COMP 3150: Programming in C/C++
Dr. James Yu

Contact Information:

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The best way to contact me is through email – I usually respond within 24 hours.

Office Hours:

I am usually around between 9:30 to 11:30 am (M, Tu, Thr, F, Sat). You can drop by any time. My classes are in the afternoons (M – Thr). It is best to email me to set up an appointment (zoom or in-person) in advance.

Lecture Meeting Times/Locations:

91955 - COMP 3150 - 001 TR 5:30 pm to 7:30 pm Dunn Hall 124

Catalog Description:

Introduction to C/C++; software development environments; primitive data types, pointer, reference, struct; user-defined structures; memory management; control statements; function; file I/O; introduction to object-oriented programming; C++ class; input and output with streams; inheritance, overriding, polymorphism; Standard Template Library. PREREQUISITE: COMP 2150, or permission of instructor.

Student Learning Outcomes:

1. Learn the fundamental programming concepts and methodologies in C/C++ programming.
2. Demonstrate an understanding of primitive data types, values, pointers, references, operators, control flow, and expressions in C/C++
3. Analyze the given problem statements to create basic program designs in C and C++ programming.
4. Demonstrate an understanding of procedural, structural, and object-orient programming in C/C++ programming.
5. Implement programming techniques to solve real-life problems in the C / C++ programming language.

Course Website:

You can find the course materials (lecture notes, assignments (HW, zyBooks), codes written during lecture, sample codes, grades, etc.) at the University of Memphis LMS (Canvas) at Dashboard (instructure.com) https://memphis.instructure.com

Required Text:

- Zybooks: COMP 3150: Programming in C/C++
  - Sign in or create an account at up @ http://www.zybooks.com
- Enter zyBook code: MEMPHISCOMP3150YuFall2022
  - Click Subscribe (**you must use your Memphis.edu email address to register**)

You will need this book for the in-class exercises and zyBooks assignments

Evaluation:

Items	Points
Homework Assignments (HW)	200
zyBooks-Exercises (ZB)	100
InClass exercises (IC)	200
Quizzes (3) (@100 each)	300
Final	200
Total	1000

Some of the zyBook exercises consist of in-class and take-home portions. You must submit the in-class portion to get the assignment's total (in-class + take-home) grade. Missing the in-class part will result in a zero for that zyBook exercise assignment.

Grading Scale: Letter grades will be determined as follows:

A	B	C	D	F
100 -> 89	88 -> 76	75 -> 65	64 -> 60	59 -> 0
A+ ≥ 97%	**B+ 85–88%**	**C+ 71–75%**	**D+ 62–64%**	**F ≤ 59%**
A 92–96%	**B 80–84%**	**C 67 –70 %**	**D 60–62%**	
A– 89 –91%	**B– 76–79%**	**C– 65 –67 %**		

Final Exam: based on: Fall 2022 Final Exams - Registrar - The University of Memphis
December 8, 2022 (Thurs), 5:30 pm - 7:30 pm at DH 124 (same as the lecture room)

Assignments:

Throughout the semester, you will have various assignments to reinforce the concepts discussed in the lecture. This class does not have an assigned laboratory section. Instead, you will have exercises (in-class and zyBooks) during the lectures to practice your understanding. Therefore, you will not do well in this course unless you work on assignments persistently.

The assignments fall into three categories: inClass : (200 pts), ZyBooks (ZB) Exercises (100 pts), Homework Assignments (HW) (200 pts)

1. inClass (200 pts) consists of (in-class, code-along) exercises to reinforce the current topic discussed immediately. Attendance is also indirectly taken through canvas submission. There is absolutely no makeup for the inClass coding exercise.
2. ZyBooks (ZB) exercises (100 pts) are from the required zyBook textbook. Please check your course LMS (Canvas) regularly for the posting and due dates details
3. Homework (HW) Assignments (200 pts): HW assignments will allow you to explore the topic more deeply than the zyBooks and in-class exercises. Please check your course LMS (Canvas) regularly for the posting and due dates details

You must regularly check the course LMS (Canvas) site (https://memphis.instructure.com/) for all the assignment posting and due dates. Unfortunately, there is no makeup for the missing assignments.

Attendance / participation: (zyBooks and inClass exercise)

It is essential to attend the classes regularly. The course will keep building on itself and move pretty quickly. Therefore, it would be best to get a good handle on each concept after discussing it. Frequently, you will need to submit in-class work, and I will also use that for attendance.

You must bring your laptop with the assigned zyBook textbook for this course. Some in-class exercises may be from the zyBooks chapters. If you miss the lecture and cannot submit the in-class portion, you will receive no marks for the assigned zyBooks exercise. There is absolutely NO Extention for the missing (in-class or take-home portion) zyBooks assignments

Email:

Please check your University of Memphis email (or the email address you provided) regularly (daily), as that is my primary means of communicating with you outside of Class.

Late/Makeup Policy:

All assignments (including zyBooks, and in-class exercises) are expected to be completed and turned in on schedule. Each assignment will have specified due dates. Your TA/GA will not accept late assignments except in extreme circumstances. Likewise, makeup quizzes and exams will be given only under extreme circumstances. If circumstances warrant a late work submission or a makeup quiz/exam, get in touch with me with documented proof of your situation no more than one week from the due date.

Collaboration and Plagiarism/Cheating Policy:

An essential part of learning how to program is getting plenty of practice with it yourself. I also encourage you to work collaboratively and learn from each other. You are allowed to have similar designs and codes. You have to comment at your program heading with "// collaborated with (list of the name), and which parts of the program are your main contributions." If I (or TA) determine that you have copied something directly from a book, the Internet, or some other source, you will receive a failing grade on the assignment and (at my discretion) a failing grade in the course. If we determine that you have copied work from another student directly without any comment on your contribution, you will receive a failing grade, which will happen to both you and the person you copied. The Office of Student Conduct will also receive a copy of the incident for further disciplinary action. Please don't put me in this situation.

Important: Fall 2022 Dates and Deadlines - Registrar - The University of Memphis

Getting Help:

Although I expect your work for this Class to be done individually or collaboratively with conditions (see above), I encourage you to seek help as soon as possible if you get stuck: (this key is to start working on your assignment within 24 hours from the posted date)

- Talk to me! I'm very willing to sit down and provide hints without giving away the solution.
- Contact your course TA\GA.
- Online help: I generally have an open zoom open line on Sat 9:30 to 12noon. Please come prepared with specific questions.

Student Disabilities:

If you require disability-related accommodations to meet the course objectives, please contact the Coordinator of Disability Resources located in the Student Development and Advising area of the student services building. For more information about Disability Resources or academic Accommodation, please visit the website at: http://www.memphis.edu/drs/

Tentative Course Schedule:

Date	Topics	Text	Quizzes	Assignments (HW)
23-Aug	Introduction C/C++	1.5 - 1.8		
25-Aug	VSCode installation, examples	1.11, 1.12		
30-Aug	**Variables Assignments**	2.1 - 2.8		
1-Sep	Math fct, float, exp,	2.9 - 2.16		HW1: Variables
6-Sep	Num data type, style,	2.17- 2.24		
8-Sep	**Selections (Branches)**	3.1 - 3.7		
13-Sep	Common Error, order, switch, Str,Char	3.8 - 3.15	**Q1: (09/12)**	
15-Sep	Conditional Exp, float, logical comp	3.16 - 3. 20		
20-Sep	**Loops (**while, for, do while, nests)	4.1 - 4.7		HW2: Selections
22-Sep	Break, Continue,scope, enum	4.8 - 4.13		
27-Sep	**Arrays:** (concept, loop, multi-	5.1 - 5.8		
29-Sep	2D, char, str, examples	5.9 -5.15		
4-Oct	**Functions**: def, branch, loop, pointer	6.1 - 6.10		HW3: Loops/Arry
6-Oct	array, scope, preprocess, header files	6.11 - 6.19		
11-Oct	**Fall Break/No Class**			
13-Oct	**Struct:** data struct, /fct, /ary, files	7.1 - 7. 5	**Q2: (10/12)**	
17-Oct	**Pointers**	8.1 - 8.7		HW4: Fct. Struc
20-Oct	**Input/Output, File I/O**	9.1 - 9.4		
25-Oct	C vs C ++	Notes		
27-Oct	**Classes and Objects**	30.1 - 30.10		
1-Nov	constructor, this, ovrload, namespace	30.11 - 30.20		HW5:Class/Objs
3-Nov	**pointers (**new, delete, ->**)**	31.1 -31.12		
8-Nov	**Streams** (I/O, file)	32.1 - 32.9		
10-Nov	**Inheritance**	33.1 - 33.10	**Q3: (11/09)**	
15-Nov	**Exception**	35.1 - 35.4		HW6:Inheritance
17-Nov	**template <**generics**>**	36.1 - 36.3		
22-Nov	**Container**	37.1 -37.9		
24-Nov	**Thanksgiving / No Class**			
29-Nov	TBD			HW7: TBD
30-Nov	**Last day of class: TBD**			

The quiz dates are subject to change. Each quiz is approximately 45 to 60 minutes. Plan to attend the entire lecture on the quiz day. If you miss a quiz, there is absolutely no retake.

Tentative Quiz and Exam Topics:

- Quiz1: C: variable, selection
- Quiz2: C: Loops, Array, structure, function,
- Quiz3: C++: Class/Object, pointers, inheritance, polymorphism
- Final Exam: "all of the above".