

# CS 221: Object-Oriented Design & Programming I

Spring 2023

**Instructor:** Michael P. Rogers  
**Office:** Halsey 214  
**Office Hours:** MWF 2:00-3:30 PM, Tu 3:15-4:00 PM, Other hours by appointment  
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**Class Times:** MWF 9:10-10:10 AM (MW, Halsey 309; F, Halsey 101C)  
**Credits:** 3

**Description:** A first course in computer programming, problem solving and software design using an object-oriented language. Programming topics include: data types and variables, assignment and expressions, standard input/output, branches/selection, repetition, arrays, functions/methods, and objects. Problem solving and software design techniques include: algorithm development and pseudocode, debugging, and UML class diagrams.

**Prerequisites:** A grade of C or better in Math 104 or Math 108 or Math 206 or Computer Science 142, or qualifying for Math 171 via the Mathematics Placement Exam

**Course Website:** if it happens in this course, it will be posted on UWO's [Canvas](#) site. [Set up notifications](#) to be alerted when announcements are posted, new assignments, quizzes, or notes are posted and graded, etc.

**Required Textbook:**

COMP SCI 221: Object-Oriented Design and Programming I, Online book by Zybooks.

**Subscription Instructions:**

1. Sign in or create an account at [learn.zybooks.com](http://learn.zybooks.com)
2. Enter zyBook code: UWOSHCOMPSCI221RogersSpring2023
3. Subscribe. A subscription is \$58 and will last until the end of the semester.

**Course Outcomes :**

Upon successful completion of the course, students will be able to:

1. Choose appropriate existing data types to represent data.
2. Control sequential program execution with selection and iteration constructs.
3. Manipulate collections of data using arrays.
4. Create and use methods to organize and re-use code.
5. Create and use new classes to model new data types.
6. Reason about algorithms to solve problems and convert an algorithm into programming language instructions.

### Grading Criteria:

Category	%
Exams (3)	45
Labs	15
ZyBook - Participation & Challenge Activities	10
Projects	25
Quizzes	5

While ZyBooks is nominally only 10 % of your grade, statistics indicate that overall grade performance in this class is highly correlated with the amount of time you spend with it.

### Grade Scale:

%	≥ 92	90-92	88-90	82-88	80-82	78-80	72-78	70-72	68-70	62-68	60-62	< 60
Letter	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

**Grade Disputes:** If there is a mistake in your grade (an inappropriate assessment, math mistake, etc.), you must let your instructor know **within 1 week** of when the assessment was returned if you wish it to be regraded.

### Exam Dates (tentative, subject to change):

Exam 1 - March 8

Exam 2 - April 19

Exam 3 - May 12

**Late Policies:** Douglas Adams once said, "I love deadlines: I love the whooshing sound they make when they fly by". Hopefully you'll agree with the first part, and not the second, but regardless the policies are as follows:

1. Exams - If you are unable to make an exam, a) let me know in advance, via email, and b) provide justification (a note from medical professional who treated you, or a representative from the Dean of Students Office).
2. Labs, ZyBook Exercises - **late labs and ZyBooks exercises will not be accepted** (plan accordingly!)
3. Projects - you will be provided with 3 virtual "Whoosh" cards at the beginning of the semester. Each can be redeemed in exchange for an extra day for a project. Do not squander them - late projects will not be accepted without a Whoosh card.

**Absences:** It has been scientifically proven that the most significant factor for predicting student success is attendance (although whether this is truly causation or merely correlation is another question). Students should attend each and every class, and notify the instructor ahead of time if you will be absent. Attendance may be taken and factored into the Participation category.

**Academic Integrity:** The purpose of this course is to teach you in particular about Java programming, and more generally how to think, how to *problem solve*. For that reason, the work that you turn in must be your own. Note that the goal here is not to force you to work in a

complete vacuum: you may have *general* conversations with students to clarify the nature of an assignment, and you can ask for help with debugging, but that second-set-of-eyes-student should not be looking at their code while they assist you.

Sometimes students are unaware of whether or not they have committed plagiarism, but here are some tips:

1. if your problem solving begins with ctrl-C and ends with ctrl-V, you have committed plagiarism.
2. if your problem solving starts at Google and ends at Chegg, you have committed plagiarism.
3. if your problem-solving involves surreptitiously glancing at the exam of the student next to you and doing a *virtual* copy-and-paste, you have committed plagiarism.
4. if that tiny voice inside your head, the same one that inconveniently shuts up entirely while you are working on a tricky assignment, starts making "ahem" noises, you have committed plagiarism.

Let us consider the pros and cons of committing plagiarism.

Pros:

1. You have completed the assignment. Rah!

Cons:

1. You will have missed that exhilarating, ego-boosting, delicious "aha!" moment that everyone experiences when they have, on their own, solved a difficult puzzle.
2. You will be caught, receive a 0 on the assignment/exam, and may face disciplinary action in front of a bevy of grim-faced administrators who you do *not* want to meet.
3. You won't *know* anything!

So what do you do when you can't solve a problem? The answer is simple, ask your instructor (or lab assistant) for help. We will use the time-tested Socratic method, asking questions that will lead you to the correct answer. Failing that, just write "I have no idea" in bold letters in the comment block at the top of the assignment, turn it in, and you will gain *some* points (more than 0).

Exams and quizzes are to be done entirely on your own. These are closed book, closed notes, because this material is so absolutely fundamental that you **must** have it at your fingertips. See the Dean of Students Office web page [for more information](#).

Also, for an even more detailed discussion of what constitutes academic misconduct, please see the discussion of [UWS Chapter 14, Student Academic Disciplinary Procedures](#).

**Accessibility:** Your instructor is committed to ensuring a fair playing field. If you have a disability and need assistance (e.g., a note taker, certain seating, extra time to take tests, adaptive technology, etc.), please register with the Accessibility Center, and we work hard to accommodate your needs.

**Non-discrimination and Anti-harassment:** Your instructor is committed to maintaining a harassment-free, welcoming classroom, and to that end will not tolerate discrimination on the basis of race, religion, creed, color, sex, gender, identity/expression, ancestry, national origin, age, marital status, preferences in streaming services (just snuck this in to see if anybody's reading :-), relationship to other employees, sexual orientation, disability, veteran's status, membership in the military, arrest/conviction record, political affiliation, or any other protected status.

**Feedback:** Your instructor thrives on feedback. If a concept doesn't make sense, ask, and if the answer didn't make sense, ask again! There are no stupid questions (and any stupid answers are my responsibility 😊). It may seem intimidating to put yourself out there and admit that you don't understand something, but:

1. if you didn't understand something, there is a good chance that your peers didn't either, and they will (silently, or better yet, by banging on desks like they do in parliament) applaud your act of inquiry
2. you needn't worry about "slowing down the class". Learning never slows down anything.
3. your instructor is intimately familiar with being in situations where things don't make sense: you will receive a very sympathetic hearing.

If you do feel uncomfortable asking in class, please inquire during office hours or on our Discord server.

**Consumer Protection Required Disclosure:** Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990: <https://uwosh.edu/financialaid/resources/consumer-information/>