

## What Do You Think Goes Into Developing Games?

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- 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)
- What do we have?



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## IMGD 1001 - The Game Development Process: Introduction

by

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(with lots of input from Mark Claypool!)

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## What to Expect

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- This course is mainly about the process of successfully bringing a game from idea to delivery
  - Major "players" in the process
  - Steps in the development lifecycle
  - What makes a good (and bad!) game
- Presupposed background
  - Not much!
- Nice to have
  - Gaming experience in a few genres

## Today's Topics

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- Background
- Course Topics
- Course Materials
- Motivation

## Instructor Background (Who Are We?)



- Dr. Rob Lindeman (Professor, "Rob")
  - Computer Science
  - Like to play
    - Driving games (NFS, Ridge Racer)
    - Platformers (Oni, Onimusha, Prince of Persia)
    - Rhythm games (Guitar Hero, Oendan)
    - *Real* FPS, with alternate input/output devices (TimeCrisis)
- Research interests
  - Virtual Reality, Immersive User Interface, Computer Graphics, HCI, Large-Scale Virtual Worlds, Evaluation and User Studies

## Instructor Background (Who Are We?) (cont.)



- Kent Quirk ("Kent")
  - Software Engineer - 25 years
  - Game developer
    - 10 Years in the game industry: CogniToy, SolidWorks, Linden Lab
    - Like to provide tools for users to make their own content
- Interests
  - Computer Graphics, HCI, Game Development, Software Engineering Process
  - Cycling, juggling
  - Games: shooters, puzzles, adventures, building games

## Student Background (Who Are You?)

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- 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

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<http://www.cs.wpi.edu/~gogo/courses/imgd1001/>

- Office hours:
  - TBA (about 3 per week each)
  - See Web page
- Email:
  - {gogo, kentquirk, jeffz, canozmen} at wpi.edu
  - id111x-ta at cs.wpi.edu
  - id111x-all at cs.wpi.edu
- MyWPI
  - For discussions, announcements

## Course Materials

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- 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

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- 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

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- Prerequisites
  - None!
  - Neither Programming nor Art
- In-Class
  - Lecture
  - Discussion
  - Exercises
  - Exams
- Out-of-Class
  - Reading
  - Projects
- Grading
  - Exams (40%)
  - Projects (60%)

(More on Exams and Projects, next)

## Exams

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- 2 exams
- 40% of grade
- Non-cumulative
- Closed-note
- Closed-paper
- Closed-friend

## Projects (1 of 2)

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- About 7 projects
  - 3 are tutorials with some "add ons"
  - 4 are original, made from "scratch"
- 60% 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!
  - Add this to your portfolio
- 10% penalty on late projects

## Projects (2 of 2)

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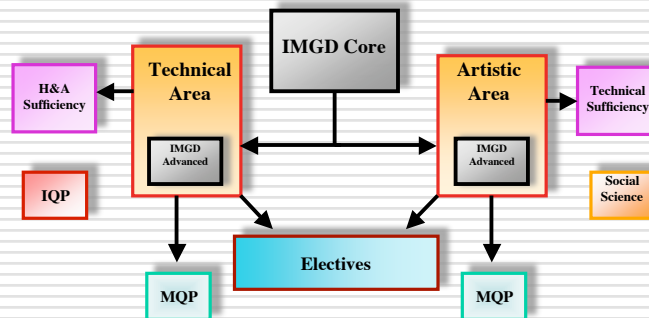
- Project 4: Game Inception and Design
  - Inspiration of a game, design and documentation
- Project 5: Content Creation
  - Create 2-d animated sprites (or other art) and select supporting content
- Project 6: Game Logic
  - Implement game objects and game rules
- Project 7: Level Design
  - Put above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

## Course Topics

- Game Industry
  - Structure
  - Major actors
  - Trends
- Game Design
  - The Creative Process
  - Design Documentation
- Artistic Content Creation
  - Color and Displays
    - Graphics
    - Animation
  - Audio
    - Music
    - Sound Effects
- Introduction
  - Team
  - Timeline
  - Size and Shape
- Engineering
  - Game Architectures
  - Programming
- Production, etc.
  - 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*")