

CS 492 Special Topics: GPU Programming
Fall 2018
MW 12:00-1:15, Lab Monday 3:00-5:00

Instructor Information

Name: S. Seth Long, Ph.D
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Office Hours: Monday 1:30-2:30, Thursday 9:30-10:30

Class Website

The class website is located at <http://isoptera.lcsc.edu/~seth/cs492>. Look here for assignment information, lecture notes, etc.

Course Goals

At the end of the course, students should

- Understand purpose and use of the Graphics Processing Unit
- Be able to use OpenGL 2.0+ and GLSL
- Be familiar with general-purpose GPU programming using CUDA or OpenCL

Textbook

There is no single textbook for this course. A variety of online resources will be used instead.

Grading

Your grade will be calculated based on the following items:

Item	Percentage of grade
Midterm	15%
Final	20%
2 Projects	40% total
1 Presentation	10%
Lab	15% total

Lab assignments will be due at the beginning of the next lab session, thus providing a week to finish them. Grades will be assigned according to a standard curve, that is:

- A: 90% +
- B: 80%- 90%
- C: 70%- 80%
- D: 60%- 70%
- F: less than 60%

Use of + or - grades (such as B+ or A-) and curves will be at the instructor's discretion.

Deadlines and late work

Late work will not be accepted, except in unusual circumstances by instructor discretion. However, partial credit will be given for partially-completed work. It is better to turn in an unfinished assignment for partial credit than to not turn in something on time and receive a 0.

Attendance

Attendance will not be taken in this class except as required for financial aid purposes. However, all material presented during lecture and student presentations is "fair game" for the midterm and final, and some of this material may not be in any online resources. Therefore I recommend that you always attend class.

Academic Dishonesty

Cheating on any assignment will result in failing the class. Some things which constitute cheating in this class are:

- Copying another student's homework
- Turning in homework created by another student
- Reading another student's answers on a test
- Sharing all or part of your completed homework with another student before the assignment is due

Appropriate collaboration on homework involves sharing ideas with other students only, not source code! Although it is often tempting to help another student by showing them how your completed program works, this is not helpful to their learning. However, this does not mean you cannot collaborate with other students on homework. Sharing of ideas, principles, and algorithms is permitted and encouraged.

Very Tentative Fall 2018 CS492 GPU Programming	
Week	Course Content
Aug 20	Course Introduction and 3D spaces
Aug 27	GPU Programming for Graphics
Sep 3	GPU Programming for Graphics
Sep 10	GPU Programming for Graphics, Graphics Project Begins
Sep 17	GPU Programming for Graphics
Sep 24	GPU Programming for Graphics
Oct 1	GPU Programming for Graphics
Oct 8	GPU Architecture and History
Oct 15	Midterm
Oct 22	Presentations of Graphics Projects
Oct 29	General Purpose GPU Programming
Nov 5	General Purpose GPU Programming
Nov 12	General Purpose GPU Programming
Nov 19	Thanksgiving Break
Nov 26	General Purpose GPU Programming
Dec 3	Topics of Interest, general-purpose project due
Dec 10	Final Exam is Wednesday, December 12, at 12:00