

Fall 2019

IT 266-001: Game Mod Programming

D.J. Kehoe

Follow this and additional works at: <https://digitalcommons.njit.edu/info-syllabi>

Recommended Citation

Kehoe, D.J., "IT 266-001: Game Mod Programming" (2019). *Informatics Syllabi*. 94.
<https://digitalcommons.njit.edu/info-syllabi/94>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Informatics Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact digitalcommons@njit.edu.

Game Mod Programming

Instructor : DJ Kehoe

Course : IT-266-002

Email: kehoed@njit.edu

Office: MIXR Labs, GITC 3rd Floor

Office Hours: W: 12:00 - 2:00, R 1:00 - 2:00

Academic Integrity

The NJIT Honor Code will be upheld at all times. The work you do and submit is expected to be the result of your effort only. You may discuss the high level (general) solution of a design problem, however, cooperation should not result in one or more student having possession of copied graphics, code, or any other project element created by another student. Any violations of the NJIT Honor code will be brought to the immediate attention of the Dean of Students.

Objective

This class will be a hands-on, project focused course. This class will show how to work within an established game engine and how to modify the engine and game logic to create your own projects. Students will work on 2 separate major project milestones, and complete a few general exercises along the way. This course will also touch on other tangential topics and tools that are useful for software developing, including source control, documentation generation and best practices.

Grading

- Exercises (3): 10%
- Project Proposals : 10%
- Mid Term Exam : 15%
- Mid-Term Project : 20%
- Final Project : 25 %
- Final Exam : 20%

Course Materials

- Canvas
- Quake 2 from Id Software (available on Steam)
- Quake 2 Source: <https://github.com/engineerOfLies/quake2-full.git>
- Quake 4 from Id Software (available on Steam)
- Quake 4 source: <https://github.com/engineerOfLies/Game-Mod-Q4.git>
- MS Development Studio (available from IST)
- A Github Account
- GIT-Bash

Submission Criteria

All projects for the class must follow a set of submission guidelines to be eligible for grading. All projects must include the following:

- Project Proposal: The proposal functions as our contract for your project. You put forth the vision for your project and we will discuss together what will be expected at grading time. You are to post a PDF of your design document to moodle. During the one on one meeting you will bring one paper copy that we will markup with notes. Specific deliverables will be agreed upon and posted to your moodle project thread. This is how your project will be graded. Without an approved proposal your project cannot be graded (and will default to a 0).
- Github Submission: Provide the URL so I can clone into your repo. Please tag your branch with appropriate titles "midtermProject" / "finalProject" / "exercise#". Please be sure to verify that your code provided is what generated the submitted executable and that your changes are fully commented. Note: I will be reviewing your commit history, so commit often!
 - A "Readme" file with all additional instructions for setting up and playing your game.
 - Compiled library (may require `git add -f gamex86.dll`)

Late Policy

Any projects that are submitted late will have a penalty of 1 point (of its percent value towards your final grade) per day late. No exceptions.

Course Topics

- C / C++ Programming Basics
- Version Control with GIT
- Agile Development
- Game Engine Architecture
- Project Setup in Visual Studio
- Id Tech Game Engines overview
- Quake 4 Content Management
- Entity Based Systems
- Items and Weapons
- Vector Math
- User Interfaces
- Advanced topics in C
- Finite State Machines
- Artificial Intelligence

Milestones

- Week 1: Introduction
- Week 2: Midterm Project Proposal Due / Exercise 1 Due

- Week 3: 1 on 1 meetings
- Week 4: Exercise 2 Due
- Week 6: Midterm Exam / Midterm Project Presentations
- Week 7: Midterm Project Presentations Continue
- Week 8: Final Project Proposal Due / 1 on 1 Meetings
- Week 10: Exercise 3 Due
- Week 15: Finals

Syllabus subject to change, attend class to keep up to date.