



## Syllabus for CSE165-01: Intro to Object Orient Program

Fall 2022

**Instructor:**

Pengfei Su

**Office Hours:**

Th 4:00 - 6:00PM (or by appointment), Zoom: <https://ucmerced.zoom.us/j/87406905790>

**Catalog Description:**

This course covers object-oriented programming concepts, such as classes, objects, methods, interfaces, inheritance, encapsulation, and polymorphism. While the goal of the course is to teach students how these concepts can be implemented in C++, significant emphasis is on object-oriented modeling and design techniques.

**Textbooks and Other  
Required Materials:**

Bruce Eckel -- Thinking in C++: Introduction to Standard C++, 2nd Edition, Volume 1-2, Available online at:

<https://www.micc.unifi.it/bertini/download/programmazione/TICPP-2nd-ed-Vol-one-printed.pdf>

<https://www.micc.unifi.it/bertini/download/programmazione/TICPP-2nd-ed-Vol-two-printed.pdf>

**Course Objectives/  
Student Learning  
Outcomes:**

Students in the class will learn to:

- create programs using the gcc compiler and makefiles;
- learn about cross-platform development;
- apply standards and principles to write truly readable code;
- write clean programs without memory leaks;
- test and debug programs;
- learn the fundamentals of input and output using C functions and the C++ templated classes;
- develop the needed objects and data structures to solve a given computation problem;
- understand and demonstrate the concepts of object-oriented design, polymorphism, interface, inheritance, and templates; and
- apply object-oriented design in the development of implementation projects.

**Prerequisites by Topic:** CSE 031, CSE 100, MATH 024

**Course Policies:**

Labs are designed to be started and worked on in the time frame you have in lab. Assignments must be completed individually; software assignments must not be shared.

**Academic Dishonesty  
Statement:**

- a. Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work.
- b. You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an email, an email attachment file, or a hard copy. Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this

Policy can also be extended to include failure of the course and University disciplinary action.

c. During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam and may lead to failure of the course and University disciplinary action.

**Disability Statement:**

Accommodations for Students with Disabilities: The University of California Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.

**Course Calendar:**

Week 1: introduction

Week 2: C in C++

Week 3: object basics; data abstraction

Week 4: access control, friend declarations, constructors/destructors, inheritance

Week 5: references and copy constructor, overloading, and default arguments

Week 6: polymorphism and virtual functions

Week 7: dynamic object creation, static and namespaces

Week 8: mid-term practice and exam

Week 9: constants and inline functions

Week 10: operator overloading, templates

Week 11: multiple inheritance

Week 12: exception handling, standard library

Week 13: STL map

Week 14: project presentation

Week 15: final topic

Midterm:

Wednesday, Oct 19 (tentative)

Final:

Saturday, Dec 10

**Grading Policy:**

Midterm: 25%

Final: 35%

Lab: 20% (individually)

Project: 20% (individually or in team of up to 4 members)

**TAs:**

Yuanzhou Yang

Email: [yyang127@ucmerced.edu](mailto:yyang127@ucmerced.edu)

Office hours: F 9:00 - 11:00 AM (or by appointment)

In-person: SE2 lobby

Zoom: <https://ucmerced.zoom.us/j/87985022561>

Mujahid Al Rafi

Email: [mrafi@ucmerced.edu](mailto:mrafi@ucmerced.edu)

Office hours: F 5:00 – 6:00 PM (or by appointment)

In-person: SE2 lobby

Zoom: <https://ucmerced.zoom.us/j/86714952742>