



What Do You Think Are Technical Topics for Developing Games?

- Consider a computer game you want to build (or, one you like that has been built)
- Assume you are inspired (or forced or paid) to engineer the game
- Take 2-3 minutes to write a list of the tasks required
 - Subtasks, too, if you'd like
- What do we have?



IMGD 4000 Technical Game Development II

Mark Claypool





Topics

- Background
- Topics
- Course Materials
- Motivation



Professor Background (Who am I?)

- Mark Claypool
 - Computer Science
 - Operating Systems, Distributed Computer Systems, Multimedia, Networks
 - Director of the IMGD program
 - The Game Development Process
- Research interests
 - Networks, Multimedia, Network games, Performance (*Technical*)





Student Background (Who Are You?)

- Year (sophomore, junior, senior)
- Major (IMGD-Art, IMGD-Tech), CS, other?)
- Classes
 - IMGD 3000
 - IMGD 3500, IMGD 4500
 - CS 4341 (AI), CS4514 (Net), CS4731 (Graphics)
 - PH 1110 (Newtonian Physics)
- Programming Language of choice (Java, C++, ...)
- Games made (estimate)
- Other ...



Syllabus Stuff

<http://www.cs.wpi.edu/~claypool/courses/4000-D07/>

- TA:
 - Zhe ("Jeff") Zhou
- Office hours:
 - Jeff: M 3-4, T 3-4, W 2-3, Th 2-3, Me: (TBA)
 - See Web page
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 - {claypool, jeffz} at cs.wpi.edu
 - imgd4000-ta at cs.wpi.edu
 - imgd4000-all at cs.wpi.edu





Course Materials

- Slides
 - On the Web
 - PPT and PDF
 - Caution! Don't rely upon the slides alone!
Use them as supplementary material
 - (come to class)
- Timeline
 - Tentative planning
- Resources
 - Project writeups, samples, etc.



Text Books

- Allen Sherrod. [Ultimate 3D Game Engine Design & Architecture](#), 2007, Charles River Media, ISBN: 1584504730.
- Grenville Armitage, Mark Claypool, and Philip Branch. [Networking and Online Games: Understanding and Engineering Multiplayer Internet Games](#), John Wiley and Sons, Ltd., June 2006. ISBN 0470018577.
- May supplement with other materials (make available online)





Course Structure

- Prerequisites
 - IMGD 3000
 - *Programming*
- In-Class
 - Mostly lecture
 - Some discussion
 - Exams
 - Project presentations
- Out-of-Class
 - Reading
 - *Projects*
- Grading
 - Exams (60%)
 - Projects (40%)

(More on Exams and Projects, next)



Exams

- 2 exams
- 40% of grade
- Non-cumulative
- Closed-note
- Closed-paper
- Closed-friend
- One-page "crib-sheet" (handwritten)





Projects (1 of 2)

- 4 projects
- #1-3
 - Done *individually*
 - Ask for help, but no sharing code
 - Apply technical concepts in class
 - Build upon each other
 - 30% of your grade
- #4
 - Done in groups
 - 3 ideal, 2 and 4 with permission
 - Apply creativity, design, and technical concepts
 - 30% of your grade
- Should have two working games at end!



Projects (2 of 2)

- Project 1: Chess Board
 - Chess front end, piece movement and graphical representation
- Project 2: Chess AI
 - Computer-controlled opponent, different levels of "smartness"
- Project 3: Online
 - Networked client-server, play against other opponent or computer on Internet
- Project 4: A Technical Game
 - Creative idea, technical selection, technical focus, milestone, working game



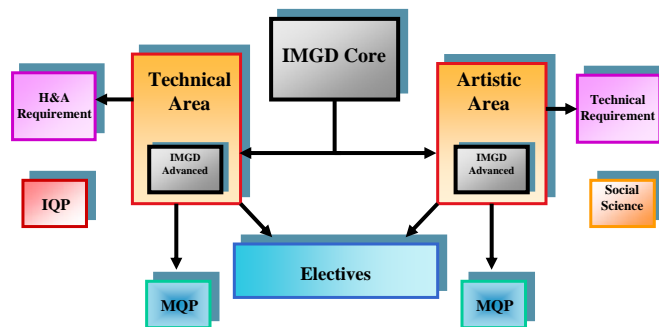
Topics

- Networking
- Distributed Systems
- Artificial Intelligence
- Physics
- Graphics
- Misc



Why This Class?

- IMGD requirements (Core Course, see www.wpi.edu/+IMGD)



- Need to be technically excellent to be a good game developer
- Fun! (*neat CS topics in games, passion for games*)

