

COSC 4324-01/5324-01 Computer Game Development I (Hybrid)

Semester: Fall 2017
Time: M 11:30-12:25
Building/Room: Maes 111
Instructor: Dr. Tim Roden
Office: Maes 96
E-mail: Tim.Roden@lamar.edu (Preferred contact method)
Phone: 880-2179
Campus Office Hours: T 9:30-12:45, F 11:15-12:30 or by appointment

Description

This is an introductory course in graphics and game programming using C++ and Microsoft Windows. Prior programming experience, especially in Java or C++, is required. C++ will be taught for students without prior C++ experience. No prior graphics or game programming experience is needed.

Prerequisite COSC 2336 (for undergraduate students only)

Required Text

None. (Web resources will be utilized)

Grading

Assignments (approx. 1 per week) 100% (all assignments weighted equally)
Final semester grade: A=90%, B=80%, C=70%, D=60%, F=below 60% (Exception: see Academic Honor Code)

Grades will typically be posted within one week of the deadline of an assignment or exam. You may view your posted grades in Blackboard.

Assignments

Assignments are due on the designated due date. Late assignments will be penalized 20%. Assignments will not be accepted later than 3 calendar days after the due date. Assignments will be submitted through Blackboard-hosted email. In the case of any Blackboard outages, assignments can be emailed to the instructor at Tim.Roden@lamar.edu. However, when using this method, students must use the Lamar email software (do not send from another email tool such as Gmail, etc.). Assignments are considered late if they are submitted after midnight on the due date.

Additional Assignment for Graduate Students

Students in the graduate section will be required to do an additional assignment that will require research on the Internet and submission of a short paper. Details will be provided later in the semester. The paper will count as a regular homework assignment.

Attendance Policy

Attendance is mandatory and roll will be taken. There is no grade penalty for missing classes. However, student's knowledge of the subject matter will suffer as a result which may affect other grades in the course.

The Campus Closure Policy

In the event of an announced campus closure in excess of four days due to a hurricane or other disaster, students are expected to login to Lamar University website's homepage (www.lamar.edu) for instructions about continuing courses remotely.

Academic Honor Code

Students are encouraged to study together and brainstorm about assignments. However, all work turned in on assignments and exams must be done individually. Copying work from another student or allowing your work to be copied by someone else is considered a breach of academic honesty. Students are expected to observe university and departmental policies regarding academic honesty (see <http://www.cs.lamar.edu/departmenthonesty.php>). Any breach of these policies may result in a grade of 'F' for an assignment, up to and including a grade of 'F' for the entire course.

No student will receive a grade of 'A' under any circumstances if any academic honesty policy has been violated regardless of the points accumulated in the course.

Academic Accommodations

Lamar University is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is located in the Communications building room 105. Office staff coordinates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact the DRC at 409-880-8347 or drc@lamar.edu to arrange a confidential appointment with the Director of the DRC to explore possible options regarding equitable access and reasonable accommodations.

If you are registered with DRC and have a current letter requesting reasonable accommodations, please contact the instructor early in the semester to review how the accommodations will be applied in the course.

IT Support

The Lamar IT Department offers support for a variety of computing-related issues. See their website at: <http://students.lamar.edu/it-services-and-support/index.html>

Drop Dates

See the Academic Calendar, <http://events.lamar.edu/index.html>.

Student Learning Outcomes

Upon completion of this course students should be able to:

- Create interactive graphics applications in C++ using one or more graphics application programming interfaces.
- Create programs that demonstrate 3D geometrical transformations.
- Create programs that demonstrate use of interactive audio to graphics applications.
- Create programs that implement visibility detection.
- Create programs that demonstrate authoring and importing of 3D models into a graphics application.
- Create 3D models for use in graphics applications software.

Lecture Topics

The list of lecture topics below is tentative, and subject to change and adaptation.

| <u>Topic</u> | <u>Description</u> |
|--------------|-------------------------------|
| 1 | Introduction |
| 2 | 3D modeling software |
| 3 | Graphics hardware |
| 4 | Geometric transformations |
| 5 | Viewing in 3D |
| 6 | Object hierarchy |
| 7 | Interactive input techniques |
| 8 | Visible-surface determination |
| 9 | Animation |
| 10 | Audio programming |

Emergency Procedures

Many types of emergencies can occur on campus; instructions for severe weather or violence/active shooter, fire, or chemical release can be found at:

<http://www.lamar.edu/about-lu/administration/risk-management/index.html>. Following are procedures for the first two:

Severe Weather:

- Follow the directions of the instructor or emergency personnel.
- Seek shelter in an interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside.
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building.
- Stay in the center of the room, away from exterior walls, windows, and doors.

Violence/Active Shooter (CADD):

- **CALL** - 8-3-1-1 from a campus phone (880-8311 from a cell phone). Note: Calling 9-1-1 from either a campus phone or cell phone will contact Beaumont City Police Dispatch rather than University Police.
- **AVOID**- If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY**- Barricade the door with desks, chairs, bookcases or any other items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it is safe.
- **DEFEND**- Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.