

Name of the course	Code	Term	T+P	Credit	ECTS
Graphics And Design			3+0	3	4

Prerequisites and co-requisites	
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Language of the course	Turkish
Type of the course	Technical Elective
Course Coordinator	
Name of Lecturers	
Assistants	
Aim and goals of the course	Donate student with the fundamentals of computer graphics. To give both research and industry standard required skills to the student. Enable student to use OpenGL and similar graphics libraries.
Course Learning Outcomes	Upon successful completion of the course, the students will be able to : <ol style="list-style-type: none"> 1. Use OpenGL programming library with three dimensional graphics in their work projects. 2. Define and explain homogenous coordinate system. 3. Create synthetic images using illumination models.
Contents of the course	Introduction to computer graphics systems and basic elements of geometric output. Properties of graphical baselines. Geometric transformations. Matrix representation and homogeneous coordinates. Two-dimensional displacement. Two-dimensional rotation. Two-dimensional scaling. Two-dimensional tilting. Geometric transformation functions with OpenGL. Two dimensional (2D) imaging. Clipping the window. Imaging functions in 2D with OpenGL. Cutting algorithms. Three-dimensional (3D) imaging. Pline descriptions. Uncovering the visual surface. Visualization of lighting patterns and surfaces.

Weeks	Subjects
1	Introduction to Computer Graphics
2	Graphical components and drawing algorithms
3	Output component features - 2D drawing
4	2D transformations and transformations with homogeneous coordinates
5	2D imaging and cutting (clip) algorithms
6	Modeling - GUI and interaction
7	3D concepts - 3D object properties
8	MIDTERM EXAM
9	3D geometric and modeling transformations
10	3D imaging algorithms
11	Visible surface algorithms
12	Enlightenment models
13	Color Concepts
14	Coloring
15	FINAL EXAM

General Qualifications
In assessments, it is important for students to understand computer graphics and design issues
References
<ol style="list-style-type: none"> 1. Graphics Gems. Computer Graphics, Foley Van Dam Hughes. www.siggraph.org 2. Computer Graphics, Donald Hearn & Pauline Baker, Addison Wesley Publishing.
Evaluation
Midterm Exam: % 40, Final Exam: % 60. Project or homework evaluations can be made at the beginning of the semester.

