

Syllabus

Instructor: Francois Gygi fgygi@ucdavis.edu

Teaching Assistants:

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E-mail to Prof. Gygi should only be regarding personal, non-technical matters and must come from a ucdavis.edu e-mail account. The string ECS36B must appear in the subject line.

Canvas course web page: <https://canvas.ucdavis.edu/courses/420425>

Piazza web page: <https://piazza.com/ucdavis/winter2020/ecs36b/home>

Note: The piazza web site is intended as a convenient tool to discuss technical issues. However, posting homework answers or uploading solutions(code) will not be tolerated. Students should not have any expectation of any response time for questions posted on piazza. Office hours are the official mechanism for getting assistance.

Reading material:

Beginning C++, Ivor Horton, Apress

Free pdf copy available online through the UC Davis library:

- Go to <https://search.library.ucdavis.edu> and search "Horton Beginning C++"
- Download the full text. Note: you must be accessing the site from the ucdavis.edu domain.

Course objectives:

Acquire proficiency in using Unix tools, develop and debug programs. Learn the process of object-oriented program design and implementation. Learn the C++ programming language.

Topics:

- Introduction. Abstract data types, object-oriented design, C to C++
- References, pointers, function parameters, const
- Class design, public, private, interface vs implementation
- Class design, constructors, destructors, assignment operator, this pointer
- const objects, member functions, friend, overloading, exceptions, cin, cout
- new and delete, class design: composition, constructors and initialization
- static class members, lazy evaluation, mutable keyword
- Inheritance, base and derived classes, protected, polymorphism
- Pure virtual functions, abstract classes, runtime type identification
- Generic programming, templates, linked list
- STL, containers, iterators
- STL associative containers, algorithms predicates, function objects
- I/O, streams, numerical formats, binary I/O
- Strings, stringstreams
- Trees, balanced, binary search tree, heaps

-Hash tables, C++11

Prerequisites Course ECS30 or ECS36A with a grade of C- or better. Students who do not satisfy the prerequisites should drop the class immediately to leave space for wait-listed students.

Lectures: Tuesday, Thursday, 10:30 - 11:50 HUNT 100

Discussions

A01	Mon	6:10p-7:00p	HGYM 290	Rohan Sogani
A02	Tue	4:10p-5:00p	HOAGLD 113	Qi Wu
A03	Wed	1:10p-2:00p	BAINER 1130	Rohan Sogani
A04	Thu	2:10p-3:00p	OLSON 251	Qi Wu

TA Office hours: (Kemper 67)

Mon	1:30p-3:00p	Qi Wu
Tue	3:00p-4:30p	Shubhankar Gupta
Wed	2:00p-3:30p	Rohan Sogani
Thu	4:00p-5:30p	Rohan Sogani
Fri	1:30p-3:00p	Qi Wu

Prof. Gygi Office hours: by appointment

-For issues not resolved in TA office hours, make an appointment by e-mail to fgygi@ucdavis.edu

-NOTE: TA office hours times are tentative and may change due to scheduling conflicts. Changes will be announced on the course web site (Canvas).

Exams:

Exams are cumulative. There will be two midterm exams and a Final exam.

Midterm1: Thu Jan 30, Midterm2: Thu Feb 20, Final exam: Wed Mar 18 at 10:30

Grade details: Homework 40%, Tests 60%

Tests details: Midterm1 15%, Midterm2 15%, Final 30%

Homework:

All programs submitted as part of the homework must be compiled and run on the CSIF computers (see <http://csifdocs.cs.ucdavis.edu/>). All homework must be submitted using the "handin" command on the CSIF computers. Late homework submissions will be graded with a maximum grade decreasing by 10 every hour according to the following table:

0 hr to 1 hr late:	maximum grade 90
1 hr to 2 hr late:	maximum grade 80
2 hr to 3 hr late:	maximum grade 70
3 hr to 4 hr late:	maximum grade 60
more than 4 hr late:	homework not accepted (maximum grade 0)

Regrade requests must be made in writing within one week of the return of the test or grading of homework.

Note: Homework assignments must be done individually. Design and write your programs yourself. Similarities between programs will be tested using automatic comparison tools.

Plagiarism in tests or homework will be immediately reported to Student Judicial Affairs. Please read the UC Davis Code of Academic Conduct at <https://ossja.ucdavis.edu/code-academic-conduct>

Lecture slides: PDF copies of the lecture slides will be posted before class on Canvas.

Example programs used in class will be posted on Canvas.

Classroom Etiquette: (from <https://ossja.ucdavis.edu/syllabus-suggestions>)

The following expectations are to enhance your ability to learn in this class, to avoid distraction and disruption to others, and to improve the quality of the classroom experience. Repeated failure to meet these expectations may result in a lower grade for the course.

Entering/Exiting Class:

- Please arrive on time to class and stay for the entire class period. Late arrivals and early departures are disruptive.
- If, despite your best effort, you arrive late, please quietly take a seat at the back of the classroom. Similarly, in the rare event that you must leave class early (e.g. for a medical appointment), email me in advance to let me know, then sit close to the rear door and leave as unobtrusively as possible. If you can't be there on time or must always leave early because of a class or work conflict, either seek specific permission from me or do not take this class.
- During exams, you must ask permission before leaving the classroom for any reason. Please use the restroom *before* coming to class or an exam.

Noise:

- When class begins, please stop all conversation.
- Turn your cell phone **off** and put it in a bag or backpack out of sight.
- Wait until class is completely over before putting your materials away, standing up, or talking to friends.

Electronic Devices:

- No taping, filming, or photography in class (whether by camera, cell phone, or other means). These activities are distracting and inhibiting to faculty and other students, may infringe upon privacy or copyright, are a violation of University policy, and have a chilling effect on classroom discussion.
- Cell phones should be turned off and put away. No talking, texting, or emailing on laptops during class.
- Laptop or tablet use is limited to viewing and annotating lecture slides. Other uses are distracting, not only for you but for students sitting behind you. Consider taking notes the "old school" way: by hand. (Preliminary research also suggests that notes taken by hand are better retained than notes taken on a computer.)
- No listening to iPods/phones or other electronic recording devices during class. Out of courtesy, please remove ear-buds during class.

Electronic Etiquette:

- If you email me, I expect your messages to conform to standards of professional correspondence: emails should be courteous and respectful in tone; do not send emails that are curt or demanding.
- Do not expect an immediate response via email (normally, a response will be sent within two business days). If your email question is sent at the last minute, it may not be possible to send you a response before an assignment is due or a test is given.

Common Courtesy:

- Do not read the newspaper during class. The shuffling of pages can be very distracting.
- Eating in class is considered disruptive.
- Show respect for me and fellow classmates. Do not interrupt someone who is speaking. It is okay to disagree with an idea but it is not okay to ridicule or make fun of another person or their ideas. Raised voices, derogatory language, name-calling, and intimidating behavior will NOT be tolerated.
- Do not disturb others by engaging in disruptive behavior. Disruption interferes with the learning environment and impairs my ability to teach and the ability of others to focus, participate, and engage. Please be advised that disruptive behavior is a violation of our Code of Academic Conduct.

Working With Others:

- In this class, I permit students to discuss the concepts and ideas of the assignments with each other, but I require that students then do the assignment independently (i.e. by themselves -- alone). If your answers are identical or highly similar to those of another student, I will know that you worked together beyond what I allow and I will report you to the Office of Student Support & Judicial Affairs (OSSJA). Working together when not allowed, or beyond what *is* allowed, is called "unauthorized collaboration" and is a violation of our Code of Academic Conduct.

Course Hero, Etc.:

- You are not allowed to post any of my course materials to any website -- period. Doing so is an infringement of copyright standards and a violation of University policy. It is generally not difficult to figure out who posted my materials to such a site, and I do report those individuals to the Office of Student Support and Judicial Affairs (OSSJA).