

Special Topics in Computer Science: Fundamentals of Game Development

CSCI 4990/G Section 602
Spring Semester 2013

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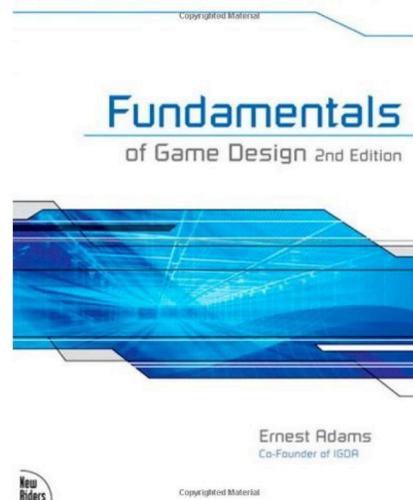
Meets: 4:30PM - 5:45 PM M,W in Math 229 (sometimes Math 320)

Office Hours: M 2:00PM-4:00PM, T 9AM-11AM, W 7:30-9:30PM. Office hours will be conducted in Math 307. Other times by appointment only

Prerequisite: Credit or concurrent registration in CSCI 4631. Introduction to techniques used in development of computer games. Concept and level design, narrative, game mechanics, gaming physics, simple AI, 2D and 3D graphics and animation, sound, and algorithms will be introduced using a team-based project approach.

Text: The required text for the course will be Fundamentals of Game Design (Second Edition) by Ernest Adams.

Supplementary Texts: Unity Game Development Essentials by Will Goldstone, Beginning 3D Game Development iwth Unity by Sue Blackman



Course Contents

- History of Gaming
- Game Genres
- 2D and 3D Graphics
- Sprites
- Level Design and Playability
- User Input
- Collision Detection

Sound
Multiplayer Design and Networking
Introductory Gaming Physics
Introductory Artificial Intelligence Concepts

Learning Objectives:

Upon completion of this course of study, a student will know the history of computer gaming, and understand the fundamentals of game design and programming. The student will have facility with user interface design, 2D and 3D graphics, sound, level design, multiplayer game design, simple artificial intelligence design and implementation, and simple game physics. The students will work in teams for development, providing them with practice developing a complex collaborative project.

Grading:

Grading: (1) Homework/programming assignments will consist of 60% of your final grade; and tests 30%. The other 10% will be based on your class attendance and participation, and I reserve the right to give pop quizzes, which will factor into that 10%. The test component will be computed as the mean of one in-class, closed-book announced midterm plus the final exam grade. It is expected that, unless otherwise stated, that you turn in your own work and not a collaborative effort.

(3) All work is graded on a numerical (percentage) basis. The correspondence between numerical and letter grades is given as follows:

A: ≥ 90 ,
B: 80 - 89,
C: 70 - 79,
D: 50 - 69,
F: < 50 .

(4) It is expected that all homework will be turned in on time. Lateness penalties are:

- 1 day late - 10% off;
- 2 days late - 20% off;
- 3 days late - 40% off;
- >3 days late – no credit

Note: We count school days (Sundays and holidays are not included).

(5) No make-ups for graded work (either tests or homework) will be given except for a legitimate (e.g., medical) reasons.

(6) Questions about the grading of student work should be raised within 72 hours of its return. After that time frame, issues raised will risk not being entertained.

(7) Students should retain all returned graded work, in case there are issues raised about the grade.

(8) The "I" grade (for Incomplete) is given only in exceptional circumstances, (e.g. missing the final exam because of a surgery).

Attendance:

The UNO Senate (Feb. 20, 2002) has made the taking of attendance a requirement for "developmental, 1000, and 2000 level courses." Attendance will therefore be taken at each class meeting. Although not a formal component of the computation of grades, good attendance will impact final grades in borderline cases. Important course content is often introduced outside of the published sources and/or scheduled presentations.

Academic Dishonesty:

Finally, students are expected to conduct themselves according to the principles of academic integrity as defined in the statement on Academic Dishonesty in the UNO Student Code of Conduct. Any student or group found to have committed an act of academic dishonesty shall have their case turned over to the Office of Student Accountability and Advocacy for disciplinary action which may result in penalties as severe as indefinite suspension from the University. Academic dishonesty includes, but is not limited to: cheating, plagiarism, fabrication, or misrepresentation, and being an accessory to an act of academic dishonesty.

Students with Disabilities:

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact their instructors and/or the Office of Disability Services to discuss their individual needs for accommodations.