Course Description

Continuation of Computer Science 3371. Advanced game programming techniques, including designing game mechanics, concepts of emergence and progression, and the use of visual design tools.

Prerequisite

CS 3371: Computer Game Development I

Learning Outcomes

When you complete this course, you should be able to:

1. Connect a complete game to the internet
2. Deploy a game to a player’s device
3. Model a basic object and incorporate it into a game
4. Incorporate advanced topics such as emergence, progression, and artificial intelligence into a game

Required Materials


Software:

1. Unity:
   - Available on the machines in the MCS computer labs.
   - You can download Unity free of cost from unity3d.com. Details will follow when class starts.
**Blackboard:** Blackboard will used for lecture note postings, assignment postings, and assignment submissions.

**Computer:** You must have access to an adequate computer and Internet connectivity to participate fully in the class. A table describing supported browsers can be viewed on Blackboard’s support site.

**Communication**

You are responsible for checking your ASU email account and Blackboard throughout the duration of this course.

**Activities Assessing Learning Outcomes**

**Homework** Homework assignments will take the form of written papers related to the material covered in class. The purpose of homework assignments is to assess student’s learning in aspects that are non-programming related.

**Programming Assignments** The purpose of the programming assignments is to give you individual practice on the topics that you are learning and to explore some ideas more deeply. Programming assignments will be in the form of programming exercises to be completed in the Unity environment.

**Conference Paper or Journal Presentation** Students will be asked to find a conference paper or journal article to present to the class regarding special topics in game development. Students will prepare and lead the discuss for the paper of their choosing.

**Quizzes** For each assigned conference paper or journal presentation, a quiz will be given to insure the class is prepared to discuss the material.

**Final Project** In the place of a final exam, a final project will be completed by the student. The final project will be an original game of the student’s own creation.

**Grades**

Your course grade will be based on the following:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework and Programming Assignments</td>
<td>50%</td>
</tr>
<tr>
<td>Conference Paper or Journal Presentation</td>
<td>10%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Final Project</td>
<td>30%</td>
</tr>
</tbody>
</table>
ASU employs a letter grade system. Grades in this course are determined on a percentage scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>80-89</td>
</tr>
<tr>
<td>C</td>
<td>70-79</td>
</tr>
<tr>
<td>D</td>
<td>60-69</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
</tr>
</tbody>
</table>

### Course Outline

Weekly tentative schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Background music</td>
</tr>
<tr>
<td>2</td>
<td>Connecting your game to the internet</td>
</tr>
<tr>
<td>3</td>
<td>Connecting your game to the internet</td>
</tr>
<tr>
<td>4</td>
<td>Putting the parts together into a complete game</td>
</tr>
<tr>
<td>5</td>
<td>Putting the parts together into a complete game</td>
</tr>
<tr>
<td>6</td>
<td>Deploying your game to player’s devices</td>
</tr>
<tr>
<td>7</td>
<td>Deploying your game to player’s devices</td>
</tr>
<tr>
<td>8</td>
<td>Modeling</td>
</tr>
<tr>
<td>9</td>
<td>Emergence</td>
</tr>
<tr>
<td>10</td>
<td>Emergence</td>
</tr>
<tr>
<td>11</td>
<td>Progression</td>
</tr>
<tr>
<td>12</td>
<td>Progression</td>
</tr>
<tr>
<td>13</td>
<td>AI in games</td>
</tr>
<tr>
<td>14</td>
<td>AI in games</td>
</tr>
<tr>
<td>15</td>
<td>Special topics in games</td>
</tr>
<tr>
<td>16</td>
<td>Final Project</td>
</tr>
</tbody>
</table>

### Course Policies

**Policy on absenteeism/non-communication**
- Attendance will be taken every day in the beginning of class. In-class quizzes and programming assignments will be given, so absenteeism will negatively impact your grade. Failure to participate or communicate on your part will result in an appropriate reduction of your grade and possibly in your failure of this course.

**Late work**
- All assignments, unless otherwise specified, must be submitted to Blackboard containing your name, course name, the title of the assignment and the due date.
• No late assignment will be accepted. No e-mail submission is accepted. There are no exceptions to this rule.

Student Disability Services

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting:

Ms. Dallas A. Swafford
Director of Student Disability Services
• 325-942-2047
• dallas.swafford@angelo.edu
• Houston Harte University Center

Title IX Statement

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Nicole Boone, J.D. Director of Student Disability Services
• 325-942-2022
• Michelle.boone@angelo.edu
• Mayer Administration Building 204

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.
For more information about Title IX in general you may visit www.angelo.edu/title-ix.

**Student Absence for Observance of Religious Holy Days**

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

**Incomplete Grade Policy**

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

**Student Conduct Policies**

**Academic Integrity**

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU. Visit ASU’s Academic Integrity page for more information.

**Plagiarism**

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

**Copyright Policy**

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.
General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- Angelo State University Student Handbook
- Angelo State University Catalog

Modifications to the Syllabus

The instructor and the university reserve the right to modify or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and/or program require(s).