

IMGD 3000

Technical Game Development I

Administrative

Topics

- Background
- Admin Stuff
- Motivation
- Objectives
- Class material!

Professor Background (Who am I?)

- Mark Claypool (professor, "Mark")
 - Professor, Computer Science
 - Director, Interactive Media and Game Development
- Research interests
 - Multimedia performance
 - Congestion control (protocols, AQM)
 - Wireless networking
 - Network games

Student Background (Who are you?)

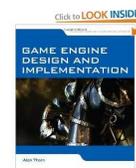
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|------------------------|---------------------------------|
| 1. Background | 4. Major? |
| a. CS2303? | a. Double major? |
| b. CS3733? | 5. Expertise (low 1 to 5 high)? |
| 2. Language of Choice? | a. C/C++ |
| 3. Platform of Choice? | b. Java |
| 4. Year? | 6. Game w/engine? |

Syllabus Stuff

- <http://www.cs.wpi.edu/~imgd3000/c12>
- Class: Tu, Fr 9-10:50am
- TA: Will Disanto
- Office hours:
 - Will be on Web page
 - Or by appointment
- Email
 - claypool@cs.wpi.edu (me)
 - imgd3000-staff@cs.wpi.edu (me + TA)
 - imgd3000-all@cs.wpi.edu (class)

Text Book

- None!
- But some you could get *game engine* book...
- Gregory on reserve
- Ask if you want to browse before buying



Text Book

- You should have programming books...



Range of Topics

- Game Engine Overview
- Software Engineering for Games
- The Game Loop
- Resource Management
- Graphics and Rendering
- Input
- In-Game Collisions
- Tools for Debugging and Development
- Advanced Techniques...
 - AI
 - Pathfinding, Flocking
 - Scripting Support in Engines
 - Physics
 - Networking
 - Performance Tuning

Course Structure

- Prerequisites
 - System Programming Concepts ([cs2303](#))
 - Good programming skills in C++ (required!)
 - No game engine experience required
- Grading
 - Exams (15%)
 - Projects (85%)
 - Attendance (100% ... jk)

Projects



- Project 1 – To Catch a Dragonfly (10%)**
 - Tutorial → Learn a game engine
 - Solo
 - Today!
- Project 2 – Dragonfly (Egg, Naiad, Dragonfly, Flying Speed) (50%)**
 - Build your own game engine!
 - Solo
- Project 3 – Dragonfly Spawn (Treatment, Alpha, Final) (25%)**
 - Teams

Exams

- 2 exams
- 15% of grade
- Non-cumulative
- In-class (part of the 2 hours)
 - Closed-note, Closed-paper, Closed-friend

Slides

- On the Web (maybe after class)
- PPTX and PDF
- Caution! Don't rely upon the slides alone! Use them as supplementary material
 - (come to class)
- Timeline
 - Tentative, but may help you plan

Why This Class?

- WPI IMGD requirements
 - Gotta take IMGD 3000 and IMGD 4000
- Now that you know games, and know programming, the fun really begins!
- Game engines are increasingly important
 - Know how to use one
 - Know how to build one
- Programming is critical
 - The more you do, the better you get
 - IMGD Tech students need to be the best programmers
- Make a game
- Fun!