

CIS/CSC 17A - C++ Programming: Objects

0 Introduction:

Course: CIS/CSC 17A - C++ Programming: Objects
Professor: Paul J. Conrad
Website: <http://rccd.instructure.com>
Email: Paul.Conrad@rcc.edu, Phone: 951-222-8070
Lecture: Sections 47062, 47156 meet in person Mon/Wed 12:45pm-2:10pm BE-208
Sections 47063, 47157 online (asynchronous)
Lab: All Sections Online (asynchronous)
Office Hrs: Mon/Wed 11:30AM-12:30PM in BE220-H
Mon/Wed/Thurs 4:00PM-5:00PM via Zoom (request password protected link via email)
Prerequisite: CIS/CSC 5, Advisory: None

1 Course Description:

The application of software engineering techniques to the design and development of large programs; data abstraction, structures, and associated algorithms. A comprehensive study of the syntax and semantics of the C++ language and the methodology of Object-Oriented program development. 54 hours lecture and 18 hours laboratory. (TBA option)

2 Reading:

Required Text: Starting Out With C++ From Control Structures through Objects, Ninth Ed.
By: Tony Gaddis, ISBN-13: 978-0-13-444382-9

3 SLO - Student Learning Outcome:

Students should be able to:

- Write programs that use each of the following data structures: arrays, records, strings, linked lists, stacks, queues, and hash tables.
- Implement, test, and debug simple recursive functions and procedures.
- Evaluate tradeoffs in lifetime management (reference counting vs. garbage collection).
- Explain how abstraction mechanisms support the creation of reusable software components.
- Design, implement, test, and debug simple programs in an object-oriented programming language.
- Discuss the properties of good software design. Compare and contrast object-oriented analysis and design with structured analysis and design.

4 Laboratory Assignments:

Course lab assignments are programming problems from course website. Lab assignments are to be turned in via Assignment Submission on Canvas with proper documentation of the lab assignment by the assigned due date. Lab assignments are worth 10 points each. Lab work turned in after the due date will be considered late and worth at most 50% credit. Once closed on Canvas, will not be reopened.

5 Discussion Board Participation

As part of your course reading requirements, you will be required to participate in the Canvas Discussion Forum for the respective chapter. You are to answer the three questions posted in the discussion forum for the respective chapter. To receive credit, the answers must be a minimum of three sentences. Copy/pasting of another student's answers will result in an automatic zero for the chapter discussion grade. Answers that do not add any value to the discussion. Once closed on Canvas, will not be reopened.

Note: I do reserve the right to make changes to this syllabus if needed in order to maximize potential student learning in this course.

6 Quizzes

There may be occasional weekly quizzes covering the discussed topics of the week. The quizzes will consist of twenty questions, worth 20 points total for the quiz. Quizzes are due no later than 11:59PM on the Sunday **two weeks** after being assigned. Once closed on Canvas, will not be reopened.

7 Exams

There will be one comprehensive final examination. The Final Exam will be available on Canvas from **June 2nd, 2023 12:00AM until June 9th, 2023 11:59PM**. The final exam will cover all of the material that is introduced in the course, and the Final Exam is worth 100 points. It will comprise of short answer questions, true or false questions, or multiple-choice questions. Once closed on Canvas, will not be reopened.

8 Reading and Exam Schedule

The table below is the tentative reading and examination schedule for this semester.

<u>Week of</u>	<u>Reading / In Class Objectives</u>
1 – Feb 13 th	Introduction/Getting Started
2 – Feb 20 th	Chapters 1-3: Review of C++ Part 1
3 – Feb 27 th	Chapters 4-6: Review of C++ Part 2
4 – Mar 6 th	Chapters 7-9: Review of C++ Part 3
5 – Mar 13 th	Chapter 11: Structures
6 – Mar 20 th	Chapter 13: Introduction to Classes
7 – Mar 27 th	Chapters 13/14: More About Classes
8 – Apr 3 rd	Chapters 13/14: More About Classes / Inheritance
Apr 10 th	----- Spring Break -----
9 – Apr 17 th	Chapter 15: Polymorphism and Virtual Functions
10 - Apr 24 th	Chapter 16: Exceptions and STL
11 – May 1 st	Chapters 10/12: File I/O and Advanced File I/O
12 – May 8 th	Chapter 17: Linked Lists / Final Project
13 – May 15 th	Chapter 18: Stacks and Queues / Final Project
14 – May 22 nd	Chapters 19/20: Recursion / Binary Trees / Final Project
15 – May 29 th	Chapter 20: Binary Trees / Wrap Up (no in person 5/29/23)
16 – Jun 5 th	Final Exam June 2 nd until June 9 th on Canvas

9 Make Ups

Make up work can be done in the event of an unforeseen emergency with proper documentation (doctor's note, etc – your instructor will require documentation).

10 Grading Breakdown

<u>Task</u>	<u>Points</u>	<u>Grade Weight</u>
Discussion Board	3 pts each	10%
Assignments	10 pts each	30%
Quizzes	20 pts each	30%
Final Project/Exam	100 pts each	30%

11 Grading Scale

<u>Letter Grade</u>	<u>Percentage</u>
A	90% to 100%
B	80% to 89%
C	70% to 79%
D	60% to 69%
F	0% to 59%

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12 Classroom/Lab Policies

Attendance is necessary for success in this course. **Anyone having a lapse in their log ins for the course exceeding 7 (seven) days WILL BE dropped from the course for non-participation (you are required to log in on a regular basis and participate regardless of academic standing in the course!). Since Canvas is an important tool used in this course, anyone who has not logged into Canvas by February 27th, 2023 will be dropped from the course (no exceptions!).** Computer and Network Use in department classrooms and labs are governed by district policies found in Board Policy 3720 and are subject to Standards of Student Conduct located in the Student Handbook. Violations of these policies are subject to Disciplinary Actions as outlined in Section VI of the Student Handbook.

13 Academic Dishonesty

RCC defines plagiarism as, "Presenting another person's language (spoken or written), ideas, artistic works or thoughts as if they were one's own." This includes using someone else's code as your own. Plagiarism is academically dishonest. Students must make appropriate acknowledgement of the original source where material written or compiled by another is used. Cheating or dishonest practices, such as turning in the writing of someone else and claiming it as your own, will result in your receiving a failing grade on the assignment and possibly for the course. **I take academic honesty very seriously, please adhere to honest academic work!**

14 Student Accommodations

If you have a physical, psychiatric/emotional, medical, or learning disability that may impact your ability to carry out assigned course work, I urge you to contact the staff in the DRC Office at (951)222-8060. The office is located on the Riverside Campus, in the Administration Building. The DRC will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation are confidential.

15 Department Equity Statement

Riverside City College School of Business, Information Systems and Technology embraces a notion of an intellectual community enriched by diversity with multiple dimensions, including race, ethnicity and national origin, gender, gender identity, sexuality, class, and religion. We are particularly committed to populations that have historically been excluded from equitable participation in the classroom, higher education institutions, and our communities. Individually, we are devoted to addressing our unconscious bias to pave the way for a more inclusive curriculum and learning environment.