University of Wyoming
College of Engineering
Department of Computer Science

SYLLABUS

Computer Science 1030 - Computer Science I

Semester	Fall 2023
Meeting	Tuesday and Thursday, 11:00 AM - 12:15 PM
	Geology Building 216
Instructor	Nels Frazier
Office	EN 4068
Office Hours	•Tuesday, Wednesday, Thursday: 1500–1600
	•Other times are available by appointment
Contact	•Email: nfrazie1@uwyo.edu
	•Office Phone: 307-223-2260

Course Description: Continues the introduction from COSC 1010 to the methodology of programming from an object-oriented perspective. Through the study of object design, introduces the basics of human-computer interfaces, the social implications of computing, with an emphasis on software engineering.

Prerequisites: COSC 1010

Objectives: We will focus on two primary tasks: enhancing object-oriented program design skills and gaining practical expertise with the C++ language. Particular objectives which we will pursue are detailed as follows:

- Mastery of C++ syntax for structured programming with sequential, selection, looping and procedural capabilities.

- Mastery of basic procedural programming concepts for solving simple computational tasks and verifying correctness.

- Mastery of C++ syntax for describing simple data structures with class definitions and implementations.

- Advanced practice in use of object-oriented design techniques to implement simple computational problem solutions.

- Practice in C++ Standard Template Library use for data structure and algorithm implementation.

In doing this, we will continually wrestle with the demands of good programming design practice and the constraints imposed by the language with which we complete the design.

Required Text: *Starting out with C++: From Control Structures though Objects*, 9th Edition, Tony Gaddis, Pearson Education, ISBN 9780134443850 (e-text), 2019. Note that electronic versions are available for purchase or rent through UW bookstore. Look at the "My Textbooks" link on the WyoCourses home page for COSC1030. I do not believe that there is any hard copy available. BUT, if you happen to have/come across the 8th edition, it would be acceptable.

Course Policies:

- Grading:
    - A 90% - 100%
    - B 80% - 89%
    - C 70% - 79%
    - D 60% - 69%
    - F Below 60%

- Percent of Grade:
    - Quizzes – 5%
    - Labs – 25%
    - Programming Assignments – 30%
    - In-Class Exams (3) – 30%
    - Final Exam – 10%

"Homework", Quizzes and Exams: The course text has both "Checkpoints," which are sets of questions that correspond with sections of the text, and "Review" questions at the end of the chapters. Answers to Checkpoints and Odd-numbered Review questions are available on the Pearson text website. Instructions (a link) to get to that are inside the front cover of the text.

The lecture notes page on the WyoCourses site will indicate the chapters of the text that each lecture concentrates on. Your daily "homework" should include reading the text and checking your comprehension with the Checkpoints. This will typically require access to a C++ development environment in order to enter and test live code. **It will be to your advantage to become very comfortable with Microsoft Visual Studio for C++.**

You can download and install for free the Visual Studio Community edition. I know this runs on Windows 7/8/10. The Mac version does NOT support C++. There is no version for Linux. There is Visual Studio Code for both Linux and Mac BUT THIS HAS NO COMPILER! If you want to establish a development environment on Mac or Linux, come see me and we can disscuss the options.

Normally, there will be a brief online quiz given each Tuesday (unless there was an exam the Thursday before). <u>This includes the last week of classes.</u> The lowest <u>single</u> quiz grade will be dropped from your final semester quiz average. These quizzes will be available on the WyoCourses site on Tuesday from the end of the class period until 6 PM Mountain Time. **A missed quiz or exam cannot be made up without a University Excused Absence.**

Programming Assignments: Programming assignments will be given on a weekly basis. Typically, assignments will be made available on-line on Tuesday and will be due by Midnight on Friday. Submission of work will be electronically via the COSC 1030 Course website on WyoCourses. Credit for late submissions will be reduced at the rate of 20% per 24 hour period late (e.g., if you submit at 00:01 am on Saturday, the maximum you may receive is 80%). A programming assignment **will** be due during the last full week of classes. **No assignment will be accepted more than 48 hours late.**

Laboratory: Attendance at and Completion of all laboratories is <u>required.</u> You **MUST** attend the lab section in which you are enrolled. If you have a University excuse for absence during a lab time, arrange with your instructor/TA to attend a different lab section for that week only. The only thing that will change is the due date of the lab submission.

An unexcused absence from lab will result in a grade of 0 for that lab. Labs will meet weekly, beginning the first week of class. Lab assignments must be turned in electronically to the COSC 1030 WyoCourses site no later than **24 hours** after the end of the given lab session. **No lab submissions will be accepted after the 24 hour period.** A lab assignment **will** be due during the last full week of classes.

Course Website and Email: Course materials (including this syllabus, programming assignments, laboratory procedures, and examples from lecture sessions) will be posted on the WyoCourses course site. It is expected that you you will check your email regularly for changes to the schedule, feedback for electronically submitted assignments, and for notice of updates to online resources. Each student should check their UW registered email address frequently. If you are primarily using a different email address, then forward your UW email to the address you check regularly. (See the IT web at https://uwyo.teamdynamix.com/TDClient/KB/ArticleDet?ID=7456). Note that if you are unfamiliar with WyoCourses, you should see www.uwyo.edu/wyocourses/ and select the "Students" tab. You can change the the way (including different email or text messaging) you are notified from your settings.

Tutoring Tutoring is available in this class at the STEP Tutor Center. STEP is open Sunday-Thursday from 5-9pm and is located in Coe Library. Sessions are drop in (no appointments) and are 30 minutes in length. STEP has also opened a Satellite Tutor Center in the basement of Washakie and has online tutoring available as well. Please watch your email for details about all of these services.

Students who use academic resources (like tutoring, Supplemental Instruction, office hours, etc.) for at least 3 hours/semester see improvements in their grades.

Please visit the STEP Tutor Schedule for days and times: www.uwyo.edu/step. STEP opens Sunday, September 9th.

Academic Dishonesty: See "Classroom Climate & Conduct" link on course pages.

Collaboration and discussion are acceptable, but you MUST do your own work. This especially covers the programs that you will write. The grade you receive must represent your effort and achievement not that of others. Anything else is unfair to you and to your fellow students.

Attendance: Attendance at the lecture is highly recommended as not all material will come from the text. (see further UW Regulation 2-108) **Failure to attend lab session will result in a 0 for that lab, regardless of whether you complete the assignment or not.**

Students with disabilities: See "Learning Tools" link on course pages.

COVID-19 Policies:

The University has not recently updated the Campus COVID-19 policy. Check current policy, guidelines, and resources for updates. Basically, STAY HOME IF YOU ARE SICK.

Early Alert:

Approximately 6 weeks into the semester you can view a progress report in Wyoweb for your classes. When you click on the Students tab in WYOWEB, you will see Quick Links on the left side bar, go to EARLY ALERT grades. You will see either a P for pass, or a D or F grade for each of your courses. If you have withdrawn from the class you will see a W. Be sure to talk to your instructor if you have a D or F grade. Remember, this is a progress report–not a final grade! This is an ideal time to visit with your instructor and/or your advisor to talk about your options and avenues for support in the class (call 766-2398 for the Center for Advising & Career Services).

Suggestions: Some recommendations for study which you should consider are as follows. . .

- **Don't miss class.** New material is covered each lecture, including methods and concepts which are not covered in the course text. The course moves very quickly.

You can't afford to miss class.

- **Read in advance.** The reading assignments are detailed on the WyoCourses site. It will be assumed that you've read the pages described before the lecture session. **The text contains a significant number of self-review exercises and lots of sample code, you should be covering all of the associated elements in the prescribed reading sections.**

- **Play with the sample code.** Sample program code used in lecture will be provided on the WyoCourses course site. Download the code, compile, run, experiment.

- **Don't ignore the quizzes, labs and programming assignments.** They comprise a total of 60% of your grade. You <u>cannot</u> pass by only taking the exams and quizzes.

- **Get your "hands dirty" with the code.** You must become comfortable with programming, testing, debugging, re-testing.

Other Information: The use of cell phones, pagers, and other devices that beep, ring, etc. is prohibited in class. They must be turned off or set to "silent". Text messaging is extremely distracting so please wait until after class to reply to or check your messages. I know many of you like to use laptops and tablets in class, but please, only take notes, do not do homework for other classes, or watch videos. You do not get credit for simply attending and if you are not paying attention, you are not getting the material.

- Office hours are kept for the benefit of the students. They are intended to be set times when the instructor is available in his office to answer questions, discuss course material and provide help. If I will not be available for office hours, you will be notified as much in advance as possible. There are times when this may have to be a note on my door. If you wish to come by outside of scheduled hours, please feel free. I will not guarantee that I can talk to you but we can make arrangements for some other time when I am available. You can also call or email. I have an "open-door" policy: that is if the door is open regardless of the scheduled time, ask questions. I may tell you I am busy but I will NOT be upset at you for stopping by.

- I do not often read email in the evenings and on weekends. I do have my machine on all the time I am in the office and unless I get absorbed in something, I read and answer my email all day. But, do not plan on an immediate answer. I will read and answer as fast as I can but there are no guarantees.

This Syllabus: This document is subject to change. Any changes will be communicated to the students in a timely manner via WyoCourses per UW Regulation 2-117. No changes involving grading will affect assignments already given at the time of the change. No changes in assignment due dates will affect current assignments if such change causes the assignment to be due earlier than originally indicated.

Last Update: August 28, 2023