

**UV Mapping (noun)** → .....

•**Example:** "UV mapping wraps 2D textures onto 3D models."



**Animation (noun)** → .....

- Example:** "Animation creates motion for objects in computer graphics."

**Frame Buffer (noun)** → **Çerçeve Arabelleği**

- Example:** "The frame buffer stores the image before rendering to the screen."

**Ray Tracing (noun)** → **Işın İzleme**

- Example:** "Ray tracing simulates light paths for realistic reflections and shadows."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-8

**Z-Buffer (noun)** → Z-.....

- Example:** "Z-buffering handles depth calculations for 3D rendering."

**Depth Buffer (noun)** → .....

- Example:** "The depth buffer determines which objects are visible in a scene."

**Color Space (noun)** → .....

- Example:** "Color space defines how colors are represented in graphics."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-9

**Rendering Engine (noun) → İşleme Motoru**

•**Example:** "The rendering engine processes graphics data to produce final images."

**Graphics Pipeline (noun) → ..... İşlem Hattı**

•**Example:** "The graphics pipeline manages the steps of rendering images."

**OpenGL (noun) → .....**

•**Example:** "OpenGL is a widely used graphics API for rendering images."

## INTRODUCTION TO COMPUTER GRAPHICS LEARNING-10

**DirectX (noun) → DirectX**

- Example:** "DirectX is used for rendering graphics in Windows applications."

**Viewport (noun) → .....**

- Example:** "The viewport shows the visible area of a 3D scene."

**Transformation (noun) → .....**

- Example:** "Transformations include scaling, rotation, and translation of objects."

# BOOK/BLOG RECOMMENDATION



Harun Çiğ • 1st

Dr. Öğr. Üyesi

3w •



🎮 HAVELSAN işbirliği ile UNREAL ENGINE EĞİTİM KAMPI BAŞLIYOR! 🎮

📅 16-20 Aralık 2024 tarihlerinde Şanlıurfa Teknokent'te yüz yüze gerçekleşecek Unreal Engine Eğitim Kampına davetlisiniz! 🚀

🎓 Hedefimiz: Unreal Engine 5 oyun motorunu kullanmayı öğrenmek ve oyun geliştirme dünyasında ilk adımlarınızı atmanıza rehberlik etmek!

💡 Eğitim İçeriği:

1. Gün: Unreal Engine'e giriş, oyun motoru arayüzü ve temel araçlar.
  2. Gün: Texture, Material ve Shader'larla çalışmak, oyun dünyası tasarım araçları.
  3. Gün: Işıklandırma, post-process efektleri, animasyon ve görsel programlama.
  4. Gün: Proje paketleme ve yayınlama için gerekli adımlar.
- 📌 Eğitim, Havelsan'da alanında uzman eğitmenler tarafından verilecektir.

BLOG: <https://www.scratchapixel.com/>

Excellent blog explaining CG concepts

OPENGL: <https://learnopengl.com/>

LEARN RAYTRACING: <https://raytracing.github.io/>

BOOK: **Computer Graphics: Principles and Practice 3rd Edition**

WEEKLY NEWSLETTER ON GC: <https://www.jendrikillner.com/post/>

BLOG: <https://iquilezles.org/>

UNREAL ENGINE: <https://www.unrealengine.com/en-US>

BLENDER: <https://github.com/blender/blender>

[Computer Graphics Programming Resources](#)

CONFERENCE: SIGGRAPH- [HTTPS://S2024.SIGGRAPH.ORG/](https://s2024.siggraph.org/)

# LISTENING

## UNREAL ENGINE NEW FEATURES VIDEO

<https://128.pl/TrHZp>



# WEEK 1-3: ENCOURAGEMENT

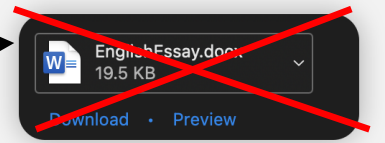
If you switch both your mobile phone and computer language to English and write an **essay** on the *pros* and *cons* of this change, you will earn extra points—between 0 and 10.

The **essay** should clearly describe the benefits and any new words or concepts you learned after making the change.

Check out this video that will help you to learn how to write an essay : [Video](#)

# END OF THE YEAR HOMEWORK

## YOUR EXPERIENCE AFTER CHANGING THE DEVICE LANGUAGE



Please do not send me a Word or PDF file. Send your essay as email body not a separate file. Please send your essays to my Gmail account (dr.ercan.ezin@gmail.com). Your essay should be convincing that you have truly changed the language of your devices. No fluffy words, unrelated topics or GPT generated content. We want to hear how it affected your life good or bad ways not GPT generated content. You can use GPT to correct grammar mistakes or typos but you should **avoid** generating content.

2-point penalty if it is a separate file. 2-point penalty if it is not in my gmail account. 5-point penalty if it is not convincing and not talking about your experience. 3-point penalty for GPT generated content.

IMPORTANT: Check out internet on how to write an essay. Particularly Pro-Con essays.





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# CREDITS

Unreal Engine Youtube Channel