

## 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"><li>1. Introduction to OpenGL Programming</li><li>2. 3D Graphics System</li><li>3. 2D and 3D Object Representation</li><li>4. Object Modeling and Visualization</li><li>5. Object Transformation Functions, Projection Designs</li><li>6. Object Animation</li><li>7. Animation Models</li><li>8. Midterm Exam</li><li>9. Object-Oriented Graphic Design</li><li>10. Interactive OpenGL Programming</li><li>11. Introduction to Different OpenGL Derivatives: WebGL, OpenGL ES, GLSL, JavaScript</li><li>12. Game Engine Architectures</li><li>13. 3D Scene Design, Ray Tracer</li><li>14. Projects</li></ol>
References	<ol style="list-style-type: none"><li>1- Computer Graphics with Open GL, Hearn Baker Carithers, Fourth Edition, Pearson, 2014</li><li>2- 3D Computer Graphics, A Mathematical Introduction with OpenGL, Samuel R. Buss, Cambridge University Press 2003</li><li>3- WebGL Programming Guide: Interactive 3D Graphics Programming with WebGL, Kouichi Matsuda, Rodger Lea Addison Wesley, 2013</li><li>4-Mathematics for 3D Game Programming and Computer Graphics Third Edition, Eric Lengyel, Course Technology, 2012</li></ol>

## Theory Topics

Week	Weekly Contents
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