

GLENDALE COMMUNITY COLLEGE BUSINESS DIVISION

COURSE OVERVIEW (SYLLABUS) FOR CS/IS 135,

Programming in C/C++

Instructor: Tony Biehl

<u>Ticket #'s</u>	<u>Classroom</u>	<u>Class Day</u>	<u>Class Hours</u>	<u>Final Exam</u>
1050/1051	Remote/hybrid ...	TTh	6:00 pm – 7:30 pm.....	Thursday, July 20, 6:00 pm – 7:30 pm

Semester: Summer 2023

Telephone: 818 240-1000 X5478

E-mail: tbiehl@glendale.edu but please use Canvas messages instead to contact instructor

Office Location: SR334

Office Hours: No office hours during summer

Supplemental Instruction: TBD

Course Description

CS/IS 135 is a course in programming using the C/C++ languages which are easily transportable languages with uses in applications programming for real-time, business, and image processing systems, as well as systems programming. Types, operators, control flow functions, object-oriented programming, classes, data abstraction, and program structure pointers and arrays are covered in the programming assignments. Lecture 3 hours plus lab.

Prerequisites

CS/IS 112 or equivalent.

Disabled Students

All students with disabilities requiring accommodations are responsible for making arrangements in a timely manner through the Center for Students with Disabilities.

Course Objectives

Students should be able to:

1. demonstrate object-oriented programming concepts and object-oriented design;
2. design, code, and debug basic object-oriented programs and procedural programs;
3. use objects, pointers, and structures to program in the C++ language.

Course topics (not inclusive):

Brief history of programming languages

Machine language, Assembly language, High-level languages

Introduction to C/C++ language

Components of the language; variables and arithmetic; data types; operations and expressions

Creating a program

Required files; input/output; formatting; functions and scope

Control Flow Statements

Branching – IF, IF/ELSE; loops – WHILE and FOR; switch; break and continue; go to and return

Functions and Complex Expressions

Function arguments, types, and parameters; scope rules; recursion; compound assignments; operator precedence

Arrays

Single and multidimensional; declaration, reference, store and initialize; use of arrays in string processing

Pointers

Pointers and addresses; syntax and use of pointer operator; pointers and arrays; pointers to functions

Data Structures and Classes

Introduction to Object-Oriented Programming

Input and Output

Standard I/O; formatted I/O; table lookup; unions

Textbook and Supplies

Textbook:

Starting Out with C++ from Control Structures to Objects, by Gaddis, Pearson, 9th Ed., 2018, **ISBN: 9780134498379**

Attendance

Students are required to attend all class sessions and to stay for extra lab time whenever needed to complete work on time (see weekly schedule below). Any student missing more than two consecutive class meeting must call or e-mail to inform the instructor. Missing more than 2 class meetings could seriously jeopardize a student's grade and could, without prior arrangements made with the instructor, make him/her subject to being dropped from the course. Also inactivity on assignments, such as quizzes, homeworks/labs, and such, will cause a drop.

Exam Makeup Policy

An exam may be made up if there is a valid excuse (serious illness corroborated by a physician). A make-up exam must be scheduled within 12 hours of the actual exam in person, by phone or email.

Grading Method

Required Work:	%	Grading Scale
Participation/Discussion Boards	10	A = 90%
Quizzes	10	B = 80%
Homework labs (Hypergrade)	20	C = 70%
Midterm	30	D = 60%
Final	30	F = less than 60%

First Day/Check-in Drop Policy

This instructor reserves the right to drop no-shows after the first hour of the first class meeting if no prior arrangements were made for the absence. Also, not doing the check-in quiz will cause a drop.

General Late Policy

Assignments have a one-day grace period. Then they are marked off 20% up to a week late from the due date. After that, they are marked off 50% until the final.

Note: programs, if lacking requirements or bad style, may be rejected and given 48 hours to correct the defect. You must submit the correction or the program will be treated as a week late, 20% off. After a week, it will be 50% off. Also, if the program does not compile or has a major flaw it will be counted as 20% late and you need to correct, resubmit, and notify the instructor.

Note: please do not email your programs. Depending on assignment, use the Hypergrade or Canvas submission.

Zoom and Discussion Board

Weekly zoom. Need to arrive within 5 minutes of the start of the zoom and stay for the entire zoom (or if the instructor dismisses everyone). For security reasons, you will need to enter a password (initially on Canvas under the 135 Zoom link) then, if changed, sent via the Inbox on Canvas to the class) and will be placed in a waiting room. The instructor will let you in. You will need to do the discussion(s) for that week.

Regular weekly Discussions and Hypergrade

These discussions are required. They may be up to a week late but will lose 20% of the points. Also it is required to buy the hypergrade software package for \$10 (instructions on Canvas how to get Hypergrade). Need it before submitting assignments.

Communication

Students are encouraged to contact the instructor with questions or problems as necessary. Using the Canvas messaging system is preferred. If you need to use e-mail, please use your GCC email account to contact the instructor about course related issues (go to MyGCC to activate your GCC email account).

Academic Honesty Policy

This instructor follows the Glendale Community College Honesty Policy as listed in the *Glendale Community College Catalog* and the *Student Handbook* (free at Information Desk near Admissions). Students are, at all times, required to do their own work. No copying of other students' work, whether on a test or on routine class work, is allowed at any time. Activities that are considered to be CHEATING include, but are not limited to, the following: communication with another person during an exam, accessing materials electronic or otherwise without the instructor's express permission. Violation of any of these rules (i.e. cheating) could result in a lowering of the exam grade or the course grade (e.g. a "Fail"), and the violator's name and student I.D. number will be sent, with a description of the violation, to the Division Chair and to the Vice President of Instruction to be kept on record for future reference. The Dean of Student Activities may also be contacted for disciplinary action, if necessary.

Academic Integrity

The work you do and submit is expected to be the result of your effort ONLY. You may discuss the high level (general) solution of an assignment. However, cooperation should not result in one or more students having possession of any part of an assignment written by another student. Incidents of academic dishonesty or lack of integrity will be referred to the Vice-President of Instruction's office.

Class Rules

Everyone is to behave in a professional manner while online and while interacting with the instructor or other students (no rude or insulting behavior, please). Those acting in an unprofessional manner may be banned for a few days from the online site.

Issues or Complaints

Please address any issues you may have that are relative to this course *with me, your instructor*, either in person during my office hours (see above), by e-mail (tbiehl@glendale.edu or Canvas), or by telephone (818 240-1000 X5478, though rarely in office since the pandemic) as early in the semester as possible. If you and I cannot resolve the issue, I will refer you to the division chair, Michael Scott, mscott@glendale.edu, 818 240-1000, Ext. 5746 or see the Division Office, SR 311, Ext. 5484, for an appointment.

Schedule of Class work, Homework, Exams, and Other Activities

CS/IS 135 – Tentative Class Work Schedule – Summer 2023			
Week	Date	Concept Lectures & Projects	
	Week		
1	T 6/20	Introduction, Chapter 1, Introduction to computers and programming	
	Th 6/22	Chapter 2, Introduction to C++	
		Chapter 3: Expressions and Interactivity	
2	T 6/27	Chapter 4: Making decisions	
	Th 6/29	Chapter 5 – Loops and files	
		Chapter 6: Functions	
3	7/4	Fourth of July – campus closed	
	Th 7/6	Midterm Exam	
4	T 7/11	Chapter 10: Characters, C-Strings, and More about the string class	
4	Th 7/13	Chapter 7: Arrays and vectors	
		Chapter 13: Introduction to Classes	
5	T 7/18	Chapter 8 – Searching and Sorting Arrays	
		Chapter 9: Pointers	
		Chapter 11: Structures	
	Th 7/20	Final Exam	