

Computer Graphics

CS300 Fall 2021

Class Meetings

Mon/Weds/Fri 1:00 pm -1:50 pm Taylor Hall, Room 200

Personnel Information

Professor

Drew Guarnera dguarnera@wooster.edu

Office: Taylor Hall 313

Office Hours:

- Mon/Weds/Fri @ 2:00pm – 2:50pm
 - Thurs @ 9:00am – 10:30am **by appointment**
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Course Description

An introduction to the basics of computer graphics with topics such as: the graphics processing pipeline, representing objects with vertices and meshes, shaders, transformations, projections, lighting, texture mapping, user interaction, and animation. Implementation of small to large scale applications re-enforce course material. Application development uses low-level libraries or a high-level framework for graphics programming.

Prerequisites: CSCI 20000, CSCI 23000 or 23200, MATH 11200 or 12000, and MATH 13000 or 21500

Course Goals

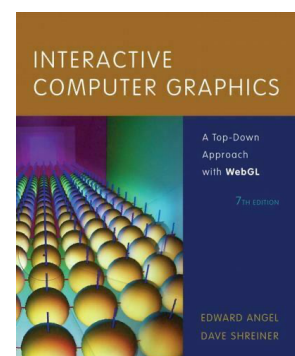
Upon completion of this course, a successful student will be able to:

- Demonstrate understanding of how visual elements are represented in a graphics system and process of rendering the representations to an end user's display
- Implement renderings of 2D/3D images using a modern graphics library
- Use event driven programming concepts to create interactive 2D/3D applications
- Construct custom shaders

Textbooks

The textbook can be purchased from the College bookstore. The book is also available from other retailers/sites as physical ([Amazon](https://www.amazon.com/Interactive-Computer-Graphics-7th-Edition/dp/0321776410)) or digital.

- *Interactive Computer Graphics: A Top-Down Approach with WebGL, Seventh Edition* by Stephen G. Kochan (ISBN: 0321776410)



Course Resources

Course Website - <http://csweb.wooster.edu/dguarnera/cs300/>

The course website provides access to all class resources, information updates, and the tentative schedule of activities and assignments. External resources such as webpages, videos, or other types of content will be used, and everything will be accessible from the course website. Bookmarking this site is highly encouraged as the course website will be updated regularly throughout the semester.

Moodle Classroom

Our Moodle online classroom will primarily facilitate quizzes and exams. I will keep all assessment scores in this system so you will always know your current performance in the class.

Microsoft Teams

Together we are a learning community. Questions and discussion about course specific content or of curiosity are always welcome and do not necessarily arise during class or office hours. In this course, we will use Microsoft Teams for asynchronous/synchronous communication outside of our in-person classroom or office hour meetings. We have a shared channel in our MS Teams group for the class named "Discussion" where you can at any time, ask questions or start a conversation. If internet connectivity or access to hardware is problematic, please contact me so we can discuss a plan that will best meet your needs.

The College Libraries and the Research Help Desk

Contact: library@wooster.edu, 330-263-2493, [Libraries website](#)

Your librarian for this course is: Ian McCullough. You can ask your librarian for help with research in this class and can make an appointment with them using the [research consultation form](#) for help with your research and information needs, including finding and using items we have in the Libraries; learning expert tips to refine your search for articles in magazines, journals, and newspapers; making an appointment with a librarian for help on a project; and learning how to evaluate the information you discover.

Course Policies

Office Hours

I will have regular office hours throughout the week. I highly encourage you to take these opportunities to stop by and ask any questions you may have during the course. If you are unable to meet during the scheduled office hours, please contact me and I will work with you to schedule an appointment. Any changes made to the office hour times or locations will be communicated in advance.

Attendance

It is in your best interest to make all reasonable efforts to attend class sessions. Lecture, discussion, and in-class activities are essential components of your learning experience. If an issue arises that will prevent you from attending class, please let me know as soon as possible so we can discuss how to make up the absence.

Grading

Assessment Categories:

- **Engagement:** (attendance, taking part in discussions, in-class activities, group work, asking/answering questions on Teams, and meeting with the instructor all count towards engagement)
- **Labs:** small scale assignments to be completed in or outside of class
- **Projects:** medium to large scale assignments to be completed outside of class
- **Midterm Exam:** There will be one midterm exam during the semester
- **Final Project:** A project consisting of the following components:
 - A software application
 - A written paper

All assignments are to be completed individually unless indicated explicitly as group work.

Assessments will be weighted as follows:

- 40% Projects
- 15% Labs
- 5% Engagement
- 15% Midterm Exam
- 25% Final Project

Letter grades will be awarded based on the following scale:

A	A-	B+	B	B-	C+	C	C-	D	F
≥ 93	92-90	89-87	86-84	83-80	79-77	76-74	73-70	69-60	< 60

Late Work

Due dates and times are indicated on the course schedule page of the website. Assignments may be due **at the end of the day** or **by the end of class** be mindful of this distinction when planning your time. Work is determined late after this time and will be penalized 30%. If the work is not submitted by the end of the following day, it will not be accepted for a grade. In the event a dire situation occurs that affects your ability to turn in an assignment, contact me as soon as possible.

Academic Honesty and the Code of Academic Integrity

The academic program at the College seeks to promote the intellectual development of each student and the realization of that individual's potential for creative thinking, learning, and understanding. In achieving this, each student must learn to act rigorously, independently, and imaginatively.

The College's understanding and expectations in regard to issues of academic honesty are fully articulated in the Code of Academic Integrity as published in [The Scot's Key](#) and form an essential part of the implicit contract between the student and the College. The Code provides framework at Wooster to help students develop and exhibit honesty in their academic work. You are expected to know and abide by these rules.

Dishonesty in any of your academic work is a serious breach of the Code of Academic Integrity and is ground for serious penalties. Such violations include turning in another person's work as your own, copying from any source without proper citation, violating expectations for a group project, submitting an assignment produced for a course to a second course without the authorization of all the instructors, and dishonesty in connection with your academic work. You will be held responsible for your actions. Particular attention should be directed to the appropriate use of materials available online. Whether intentional or not, improper use of materials is a violation of academic honesty. If you are unsure as to what is permissible, please contact your course instructor.

Course Withdrawal Options (for 2021-22 Academic Year)

For Fall 2021, students may withdraw from one course after the 6th week drop deadline, up to 1.25 credits, at any time through the last day of classes (Friday, December 10 by 4:00 p.m.), as long as their total remaining credits are above 3.0. This may be done without documentation of extenuating circumstances. The minimum enrollment of 3.0 credits remains in effect. Requests to drop enrollment below 3.0 credits will require additional documentation through a [Petition for an Exception to an Academic Policy](#).

By policy, all students should receive feedback on a significant graded assignment within the first 6 weeks. This offers an opportunity to give timely feedback before the 6-week drop deadline. Note that because federal government guidelines define courses as “attempted” after 6 weeks, if a student withdraws from a course after 6 weeks, it will be noted as a ‘W’ on their transcript.

Inclusive Learning Statement

Your success in this course is important to me. If there are circumstances that may affect your academic performance or impact your learning in particular portions of the class, please let me know as soon as possible. You do not need to share specifics, but together we can develop strategies to meet both your needs and the requirements of the course. I encourage you to visit the [Academic Resource Center](#) to determine how you could improve your learning as well. If you need official accommodations, the ARC can work with you to make sure your needs are met. There are also a range of resources on campus, including the [Writing Center](#), [Math Center](#), [STEM Success Initiative](#), and [APEX](#).

It is also important that we all be respectful of everyone’s privacy around health concerns, vaccination status, and any accommodations that are necessary in the classroom. It is not appropriate to question why someone requests physical distancing, chooses to wear a mask, or requires any other accommodations. As part of our participation together in this class, we commit to showing respect to each other as individuals, to working together to create a learning environment that fosters a sense of belonging and inclusion to all members, and to understanding that our differences are also strengths. Your suggestions are encouraged and appreciated, and please contact me—via email, office hours, or after class—if you have any concerns or questions.

MCS Statement on Diversity, Equity, & Inclusion

The College of Wooster is committed to inclusive excellence in undergraduate education, and our department seeks to actively foster a welcoming learning environment in which diversity and individual differences are valued, respected, and celebrated. Diversity comes in many forms, including but not limited to, race, color, national origin, ancestry, sex, gender identity and expression, sexual orientation, socioeconomic status, religion, age, and physical and/or mental abilities. The diversity that students and staff bring to the classroom is an invaluable resource, strength, and benefit to everyone at the College of Wooster. As such, we are vigilant and attentive about issues of diversity, equity, and inclusion in the classroom. Expressions or actions disparaging others are contrary to the mission of the department and will not be tolerated.

Conflicts with Academic Responsibilities

The College of Wooster is an academic institution and its fundamental purpose is to stimulate its students to reach the highest standard of intellectual achievement. As an academic institution with this purpose, the College expects students to give the highest priority to their academic responsibilities. When conflicts arise between academic commitments and complementary programs (including athletic,

cultural, educational, and volunteer activities), students, faculty, staff, and administrators all share the responsibility of minimizing and resolving them.

As a student you have the responsibility to inform the faculty member of potential conflicts as soon as you are aware of them, and to discuss and work with the faculty member to identify alternative ways to fulfill your academic commitments without sacrificing the academic integrity and rigor of the course.

Names, Pronouns & Pronunciation

All people have the right to be addressed and referred to as they prefer. I will do my best to address and refer to all students by the names and pronouns that they share in class, regardless of what is listed on the roster, and I support classmates in doing so as well. I would like for you to refer to me as either Professor Guarnera. I use he/him/his pronouns. Please share the name you prefer to be called and pronouns you wish to use in this class with me via classroom introductions or privately.

If you are interested in changing your chosen name and/or including your pronoun(s) in The College of Wooster system, [you can find additional information here](#). What appears in The College of Wooster system is what will display in all platforms across Microsoft Teams. At present, there is no alternative way to change your name or to add pronouns in Teams, but you can add a background that includes these for any video platform (see [instructions for Microsoft Teams here](#)).

I encourage everyone in this classroom to create a space of mutual respect and support by also giving each other some grace around pronouns, pronunciation of names, etc., if or when we make mistakes. This is not at all to absolve anyone of responsibility for using correct pronouns, names, and pronunciations. But I find it useful to acknowledge that even with the best of intentions, sometimes we can all still make mistakes.

College Resources

Basic Needs, Food Security & Access to Course Materials

Contact: Dean of Students Office, dos@wooster.edu, 330-263-2545, Galpin Hall

We learn as whole people. To learn effectively you must have basic security: a roof over your head, a safe place to sleep, enough food to eat. If you have trouble with any of those things or need assistance obtaining the course materials for this or other classes, please talk with me or with staff in the Dean of Students office. Together we can work to make sure those needs are met. There is a [Technology Assistance Application](#) (Wooster login required) and Wooster alums have created a fund to assist students who encounter a personal financial crisis during their time at the College; find out more about this [Emergency Funding](#) through the DoS office.

Academic Resource Center: Academic Support and Disabilities

Contact: Amber Larson, alarson@wooster.edu, (330)263-2595, [ARC Website](#)

The Academic Resource Center, which is in APEX (Gault library) offers a variety of academic support services, programs and 1:1 meetings available to all students. Popular areas of support include time management techniques, class preparation tips and test taking strategies. In addition, the Academic Resource Center coordinates peer-tutoring for several academic departments. Students are encouraged to schedule an appointment.

An additional support that the Academic Resource Center offers is English Language Learning. Students can receive instruction or support with English grammar, sentence structure, writing, reading comprehension, reading speed, vocabulary, listening comprehension, speaking fluency, pronunciation, and American culture through 1:1 meetings with the Academic Resource Center staff, ELL Peer Tutoring, ELL Writing Studio courses, and other programming offered throughout the year.

The Academic Resource Center also coordinates accommodations for students with diagnosed disabilities. At the beginning of the semester, students should contact the Academic Resource Center to make arrangements for securing appropriate accommodations. Although the Academic Resource Center will notify professors of students with documented disabilities and the approved accommodations, students are encouraged to speak with professors during the first week of each semester. If a student does not request accommodations or does not provide documentation to the Academic Resource Center, faculty are under no obligation to provide accommodations.

[Title IX Reporting Policy Regarding Sexual Misconduct, Harassment, Relationship Violence, and Stalking](#)

Contact: Lori Makin-Byrd, lmakin-byrd@wooster.edu, (330) 263-2017, [Title IX website](#)

The College of Wooster is committed to fostering a campus community based on respect and nonviolence. To this end, we recognize that all Wooster community members are responsible for ensuring that our community is free from discrimination, gender bias, sexual harassment, and sexual assault. In accordance with Title IX, Wooster is legally obligated to investigate incidents of sexual harassment and sexual assault that occur on our campus. Faculty who become aware of an incident of sexual violence, including harassment, rape, sexual assault, relationship violence, or stalking, are required by law to notify Wooster's Title IX Coordinator. The purpose of this disclosure is to ensure that students are made aware of their reporting options and resources for support. For more information about your rights and reporting options at Wooster, including confidential and anonymous reporting options, please visit <http://www.wooster.edu/offices/title-ix/>.

[Discriminatory or Bias-Related Harassment Reporting](#)

Contact: Kayla Campbell, kcampbell@wooster.edu; or visit the [Bias Reporting website](#)

The College of Wooster is committed to promoting its mission of inclusivity and equity in all aspects of the educational enterprise. This commitment extends to all rights, privileges, programs and activities, including housing, employment, admissions, financial assistance, and educational and athletic programs at the College. The College's Bias Incident Reporting Process is designed to effectively respond to bias concerns raised by faculty, students, staff, alumni and visitors to the College. If you or someone you know are the victims of bias, you can:

- [File a report online](#) (where you may choose to identify yourself or not)
- Contact Campus Safety: 2590 (from campus phone) or 330-263-2590
- Call the Anonymous Tip Line: 2337 (from campus phone) or 330-263-2337
- Contact the Dean of Students Office: 2545 (from a campus phone) or 330-263-2545
- Contact the Chief Diversity, Equity, and Inclusion Officer representative for students: Kayla Campbell, kcampbell@wooster.edu, 330-263-2607

[Wellbeing at Wooster](#)

Contact (24/7): (330) 263-2319, or visit the [Wellness Center website](#)

The College of Wooster is committed to supporting the wellbeing of our students. During the course of their academic careers, students experience challenges that may interfere with their learning & health (both physical and mental), including but not limited to: strained relationships, adjusting to a new environment, chronic worrying, persistent sadness or loss of interest in enjoyable activities, family conflict, grief and loss, domestic violence, unwanted sexual experiences, difficulty concentrating, drug/alcohol problems, significant changes in eating and sleeping patterns, microaggressions, challenges with organization, procrastination and/or lack of motivation. Counseling Services at the Longbrake Student Wellness Center is a free and confidential resource providing short-term counseling and connections to community agencies for students needing longer term or specialized resources. You can make an appointment by calling 330.263.2319 between 8:30am-4:30pm during weekdays or by emailing Lori Stine (lstine@wooster.edu). You can also find helpful resources on the Counseling Services website at <https://inside.wooster.edu/health/counseling/>.

Students also have free access to TimelyCare, a telehealth service providing scheduled medical and counseling appointments as well as 24/7 crisis consultation with licensed professionals. Students use their Wooster email to establish an account at [TimelyCare: Telehealth for Scots](#). TimelyCare also provides students access to nutritionists and health coaches about issues of sleep and exercise, and psychiatry (with a referral from doctor or counselor).

If you or a friend is in crisis, please call Campus Safety at 330-287-3333 or the National Suicide Prevention Lifeline (1-800-273-TALK) or connect with the Crisis Text Line by Texting "4HOPE" to 741-741.

For financial concerns: Dean of Students Office, dos@wooster.edu (330) 263-2545, [DoS website](#)

For safety concerns: Campus Safety 330-263-2590 or cw-security@wooster.edu, [Campus Safety website](#). **In the care of an emergency, call: 330-287-3333.**

We're All Human

Let's all practice empathy, kindness, and understanding - towards each other and ourselves.

Although every effort has been made to make this syllabus as complete as possible, changes may occur regarding the course schedule, grading, assignments, and office hours. I reserve the right to make changes to this syllabus if necessary. Any changes will be communicated in a timely manner.