

Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF432	Computer Graphics	7	3	0	0	3	5

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Elective
Course Level	Bachelor Degree
Objective	
Content	<ol style="list-style-type: none">1. Introduction to OpenGL Programming2. 3D Graphics System3. 2D and 3D Object Representation4. Object Modeling and Visualization5. Object Transformation Functions, Projection Designs6. Object Animation7. Animation Models8. Midterm Exam9. Object-Oriented Graphic Design10. Interactive OpenGL Programming11. Introduction to Different OpenGL Derivatives: WebGL, OpenGL ES, GLSL, JavaScript12. Game Engine Architectures13. 3D Scene Design, Ray Tracer14. Projects
References	<ol style="list-style-type: none">1- Computer Graphics with Open GL, Hearn Baker Carithers, Fourth Edition, Pearson, 20142- 3D Computer Graphics, A Mathematical Introduction with OpenGL, Samuel R. Buss, Cambridge University Press 20033- WebGL Programming Guide: Interactive 3D Graphics Programming with WebGL, Kouichi Matsuda, Rodger Lea Addison Wesley, 20134-Mathematics for 3D Game Programming and Computer Graphics Third Edition, Eric Lengyel, Course Technology, 2012

Theory Topics

Week	Weekly Contents
1	Introduction to OpenGL Programming

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2	3D Graphics System
3	2D and 3D Object Representation
4	Object Modeling and Visualization
5	Object Transformation Functions, Projection Designs
6	Object Animation
7	Animation Models
8	Midterm Exam
9	Object-Oriented Graphic Design
10	Interactive OpenGL Programming
11	Introduction to Different OpenGL Derivatives: WebGL, OpenGLES, GLSL, JavaScript
12	Game Engine Architectures
13	3D Scene Design, Ray Tracer
14	Projects