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?)
1. Background
   a. CS2303?
   b. CS3733?
2. Language of Choice?
3. Platform of Choice?
4. Year?
5. Major?
   a. Double major?
6. Expertise (low 1 to 5 high)?
   a. C/C++
   b. Java
7. 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...

![Image of 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!