

CS324E Elements of Graphics

Course:	Elements of Graphics CS 324E Unique Number: 50945
Instructor:	Sarah Abraham GDC 5.420 theshark@cs.utexas.edu Office Hours: MW 4:30-6:00 (online) T 11:00am-noon (office)
TA:	Wei Sun wsun@utexas.edu Office Hours: TBD
Proctor:	Ian Thorne ian.thorne526@gmail.com Office Hours: TBD
Lectures:	MWF 1:00-2:00pm, Online
Class	www.cs.utexas.edu/users/theshark/courses/cs324e
Webpage:	
Required Textbook:	There is no required textbook for this course, but students are encouraged to work through the tutorials at https://processing.org/tutorials/
Additional Reading:	Processing: A Programming Handbook for Visual Designers (Casey Reas and Ben Fry)
Software:	Processing or Processing.py
Hardware:	Any machine that can run Java will work.
Prerequisites:	One of the following with a grade of at least C-: Computer Science 303E, 305J, 307, 312, 312H, 314, 314H, 315, 315H, Electrical Engineering 322C, or 422C.

Course Objectives

This course provides students with the fundamentals of computer graphics and data visualization. We will explore graph generation, image manipulation, scene hierarchy, simulation, and interactivity as well as introducing concepts like object-oriented programming. This will give students a solid understanding of how they might use graphics and visualization for data visualization, art generation, and video game development. We will work in the Java-based language, Processing, but students can choose to work in the Python-based mode, Processing.py.

Grading and Assessment

Assignments: 70%
Final Project: 20%

Class Participation: 10%

Grading Policy

Attendance Policy

Since this class is built around in-class assignments and work, attendance is *mandatory*, and it will be taken via Instapoll and in-class presentations. In-class presentations will involve students being picked at random to present their work from the previous "Hands-on" assignments, and being picked at random to answer questions from the presentation. Not being present, or being unprepared, when called on will result in an attendance of 0 for that day.

These directly affects a student's "Class Participation" grade (as will the completion grades for teammate evaluations and progress reports), and missing more than five days of class can lower your grade beyond those 10 points. If you are unable to attend a class, please contact the professor before class to inform her. If you miss class during one of the group assignment phases, you should also notify your teammates.

Late Work Policy

This class allows for three slip days per student for submitting late material. For example, you can turn in three projects one day late each, or one project 3 days late, without penalty. A project is late if it is not turned in by the specified due date and time, with any fraction of a late day counted as a full late day.

Once you have exhausted your late account, you *and your team if it's a group assignment* will lose 33% of the maximum assignment grade for each additional late day. Thus, assignments will be worth 0 points after 3 additional late days. To prevent issues where students start group work with different late slips, you **cannot** use late slips on individual assignments (i.e. Assignment 1 and Assignment 2)

Group Work Policy

You are free to discuss the course material and all aspects of the group assignments with your teammates, but teams are expected to make clear their division of labor for each aspect of the project. Students are expected to do individual work on their portion of the project. Teams will be assigned by the professor, and group members will evaluate their teammates after each assignment to ensure a fair distribution of work between members.

Consistent failure to deliver as a teammate is grounds for early failure from this course. Students who receive multiple low ratings on team evaluations will report directly to the professor and TA as part of their "parole." If their performance improves and remains satisfactory, they will not be docked grade-wise on assignments. If performance does not improve and is not satisfactory, they will not receive credit for the assignments.

Your Responsibilities in This Class:

- You are expected to show up on time for class (please have at least a microphone to help with small group discussions -- class will be done via a combination of Discord and Twitch).
- You are expected to sign up for the course on *Piazza*.
- You are responsible for all material posted to the web site or Piazza. Ignorance of such material is no excuse.
- You are responsible for all material presented in lecture.
- You are expected to work with your team to produce the best projects you can in a timely fashion. You should never wait to start work on a project. This not only hurts you, but is also unfair to your team. If you foresee any issues with time management, work with your team and the instructor to plan for this. Your individual grade will be docked if your teammates report you starting late without communicating to them that this is something they should expect.
- You are responsible for following the university's policies on academic integrity. See above guidelines for more information on what is or is not allowed.

Critical Dates (see UT Calendar for details)

<http://registrar.utexas.edu/calendars>

UT Policies

The University of Texas Honor Code

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Scholastic Dishonesty

The University defines academic dishonesty as cheating, plagiarism, unauthorized collaboration, falsifying academic records, and any act designed to avoid participating honestly in the learning process. Scholastic dishonesty also includes, but is not limited to, providing false or misleading information to receive a postponement or an extension on a test, quiz, or other assignment, and submission of essentially the same written assignment for two courses without the prior permission of the instructor. By accepting this syllabus, you have agreed to these guidelines and must adhere to them. Scholastic dishonesty damages both the student's learning experience and readiness for the future demands of a work-career. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. For more information on scholastic dishonesty, please visit the Student Judicial services Web site at <http://deanofstudents.utexas.edu/sjs>

CS Department Code of Conduct

In addition to the university-wide guidelines, this course expects students to follow the CS Department's code of conduct included below (<https://www.cs.utexas.edu/academics/conduct>):

The University and the Department are committed to preserving the reputation of your degree. It means a lot to you. In order to guarantee that every degree means what it says it means, we must enforce a strict policy that guarantees that the work that you turn in is your own and that the grades you receive measure your personal achievements in your classes:

Every piece of work that you turn in with your name on it must be yours and yours alone unless explicitly allowed by an instructor in a particular class. Specifically, unless otherwise authorized by an instructor:

1. Students may not discuss their work with anyone except the instructor and other members of the instructional staff (TA, Section Leader or Lab Proctor).
2. Students may not acquire from any source (e.g., another student or an internet site) a partial or complete solution to a problem or project that has been assigned.

You are responsible for complying with this policy in two ways:

1. You must not turn in work that is not yours, except as expressly permitted by the instructor of each course.
2. You must take all reasonable precautions to prevent your work from being stolen. It is important that you do nothing that would enable someone else to turn in work that is not theirs. Do not share your work with anyone else. Make sure that you adequately protect all your files. Even after you have finished a class, do not share your work or published answers with the students who come after you. They need to do their work on their own.

IMPORTANT: The penalty for academic dishonesty will be a course grade of F and a referral of the case to the Dean of Students Office. Further penalties, including suspension or expulsion from the University may be imposed by that office.

One final word: This policy is not intended to discourage students from learning from each other, nor is it unmindful of the fact that most significant work in computer science and in the computing industry is done by teams of people working together. But, because of our need to assign individual grades, we are forced to impose an otherwise artificial requirement for individual work. In some classes, it is possible to allow and even

encourage collaboration in ways that do not interfere with the instructor's ability to assign grades. In these cases, your instructor will make clear to you exactly what kinds of collaboration are allowed for that class.

For the purposes of this course, acts that exceed the bounds defined by the approved collaboration practices will be considered cheating. Such acts include:

1. Copying solutions, code, or programs from someone else or giving someone else your solutions, code, or programs, except insofar as you are working together in a team.
2. Participation in a discussion group that develops a solution that everyone copies, again other than in a context of making team decisions on project strategies.

Sharing of Course Materials is Prohibited

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials, review sheets, and additional problem sets, may be shared online or with anyone outside of the class unless you have my explicit, written permission. Unauthorized sharing of materials promotes cheating. It is a violation of the University's Student Honor Code and an act of academic dishonesty. I am well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure in the course.

Class Recordings

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

COVID Caveats:

To help keep everyone at UT and in our community safe, it is critical that students (and faculty and staff) report COVID-19 symptoms and testing, regardless of test results, to the HealthPoint Occupational Health Program (OHP) as soon as possible. Please see [this link](#) to understand what needs to be reported. In addition, to help understand what to do if a fellow student in the class (or the instructor or TA) tests positive for COVID, see [this University Health Services link](#).

Undergraduate Writing Center

The Undergraduate Writing Center, located in the FAC 211, phone 471-6222, <http://www.utexas.edu/cola/centers/uwc/> offers individualized assistance to students who want to improve their writing skills. There is no charge, and students may come in on a drop-in or appointment basis.

Services for Students with Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Religious Holidays

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

University Electronic Mail Notification Policy

All students should become familiar with the University's official e-mail student notification policy. The complete text of this policy for updating your e-mail address are available at <http://www.utexas.edu/its/policies/emailnotify.html>. In this course e-mail will be used as a means of communication with students. You will be responsible for checking your e-mail regularly for class work and announcements.

Campus Safety

Regarding emergency evacuation: 512-471-5767, <http://www.utexas.edu/safety>. Evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside. Further information regarding emergency evacuation routes and emergency procedures can be found at: <http://www.utexas.edu/emergency>. For Behavior Concerns Advice Line (BCAL): 512-232-5050.

Last modified: 01/14/20 by Sarah Abraham theshark@cs.utexas.edu