

Advanced Computer Graphics (4541.562)

Spring, 2011

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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
3/2–4	Introduction	
3/7–11	Rendering Pipeline	
3/14–18	Transforms	
3/21–25	Visual Appearance	
3/28–4/1	Texturing	
4/4–8	Shading and Rendering	
4/11–15	Midterm Exam	
4/18–22	Acceleration Algorithms	
4/25–29	Polygonal Techniques	
5/2–6	Curves	
5/9–13	Surfaces	
5/16–20	Intersection Test Methods	
5/23–27	Intersection Test Methods	
5/30–6/3	Collision Detection	
6/7–17	Final Exam	