CSCE 4250/5265 Advanced Topics in Game Development

Name: Jonathon Doran
Student Hours: Mon/Wed/Fri 1:00-2:00pm in E250J
(Note: Whatever we call it, this is time where you may drop in without an appointment)
Email: Jonathon.Doran@unt.edu
Class Meets: Tues/Thurs 2:30pm – 3:50pm NTDP D212
Final Exam: TBA

Communication Expectations: The best way to reach me outside of class/office hours is via email. During the week I will try to respond to your email within 24 hours. During the weekend, response time may be longer. This includes personal concerns or questions about the class or an assignment. The TA's and I strive to get grades back around 1 week from the due date, though that is not always possible when the class is large. Communication is expected to be professional and respectful. Online Communication Tips (https://clear.unt.edu/online-communication-tips) are available. Please include "CSCE 4250" or “CSCE 5265” in the subject line of all emails. I get a lot of email, and messages with a proper subject line will be filtered into a special folder for this class. If you do not follow this direction, your message might end up in my junk folder.

Course Description

Advanced topics in game development, possibly including but not limited to character animation, procedural content generation, shader techniques and graphics special effects. Discussion of articles from the recent academic and technical literature on game development and related material from relevant computer science areas.

Course Prerequisites or Other Restrictions

CSCE 4210 (Game Programming I) with a grade of C or better.

Course Objectives

Course outcomes are measurable achievements to be accomplished by the completion of a course. These outcomes are evaluated as part of our ABET accreditation process. By the end of this course, students will be able to:

1. Ability to perform a literature search for academic game development articles.
2. Ability to formulate a game development related project using forward-looking academic articles.
3. Ability to devise metrics for measuring the viability of a game development related project.
4. Experience with writing code for and evaluating those metrics.
5. Experience with interpreting and pitching the results to a game development team.
Course Calendar

It is hard to anticipate the exact dates of activities, but here is a tentative list.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>Introduction, Video Game Science, Game Dev Research</td>
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<td>2</td>
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<td>Research Methods</td>
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<td>3</td>
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<td>Project pitches</td>
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<td>4</td>
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<td>Perlin Noise and its Applications</td>
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<td>5</td>
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<td>Procedural Content Generation</td>
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<td>6</td>
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<td>Procedural Terrain Generation</td>
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<td>7</td>
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<td>Puzzles: Sokoban, The 15-Puzz</td>
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<td>8</td>
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<td>Procedural Quest Generation, Emergent Economies in RPGs</td>
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<td>9</td>
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<td>Burning Things Procedurally</td>
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<td>10</td>
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<td>Lindenmayer Systems, Wang Tiling</td>
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<td>11</td>
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<td>Audio Games, Procedural Ornamentation</td>
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<td>12</td>
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<td>TBA</td>
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<td>13</td>
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<td>14</td>
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<td>Final project presentations</td>
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<td>15</td>
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<td>Final project presentations</td>
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Grading

I guarantee that these percentages will be the maximum required for a letter grade. I usually lower these as needed to avoid having a large number of students on a grade boundary. Anyone I feel is on a boundary will receive the higher of the two grades.

A = 90% - 100%
B = 80% - 89%
C = 70% - 79%
D = 60% - 69%
F = 0% - 59%

ALL requests for extensions on assignments must be made prior to the due date and must be for a valid “emergency” reason. In extreme circumstances, contact after the due date may be accepted if there is a COMPELLING reason (and yes COVID counts).

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course. When SPOT becomes available (generally in the last week or so of the course) you will receive an email. I offer a small amount of extra credit if class participation is over 80% of the students.
Course Policies

Class attendance is optional except for student pitches and presentations which are mandatory for all.

Syllabus Change Policy
The instructor reserves the right to change the course as needed, specifically (though not limited to) the case of topics, due dates, and assignments/assessment items. Any changes are done after careful consideration of the course objectives and student progress.

UNT Policies

Academic Integrity Policy
Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Policy
UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (https://disability.unt.edu/).