



## What Do You Think Goes Into 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 3-4 minutes to write a list of the tasks required
  - Chronological or hierarchical, as you wish
  - Include your name and name of game
    - (I'll collect and read, but not grade)
- Trade write-ups with another student
- What do we have?



## IMGD 1001

### The Game Development Process

Mark Claypool





## Topics


- Background
- Topics
- Course Materials
- Motivation



## Professor Background (Who am I?)



- Dr. Mark Claypool (professor, "Mark")
  - 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





## Student Background (Who Are You?)


- Year (freshman, sophomore, ...)
- Major (IMGD (Art or Tech), CS, HUA, ...)
- Programming Classes
- Gamer: (casual) 1 to 5 (hard-core)
- Number of Games Built (zero is ok)
- Other ...



## Syllabus Stuff

<http://www.cs.wpi.edu/~claypool/courses/1001-C06/>

- Office hours:
  - TBA (about 3 per week each)
  - See Web page
- Email:
  - {claypool, chocobo7, pbd} at cs.wpi.edu
  - id111x-ta at cs.wpi.edu
  - id111x-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
  - Game creation toolkits, documentation, etc.



## Text Books

- Course packet from several text books
- *The Game Development Process*
  - By lots of people, edited by **Steve Rabin**
  - Close to course material, required for this class
  - 1000 pages! But good reference
- *Game Architecture and Design - A New Edition*
  - by **Andrew Rollings** and **Dave Morris**
  - Heavily used for design
- *On Game Design*
  - by **Andrew Rollings** and **Ernest Adams**
  - Some solid game design material
- *Designing Arcade Computer Game Graphics*
  - by **Ari Feldman**
  - Creating 2D art for games
- *Creating the Art of the Game*
  - by **Matthew Omernick**
  - Creating 3D art for games





## Course Structure

- Prerequisites
  - None!
  - Neither Programming nor Art
- In-Class
  - Lecture
  - Discussion
  - Exams
- Out-of-Class
  - Reading
  - Projects
- Grading
  - Exams (45%)
  - Projects (50%)
  - Other (5%)

(More on Exams and Projects, next)



## Exams

- 2 exams
- 45% of grade
- Non-cumulative
- Closed-note
- Closed-paper
- Closed-friend
- One-page "crib-sheet" (handwritten)





## Projects (1 of 2)

- About 7 projects
  - 3 are tutorials with some "add ons"
  - 4 are original, made from "scratch"
- 45% of your grade
- Groups (3 is good, 2 or 4 are possible)
- Apply concepts taught in class
- Related to *Game Development*
- Build upon each other
  - Should have working game at end!



## Projects (2 of 2)

- Project 4: *Game Inception and Design*
  - Inspiration of a game, design and documentation
- Project 5: *Content Creation*
  - Create 2-d animated sprites (or other art) and select supporting content
- Project 6: *Game Logic*
  - Implement game objects and game rules
- Project 7: *Level Design*
  - Put above components together in compelling game
- Project pitch
  - To panel of experts



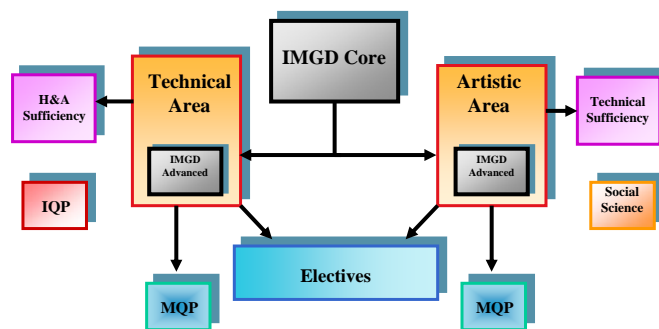
## Topics

- Game Design
  - The Creative Process
  - Design Documentation
- Artistic Content Creation
  - Color and Displays
  - 2D and 3D
    - Graphics
    - Animation
  - Audio
    - Music
    - Sound Effects
- Introduction
  - Team
  - Timeline
  - Size and Shape
- Engineering
  - Game Architectures
  - Programming
- Misc
  - Release
  - Postmortem



## Why This Class?

- IMGD requirements (Core Course, see [www.wpi.edu/+IMGD](http://www.wpi.edu/+IMGD))



- Introduction to steps of Game Development
  - In depth in Area
- Fun! ("*passion for games*")

