

# CSCI 493: Computational Geometry

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## 1 Overview

### 1.1 Catalog Description

“Many important computational problems involve data that is inherently geometric. In this course, we will explore many such applications with a focus on developing general tools and techniques for computing with geometric data. The workload will be a balance of implementations and formal analysis.”

### 1.2 Prerequisites

The official prerequisite is CSCI 180.

## 2 Course Administration

### 2.1 The Staff

Instructor: Dr. Michael Goldwasser  
Email: [goldwamh@slu.edu](mailto:goldwamh@slu.edu)  
Web: <http://euler.slu.edu/~goldwasser/>  
Office: Ritter Hall 006  
Telephone: (314) 977-7039  
Office hours: Tuesdays 3:45–4:45pm  
Wednesdays 2:15–3:15pm  
Fridays 10:00am–11:00am  
or by appointment

Please make sure to take advantage of office hours, as they offer a wonderful opportunity for individual attention.

### 2.2 Class Meetings

#### The Lectures

The material will be presented in three weekly lectures. Though attendance in class is not explicitly required, it is certainly expected. Lectures are designed to be interactive and class participation is most welcome. These meetings will offer learning opportunities that cannot be recreated purely from readings. That said, for those who miss a lecture, information on the lecture topic can often be found on the course schedule web page.

Time: Monday/Wednesday/Friday, 1:10–2:00pm  
Place: Ritter Hall 209

### 2.3 Textbooks

The required textbook for this course is:

Title: *Computational Geometry: Algorithms and Applications, Second Edition*  
Authors: Mark de Berg, Marc van Kreveld, Mark Overmars, and Otfried Schwarzkopf  
Publisher: Springer-Verlag, 2000  
ISBN: 3-540-65620-0  
Website: <http://www.cs.uu.nl/geobook>

The text should be available through the campus bookstore as well as various online book vendors.

## 3 Online Resources

This course will take advantage of the Internet and the departmental network in many ways.

### 3.1 CSCI 493 Web Page: [euler.slu.edu/~goldwasser/493](http://euler.slu.edu/~goldwasser/493)

With the exception of the first day's printed handouts, most of the information for this course will be distributed only by means of the course web page. This web site will contain all assignments, a schedule of lectures, detailed lecture notes, and links to many other sources of information.

### 3.2 Electronic Assignment Submission

All assignments for this course must be submitted electronically! The submission procedure will be done through the course web page, and allows students to submit from any computer connected to the Internet. Each student in this class will be selecting a unique username/password combination solely for use in identifying the student when using the course web page. Details of the procedure are discussed at:

[euler.slu.edu/~goldwasser/493/submit/](http://euler.slu.edu/~goldwasser/493/submit/)

### 3.3 Email with Instructor

Face-to-face contact in class and in office hours is most desirable. Yet email is a convenient form of communication as well. I try to respond to email promptly, including at least once each evening when possible.

## 4 Graded Work

### 4.1 Course Grades

*We will offer more details about the course work and grading scale a few weeks into the semester.*

### 4.2 Academic Integrity

Students are expected to have read and abide by the University statement on Academic Integrity available on page 58 of the Saint Louis University's Undergraduate Catalog. The College of Arts & Science provides a more detailed policy statement, at [http://www.slu.edu/colleges/AS/academic\\_honesty.html](http://www.slu.edu/colleges/AS/academic_honesty.html), which applies within the College and thus to this course.

In addition to those general statements, we wish to discuss our policy in the context of this course. When it comes to learning and understanding the **general course material** or the **practice problems**, you may certainly use other reference materials and you may have discussions with other students in this class or other people from outside of this class.

However, when it comes to **work that is submitted for this course**, you are not to use or to search for any direct or indirect assistance from unauthorized sources, including but not limited to:

- other students in this class
- past students, whether from this school or other schools
- other acquaintances
- other texts or books
- online information other than that referenced by course materials

Acceptable sources of information include consultations with the instructor, teaching assistants, or members of organized tutoring centers on campus, as well as any materials explicitly authorized in an assignment. Even in these cases, if you receive significant help you should make sure to document both the source of the help as well as the extent.

Any violations of these policies will be dealt with seriously. Penalties will apply as well to a student who is aiding another student. Any such violations will result in a minimum penalty of a zero on the given assignment which cannot be dropped, and severe or repeated violations will result in an immediate failing grade in the course. Furthermore all incidents will be reported in writing to the Department and/or the Dean, as per the College procedure.

## 5 Additional Information

### 5.1 Students with Disabilities or Special Needs

In accordance with the Americans with Disabilities Act, reasonable accommodations may be made to assist a student with a documented disability.

Any student who feels that he/she may need academic accommodations in order to meet the requirements of this course, as outlined in the syllabus, due to presence of a disability, should contact the Office of Diversity and Affirmative Action. Please telephone the office at 314-977-8885, or visit DuBourg Hall Room 36. Confidentiality will be observed in all inquiries.