

Spring 2023 CS 2263 Syllabus

Advanced Object-Oriented Programming

Course Description: Advanced software development with an object-oriented focus. Design, implementation, and testing of several large programs using current technologies. Includes a discussion of the philosophy, application, and examples of object-oriented concepts and techniques; comprehensive survey of software engineering design patterns. Prerequisites including transitivity: CS 2235, CS 1181 and Math 1143.

Meeting time and place: 9:30-10:45 TTH Pocatello: BA302 Idaho Falls Tingey 282

Instructor: David V. Beard, PhD, Professor of Computer Science.

208.282.2684 Col Hall 232 beard@isu.edu

Office hours: 11:00-11:30 TTH. I am generally available any time, so send me some email. If I cannot address your issues over email, We can setup a meeting.

2263 Tutor – Colonial Hall Room 230 or email for a zoom:

Samuel Morrison <morrism2@isu.edu> 8:00-10:00 MW 12:00-2:00 Tues

Ian Gonzalez <iangonzalez@isu.edu> 4:00-6:00 Tues and Fri

Textbook(s), notes and videos: Required: Pro C# 9 with .NET 5: Foundational Principles and Practices in Programming 10th ed. Edition, or any good C# book (e.g. Deitel) that covers windows forms and visual studio 2022. [Help with Moodle](#) [Zipping and UnZipping Files](#)

Software and course tools: the course will use C# Windows Forms projects using the **Visual Studio 2022** environment. All CS2263 students are either CS majors. Minors, or doing the CS cybersecurity certificate and this is the third or fourth CS course you have taken. I assume you have sufficient skills with computers to install and run emulators, windows, and the free visual studio programming environment used in the course, and also interact with Moodle, zip files, use email to interact with faculty and graders, etc. The course is run through moodle and all homework must be submitted through Moodle.

The tutor/grader(s) and I provide extensive office hours and you can ask questions in the class or using the “muddest forum.” On the moodle page. At the risk of sounding cliché, the only dumb question is the one you do not ask. I will be giving you assignments that initially you may not think you can manage - this is how you learn computer science. So, start early, and ask questions in class, through email, the forums, and by stopping by during office hours. This is a classroom course, not asynchronous online. Students are expected to attend all classes. Class attendance will be a factor in your final grade.

The following, while not required for any particular assignment, may prove useful:

[Writing Code to Be Readable](#) - A guide to basic style

[Pick a Naming Convention](#) and Stick with It - Good names are the best way to document your intentions

[The Importance of Whitespace](#) -Why consistent formatting is a key aspect of maintainability

On Writing Secure Code (

[Programmer vs computer scientist what every programmer should know about modern memory \(bit "dick and jane" but useful \)](#)

Grammar is

important: http://online.wsj.com/article/SB10001424052702303410404577466662919275448.html?mod=WSJ_hp_mostpop_read

Course Projects and Exercises: All projects and exercises are provided on the moodle page for the course. All homework must be turned in using Moodle with the Moodle time stamp used to determine submission date/time. Assignments should be submitted as a zipped project file and/or .doc or .cpp file as per the descriptions in the exercises or projects. (If I cannot run them visual studio 2022 on my windows 10 machine, I will give the assignment a 0) Be sure to submit the complete visual studio project including the .sln file and make sure all the code and files you are using are inside the zipped folder, not elsewhere on your machine.

Assignments must conform to variable and object naming standards and all other coding and documentation standards. Project and exercise grades may be reduced up to 20% for poor coding style. Grading on each assignment is based on the rubric provided. Use inter-cap names. I expect highly-descriptive variable, method, and class names with each class and method having a block comment with your name, date, and a single sentence without “ands” or “ors” that describes the goal or purpose of the method or class. Methods should be fairly small, typically fitting onto a single screen with no more than 3 nested loops, IFTHENELSE, etc. Classes generally should not be more than 2 pages or so.

Grading policy

Late Policy: If you get behind in this course you will have trouble catching up. Thus, late assignments are reduced by %2 per hour with homework more than 48 hours late not accepted. It is essential that you start homework when it is assigned, not the night before it is due.

Tests: There will be 2 paper and pencil tests: 1) an in-class midterm and 2) a final, held during finals week. The Pocatello class tests will be held in the classroom. The Idaho Falls tests will be held the ISU Idaho Falls testing center. Weighting of the test and exercises/projects are given below. You must average 60% or higher on the midterm and final to be eligible to earn a C- or above grade for the course, unless the professor sees significant improvement throughout the semester. In other words, unless you average a 60% or higher on the midterm and final, your course grade will be at most a D. This is intended to discourage obtaining excessive external help on assignments, since students cannot be prepared for exams without doing and understanding the assignments. The test covers all the material in the course up to the time of the test. Project and exercise values are weighted by the number of weeks given for the assignment; thus a 2-week assignment weighs twice that of a 1-week assignment. Exercises are weighted ½ of projects, so a 1-week exercise is weighted ¼ of the amount of a 2-week project. Note that the while the Moodle grade sheet does provide a concise listing of your course grades, it not correctly account for project, exercise, and test weighting.

Tests are closed book closed note, but you may have one 3"x5" card on which you may write anything. No backpacks or other bags are allowed in the room during the exam. No cell phones, computers, laptops, tablets, notepads, devices capable of creating an image, calculators, or any devices containing a cpu and memory are allowed in the room during the exam. Possession and/or use of such objects during a test will be considered cheating and grounds for failing the course. Note that a slide rule is allowed. If you contact anyone except the instructor during the test or use an electronic device or leave the testing room without turning in your test you will receive a zero. Students are required to produce their ISU photo ID card to take the test.

Midterm and Final	50%
Projects and exercises:	50%

Collaboration and Cheating: Students are encouraged to use the provided online forum to help each other understand new concepts and techniques, for help installing and working with visual studio and other tools, to locate information, to begin to use new concepts, and for collaborative help (only) in doing the assignments.

There is a fine but clear line between collaboration and cheating. Collaboration does NOT include duplication of assignments or designs. Someone else writing part or all of your solution, or copying of any portion of an assignment, regardless of the number of editor changes, renaming, and/or retyping, is considered cheating, and a student's inability to describe the function of an assignment will be considered clear evidence of cheating. Providing another student with part or all of a solution is cheating. Copying part or all of your solution's code or other answers off the internet is cheating. Providing solutions to someone else is considered cheating. Referencing the location from which you copied part of all of your solution is still cheating and that includes using "libraries" that contain the code you are copying. Copying off of someone else's test or bringing a forbidden item into the testing room or otherwise not following the exam rules will be considered cheating. Anyone assisting you during a test is cheating. Cheating will result in failing the course. ISU Policy 4000, Academic Integrity and Dishonesty Policy, can be found at <http://www2.isu.edu/policy/4000/index.shtml>. If the assignment indicates you are supposed to use a provided class or other code and you do not use that code but instead using an alternate approach to the assignment, it will be given a grade of 0.

Our program is committed to all students achieving their potential. If you have a disability or think you have a disability (physical, learning disability, hearing, vision, psychiatric) which may need a reasonable accommodation, please contact Disability Services located in the Rendezvous Complex, Room 125, 282-3599 as early as possible.