

Advanced Computer Graphics (4190.562)

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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
3/2–10	Rendering Pipeline	
3/12–17	Transforms	
3/19–24	Curves and Surfaces	
3/26–31	Acceleration Algorithms	
4/2–7	Intersection Test Methods	
4/9–14	Intersection Test Methods	
4/16–21	Collision Detection	
4/23–28	Midterm Exam	
4/30–5/4	Polygonal Techniques	
5/7–12	Polygonal Techniques	
5/14–19	Visual Appearance	
5/21–26	Texturing	
5/28–6/2	Environment Mapping	
6/4–16	Image-Based Effects	
6/18–21	Final Exam	