EBMYL 525 - Computer Graphics

INSTRUCTOR: Assist. Prof. Dr. Engin Mendi
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OFFICE HOURS: By appointment

DESCRIPTION: This course aims to convey understanding of the process of modeling and generating images of 3D objects. Starting by studying the basic process of drawing primitive objects including lines, circles, and polygons on a display, we will explore the process of building 2D and 3D mathematical models of more complex objects, manipulating and combining these models, and projecting the models onto a 2D image space. The course will also stress windowing systems and drawing more complex primitive objects such as curves and surfaces.

REFERENCES

1. 3-D Computer Graphics: A Mathematical Introduction with OpenGL, S. R. Buss, Cambridge University Press.
2. Computer Graphics, C Version, D. Hearn, M. P. Baker, Pearson.

GRADING

Programming Homework	**% 20**		
Research Project	**% 80**		
Proposal (Report + Presentation)		% 25	7.11.2017
Progress (Report + Presentation)		% 15	5.12.2017
Final (Demo + Report + Presentation)		% 40	26.12.2017

TENTATIVE COURSE TOPICS

Overview of Graphical Systems, Introduction to OpenGL
Programming in OpenGL, Line and Curve Drawing
Drawing and Fill-Area Primitives, Display List
Attributes of Graphics Primitives
Geometric Transformation
Two-Dimensional Viewing, Hierarchical Modeling
3D Object Representations
Spline Representation, Other 3D Object Representations
Computer Animation