

EST310 / ISE340

Design of Computer Games

Instructor: Dr. Lori L. Scarlatos

Time: TuTh 10 - 11:20 am

Location: Old CS 2205 (Multimedia Lab)

Office: 1421 Old CS

W 4 - 5:30pm

Office Hours: Th noon - 1:30pm
or by appointment

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Course Description

Fundamental ideas underlying the design of games, which occurs before the programming stage. How games function to create experiences, including rule design, play mechanics, game balancing, social game interaction and the integration of visual, audio, tactile and textual elements into the total game experience. Game design documentation and play testing. Students will design their own game during the semester. This course is offered as both EST 310 and ISE 340.

Advisory Prerequisite: basic computer skills
SBC: TECH

Learning Outcomes

- Understand the process of game design.
- Analyze the needs, desires, and constraints of the audience that a game is designed for.
- Design games using proven guidelines, tricks, and principles for designing an effective game.
- Demonstrate an ability to use digital prototyping tools to create a digital game prototype.

Textbook

We will be using the following textbook:

T. Fullerton, Game Design Workshop, 3rd edition, CRC Press, Taylor & Francis Group, 2014, ISBN 978-1-4822-1716-2.

In addition, readings from the current literature will be assigned. These may be found in the Course Materials section of the [Blackboard](#) site for the course.

Course Materials and Facilities

We will be working in the Multimedia Lab for this class. Lab hours and lab procedures will be discussed in class. Although you may prefer to work at home, please be aware that you **must be able to present your projects in the classroom**. If it does not run in the classroom, I will assume that it does not run at all.

You are responsible for backing up your own work. To do this, you may use a USB data key, a portable drive, or Google Drive.

Course Requirements

Your grade will be based on the following criteria:

- Team Projects - 45%
Over the course of the semester, you will work in teams on three (3) game designs. For the first game, you will be assigned to a team; for the second game, you get to choose 1 teammate; for the third game, you define the team (and may work by yourself). Designs must be presented in class on the day they are due.
- Class Participation - 30%
For each class, you will be expected to do a reading and/or other assignment that will be discussed/presented/extended in the classroom. Attendance is mandatory. Homeworks are due by the next class after they are assigned. See the Schedule below for assignment dates, and the Assignments section of Blackboard for further details.
- Exams - 25%
Three quizzes, corresponding to the three parts of the textbook, will be given throughout the semester. A cumulative final exam will be given at the end of the term on **Thursday, December 19, from 8:00am to 10:45am**. This day and time have been determined

by the University not to conflict with any of your other exams. The exam will be closed book/notes.

Advisories

Student Accessibility Support Center: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, 128 ECC Building, (631) 632-6748, or at sasc@Stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Academic Integrity: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html.

Critical Incident Management: Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

Course Evaluation: Each semester Stony Brook University asks students to provide feedback on their courses and instructors through an online course evaluation system. The course evaluation results are used by the individual faculty, department chairs and deans to help the faculty enhance their teaching skills and are used as part of the personnel decision for faculty promotion and tenure. No individually identifiable data are ever reported back to the university or instructor. Students who have completed previous evaluations can view all faculty ratings at: <https://classie-evals.stonybrook.edu/>

My Own Advice

Do all of the assignments, and come to all of the classes. It will affect your grade.

Think of me as your cranky client. There may be times when you disagree with what I say about your work. Just remember that I am the one giving out the grades. When I make a suggestion, be sure to listen, because it is likely to have an impact on your final grade.

Start your assignments early. That way if you have trouble, you can get help in time to finish your assignment by the due date. This will also help you to avoid a last-minute crunch in the lab.

Don't be afraid to ask questions. If you don't understand something, it's likely that your classmates don't understand it either. Raise questions in class. If you need further explanation, come see me during office hours. If you can't make my office hours, send me email. Be sure to do this before you get hopelessly lost.

Work with other students. I do not mean that you should copy each other's work (which will not be tolerated). Rather, you should learn from one another. If you can't figure out how to make something work, see how your colleague did it. It is also useful to discuss different ways of approaching a problem.

Please let me know as soon as possible if you anticipate having any problems with this class. If alerted to them early on, I may be able to accommodate your needs.

Schedule

Although most readings will come from the textbook, additional "readings" may come from the web. Classroom activities build on the readings, so discussion topics should be considered ahead of time. Participation in classroom activities and presentations is required. Please note that this schedule is approximate, and subject to change.

Date	Topic	Readings	In-Class Activities
8/27	Game design & role of the game designer	Ch. 1	HW1
8/29	Structure of games	Ch. 2	HW2
9/3	Formal elements: rules, conflict, uncertainty, emergence	Ch. 3	HW3
9/5	Dramatic elements: character, levels, stories	Ch. 4	HW4
9/10	System dynamics: uncertainty, systems, emergence, information systems	Ch. 5	HW5
9/12	Conceptualization	Ch. 6	Start Game 1
9/17	Teams	Ch. 12	

9/19	Prototyping: design process, what makes a great game	Ch. 7	Quiz
9/24	Playtesting	Ch. 9	Review Game 1 (HW6)
9/26	Functionality, completeness & balance: game mechanics	Ch. 10	
10/1			Present Game 1
10/3	Digital prototyping	Ch. 8	Start Game 2
10/8	Prototyping tools		
10/10	Fun	Ch. 11	
10/15	<i>Fall Break - no classes</i>		
10/17	More prototyping		Review Game 2 (HW7)
10/22	Game interfaces		Quiz
10/24	Development	Ch. 13	Review Game 2 (HW8)
10/29	<i>Virtual class - see Blackboard for assignment</i> Game Industry & selling yourself	Ch. 15 & 16	HW 9
10/31			Present Game 2
11/5	Culture	Culture	Start Game 3
11/7	Design documents	Ch. 14	
11/12	Gamification	Smart Gamification	
11/14	Learning	Good Video Games and Good Learning	Review Game 3 (HW10)
11/19	Games and society	Pro-social games	
11/21	Intellectual Property	Hey, That's MY Game	Review Game 3 (HW11)
11/26	Game bloopers	Bad Game Designer! No Twinkie!	Quiz
11/28	<i>Thanksgiving - no classes</i>		
12/3			Present Game 3
12/5			Present Game 3
12/19	Final Exam, 8:00am - 10:45am		