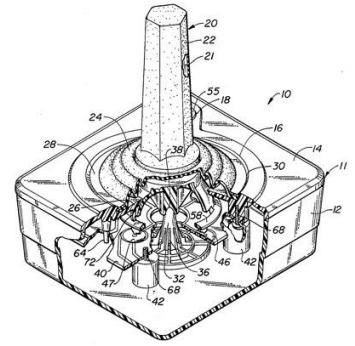


Instructor: Jason Witherell
 Office & Office-hours: ATC325, M-R 8:15a – 9am, W 2:30p – 3:30p (or by appointment)
jwitherell@shawnee.edu
 ssucet.org (course content)
 blackboard.shawnee.edu (lab submission and class grades)

Catalog Description:

Realtime Interactive Programming is a two-semester sequence that puts into practice all of the information and knowledge gained in the previous courses. In this sequence the students first identify, then build, the necessary components for a full working 3D simulation/game engine. ETGG3801 lab activities focus upon investigating existing 3D engines and then designing and implementing simple simulations/games upon a modern 3D engine. Prereq: ETGG 2802 lecture hours 2 lab hours 3 Course/Lab Fee



Student Learning Outcomes / Course Goals (and relative weight): Upon completion of this course, you should...

1. (15%) Be able to work in a team using version control and agile programming methodologies
2. (60%) Be an intermediate-level C/C++ programmer / software engineer
3. (25%) Be an intermediate-level user of 2 game commercial game engines (from Unity, Game-Maker, Unreal4, Lumberyard) – you'll explore the other 2 engines in ETGG3802.

Textbooks / Suggested References:

(Optional) **Game Engine Architecture**

Author: Jason Gregory ISBN: 978-1-56881-413-1 (1st ed.)
 ISBN: 978-1-46656-001-7 (2nd ed.)

This is the best book I've ever found on Game Engine Architecture. The author is a programmer from Naughty Dog (Drake's Uncharted, etc.) and has some very good points and discussions about the design decisions needed when making a game engine. I won't assign readings from the book, but it has influenced the engine we're going to make in 3801 / 3802. So...if you want a bit better discussion than I could give in one semester, pick up this book.

(Highly Recommended) Any good C/C++ reference book.

I don't know how much C++11/14 we'll get into, but you might want to find a reference that includes these topics as well. You can certainly find any number of online references if you'd rather not purchase a book.

Jason's email policy: I make every attempt to check my email once a day M-F (generally around 8am). If I have large numbers of students in my office hours, though, an email can sometimes take a few days to get a response. Also, I generally don't check my email after 5pm and rarely if ever on weekends. If you need a more timely response, make sure to come to office hours and more importantly ask questions in class!

Grading System: Your grade will be based on 5 components (colors match the SLO's above). The overall points will be weighted as follows:

- (46%) C/C++ Lab Assignments
- (20%) Game Engine group project #1 (split among ~3 tri-weekly interval grades)
- (20%) Game Engine group project #2 (split among ~3 tri-weekly interval grades)
- (7%) Test I (mostly C/C++, a little on engine-design) (around mid-semester)
- (7%) Test II (a little C/C++, more on engine-design) (around the end of the semester)

Min%	94	90	87	84	80	77	74	70	67	64	60	0
Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Lab Assignments: This is typically the hardest part of this course. It is very important that you attend and participate in lecture and take good notes. Make sure you truly understand what is being asked of you (ask if you're not 100% clear) early. Don't procrastinate – you likely won't find solutions on Stack Overflow and its ilk. Most of the confusion in the lab lies in the misunderstanding of lab goals.

This year, I want all labs (not counting the group project of course) to be done *individually*. Unless I tell you otherwise, assume there is no paired-programming (it's caused too many troubles in recent years). As such, it's OK to talk about general solutions, but don't share code (verbally, visually or electronically). If you do, my standard responses to plagiarism are:

- First minor offense (parts of the solution were copied) – a warning will be given in your lab feedback.
- First major offense (virtually all is copied) or second minor offense – all parties involved will receive a 0 on that lab.
- All further offenses: the case will be turned over to the academic misconduct committee (Dean of Students)

Quizzes: I don't plan to give announced or pop quizzes (other than the two exams). I do reserve the right, though, if large numbers of students aren't attending class or paying attention during class. If I do, these will count as a (small) lab grade.

Exams: Closed-note, closed-book, closed-computer (probably) and HARD, as usual 😊 Listen to in-class announcements for the exact due date (no makeups without prior arrangement and / or documented (valid) excuse)

Attendance: will be taken, but won't directly affect your grade. You're an adult – decide if coming to class is worth your time or not. You will, however, be responsible for *anything* covered in class, including announcements on due-dates, tests, etc. even if you're not there.

Resources for help:

- The instructor – I should be your first line of defense
- The class SI??? Is there interest? If so, I'll try to secure funding – but this class will be lower priority than the 1000/2000-level courses.
- Your academic advisor: career advice, etc.
- Larry Miller (ATC315), Engineering Technologies chair: troubles with instructor, changing majors, degree paperwork, etc.
- Lindsay Monihen (MAS132), CPS advisor: academic crises, financial aid questions, transferring, etc.
- Dean of Students Office (UC 222): resolution of academic and non-academic difficulties.
- Student Ombudsperson, Linda Hunt (ADM 140): help with appeals, complaints.

Americans with Disabilities Act Policy

Any student who believes s/he may need an accommodation based on the impact of a documented disability should first contact a Coordinator in the Office of Accessibility Services, Student Success Center, Massie Hall, 740-351-3276 to schedule a meeting to identify potential reasonable accommodation(s). Students are strongly encouraged to initiate the accommodation process in the early part of the semester or as soon as the need is recognized. After meeting with the Coordinator, students are then required to meet with their instructors to discuss the student's specific needs related to their disability. If a student does not make a timely request for disability accommodations and/or fails to meet with the Coordinator of Accessibility Services and the instructor, a reasonable accommodation might not be able to be provided.

Important Dates: Note the student business center generally closes around 4pm.

- 8/21/2017 (M): classes begin
- 8/25/2017 (F): Last day to add a class on MySSU
- 9/1/2017 (F): Last day to add a class (with instructor *and* Dean approval)
- **9/4/2017 (M): Labor Day (UNIVERSITY CLOSED!)**
- 9/29/2017 (F) – 10/1/2017 (Su): GDEX conference in Columbus (bonus points!)
- **10/5/2017 (R), 10/6/2017 (F): Fall Break (NO CLASSES!)**
- 10/7/2017 (Sa): Midterm grades available on MySSU
- **10/30/2017 (M): Registration for Spring Semester starts (M=Seniors, Veterans, etc. T=Juniors, etc.)**
- **11/1/2017 (W): Last day to drop a class on MySSU**
- 11/3/2017 (F): Shawnee 2017 gaming conference (bonus points!)
- 11/10/2017 (F): Veterans Day (UNIVERSITY CLOSED!)
- **11/22/2017 (W) – 11/24/2017 (F): Thanksgiving Break (NO CLASSES (W), UNIVERSITY CLOSED (R,F)!!)**
- 12/8/2017: Last day to petition to graduate, Last day of classes
- 12/9/2017 (Sa) – 12/15/2017 (F): Final Exam week (**our exam is Thursday 12/14/2017 @ 8:00am**)
- 12/20/2017 (W): Final grades available on MySSU