Advanced Computer Graphics (4541.562)

Spring, 2014

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1. Course Description:
   This course covers basic algorithms and systems that deal with three-dimensional modeling and processing in computer graphics and 3D games.

2. Prerequisites:
   Computer Graphics (4190.410)

3. Grade:

   - Midterm: 100 pts

   - Final: 100 pts

   - Homeworks, Quizzes & Projects: 100 pts

4. Text Book:

   - Tomas Akenine-Möller and Eric Haines, *Real-Time Rendering*, 2nd Ed., A.K. Peters, Natick, Massachusetts, 2002.

Weeks	Lectures	Projects
3/3–7	Introduction Rendering Pipeline	
3/10–14	Transforms	
3/17–21	Acceleration Algorithms	
3/24–28	Intersection Test Methods	
3/31–4/4	Intersection Test Methods	
4/7–11	Collision Detection	
4/14–18	Collision Detection	
4/21–25	**Midterm Exam**	
4/28–5/2	Curves and Surfaces	
5/5–9	Polygonal Techniques	
5/12–16	Advanced Transforms	
5/19–23	Shape Deformation	
5/26–30	Visual Appearance	
6/2–6	Texturing	
6/9–13	Shading and Rendering	
6/16–20	**Final Exam**	