OTTERBEIN UNIVERSITY

Syllabus
COMP 1600-01
Introduction to Programming

## *Fall Semester 2023*

Basic Information

Credits: 4.0
Time: **MWF** 9:10 – 10:05 a.m. (Lecture)
TR 9:55 – 11:15 a.m. (Lab)
Location: Point 113

Instructor Information

Name: Dr. Barry Wittman
E-mail: wittman1@otterbein.edu
Office: Point 105
Phone: (614) 823-2944
Office hours: **MWF** 1:45 – 3:00 p.m.,
WF 4:00 – 5:00 p.m.,
TR 1:00 – 4:00 p.m.,
and by appointment

Text Book

Barry Wittman, Aditya Mathur, and Tim Korb
Start Concurrent: An Introduction to Problem Solving in Java with a Focus on Concurrency
Available: https://start-concurrent.github.io
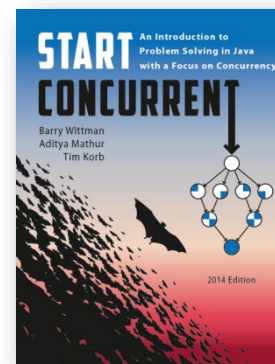
Course Catalog Description

A first course in computer programming for computer science majors. Structured and object-oriented programming in Java or a similar programming language. Algorithmic problem solving, control structures, methods, and language syntax and semantics; types, arrays, objects, classes, interfaces, encapsulation and polymorphism; exceptions, library classes, file I/O, and graphical user interfaces.

Student Learning Outcomes

By the end of the course, students will be able to:

I. Apply knowledge of computing and mathematics, including common data structures and basic algorithms, to solve problems
II. Design, implement, and evaluate a computer-based system, process, component or program to meet desired needs
III. Describe fundamental principles of the cycle of designing, implementing, compiling, and testing code
IV. Learn to adhere to standards of style and documentation
V. Develop an understanding of data types and basic operations in an object-oriented programming language
VI. Use inductive or deductive reasoning to formulate solutions to problems
VII. Model real-world phenomena mathematically and computationally
VIII. Manipulate strings
IX. Use basic I/O constructs
X. Apply Boolean algebra and selection statements to problem solving
XI. Apply loop statements to problem solving
XII. Apply methods to improve code design
XIII. Apply arrays to store aggregate data for problem solving
XIV. Use procedural and object-oriented programming paradigms

Program Learning Outcomes

The Computer Science major has a set of 10 Student Learning Outcomes (SLOs). Work in this course contributes to the following SLOs:

2. Students can methodically solve algorithmic problems in at least one programming language.
3. Students understand the recurring themes of abstraction and computation.
4. Students are proficient in a software development paradigm.

Method for Determining Course Grade

The final grade for this course will depend upon the grades and scores earned on course components weighted as follows:

35%   Five individual projects weighted as follows:

Project 1:	5%	Tentatively due:	09/08/2023
Project 2:	6%	Tentatively due:	09/29/2023
Project 3:	7%	Tentatively due:	10/20/2023
Project 4:	7%	Tentatively due:	11/10/2023
Project 5:	10%	Tentatively due:	12/01/2023

15%   In-class labs
5%   Pop quizzes
30%   Two equally weighted midterm exams

Exam 1:	Tentatively scheduled for 09/18/2023
Exam 2:	Tentatively scheduled for 10/30/2023

15%   **Final Exam:**   Wednesday, 12/06/2023 from 8:00 – 10:00 a.m.

Grades will be computed by rounding numerical percentages to the nearest integer and applying the following table:

A	93-100	**B-**	80-82	**D+**	67-69
A-	90-92	**C+**	77-79	**D**	60-66
B+	87-89	**C**	73-76	**F**	0-59
B	83-86	**C-**	70-72		

Grades for each project, assignment, quiz, and exam will be recorded in Blackboard. Students may compute their current average by using these scores with the weights listed above.

COVID-19 Related Responsibilities

We are relying on our Cardinal Community to help us stay healthy and stay strong so we can stay together. Otterbein is currently a mask-optional campus. This means masks are optional for all individuals on campus, regardless of vaccination status. While individuals are no longer required to wear masks on campus, they are welcome to wear one if they choose. Otterbein is a mask-friendly campus. We support those who choose to continue to wear a mask or need to wear a mask due to health concerns. If you are sick, do not come to campus. Perform a daily self-assessment and if you are not feeling well, stay at home and call your doctor if necessary.

You can find COVID-related FAQs and any updated information here.

Attendance and Participation Policy

Attendance is expected of every student at every lecture and lab. Students are responsible for all content covered in class as well as assigned book chapters. Students should come to class with their text books, having read the material to be covered that day. Students who have not prepared for class may be asked to leave. Due to their nature, pop quizzes cannot be made up.

Students are expected to attend in-person class sessions as indicated on the schedule. However, if a student is not feeling well and especially if that student is exhibiting the signs of COVID-19, that student should not come to the in-person class session that day. To catch up on work, students should visit the instructor during office hours or another scheduled meeting time.

Except in the case of documented emergencies, neither exams nor in-class labs can be made up afterwards. For excused absences, students must arrange to take the exam or do the lab before the normally scheduled time. Arrangements should be made with the instructor at least two weeks prior to the scheduled time.

Students are expected to maintain an attitude of respect at all times toward their colleagues, the equipment, and the instructor. Students are expected to refrain from using the computers for non-course related purposes during class time and will be penalized 1% of the final grade for each occurrence. Mobile phones and similar devices should be turned off before entering the classroom. Students who use offensive language, misuse computing facilities, or are otherwise disruptive of the classroom will be asked to leave.

Expectations for Out-of-Class Work

Projects

All projects are individual projects in this course. Each project must be uploaded into Blackboard. If the project is late, the student will receive a score of 0. All project submissions must follow the provided file name requirements or risk a score of 0. **If the project does not run, the student will receive a score of 0.**

Projects will be graded based on the following criteria:

1. **Correctness:**   Finding the right answer
2. **Formatting:**   Displaying the right answer according to instructions
3. **Style and Documentation:**   Producing readable code with appropriate comments

Late projects will not be accepted, with the following exception. Each student has 3 grace days. These grace days may be used together or separately to allow a 24-hour extension of the project

deadline per grace day. A student wishing to use a grace day must inform the instructor via e-mail *before* the normal deadline and make arrangements to turn the project in before the new deadline.

Under no circumstances should any student look at the code written by another student. Tools will be used to detect code similarity automatically.

In-class Labs

All labs are to be done individually, in class, with the assistance of the instructor. Each assignment will be given near the beginning of a class and must be uploaded to Blackboard before the end of the class. Exercises submitted after class is over will not be accepted. To receive full credit, a programming assignment must run, but partial credit will be awarded based on the understanding of the material demonstrated by the student's code.

Academic Honesty

Academic dishonesty includes cheating, complicity, falsification, multiple submission, and plagiarism. To understand better what each of these kinds of dishonesty entails, see the full statement on Academic Dishonesty in the *Campus Life Handbook*, beginning at the bottom of page 47.

All cases of suspected Academic Dishonesty will be forwarded to Academic Affairs. To learn more about the process, see the above cited section of the *Campus Life Handbook*. Academic Dishonesty may result in automatic failure of the assignment or the course itself, or even suspension or expulsion proceedings.

You are plagiarizing when you:

- Copy material from a source without using quotation marks and proper citation.
- Follow the movement of the source, substituting words and sentences but keeping its meaning, without citing it.
- Lift phrases or terms from a source and embed them in your own prose without using quotation marks and proper citation.
- Borrow ideas (that are not common knowledge) from a source without proper citation.
- Turn in a paper wholly or partially written by someone else.

If you are uncertain about when and how to cite sources, or what is allowable in completing assignment and exams, please speak with your professor.

All projects must be completed by students individually, without assistance from anyone other than the instructor. Students can discuss the course material with each other, but all work must be done individually. For projects, exams, labs, and all other activities in the course, students are expected to act according to the official policy on academic dishonesty and the highest standards of personal integrity.

Although generative AI tools like ChatGPT are impressive, they must not be used to write any code that a student is expected to turn in for this class. ChatGPT may be used to explain existing code or to suggest improvements for code but only *after* the project or lab in question has been turned in. Students who do not write code themselves have missed the opportunity to gain the skills of logical problem solving and translation to a formal programming language that are essential for computer scientists.

For the first infraction of academic honesty in this course, the instructor will seek a penalty of a 0 for the project, lab, or exam in question and a reduction of a full letter grade in the final grade. If a second infraction occurs, the instructor will seek the maximum penalty possible under the University's regulations.

Statement on Credit Hour Definition/Expectation for Student Work

For each credit hour of classroom or direct faculty instruction, students are expected to engage in two hours of out-of-class course-related work (readings, homework, studying, project preparation, etc.). A three-credit-hour course requires six hours per week of out-of-class work. These expectations are the same for blended and online courses, with some or all of the direct faculty instruction occurring online instead of in a classroom.

Nondiscrimination at Otterbein

Otterbein University is committed to providing a welcoming environment free from unlawful discrimination. To this end, the University prohibits any form of discrimination against any person on the basis of race, color, sex, gender, pregnancy, religion, creed, marital status, partnership status, age, sexual orientation, gender identity, gender expression, national origin, disability, military status, or any other legally protected status in its programs and activities. All Otterbein faculty and staff share in the responsibility to create a safe learning environment for all students and for the campus as a whole. Students who believe they have been discriminated against should contact the Office of Human Resources, (614) 823-1805 / hr@otterbein.edu.

Any person may report sexual harassment, sexual violence, dating violence, and stalking by contacting Julie Saker, Deputy Title IX Coordinator at (614) 823-1154 / jsaker@otterbein.edu.

If a student would prefer to share information about sexual harassment, sexual violence or discrimination to a *confidential* employee who does not have a reporting responsibility, they can contact the Counseling Center, (614) 823-1333 / counseling@otterbein.edu, or the WGSRC Peer Advocates, wgsrc@otterbein.edu.

Information about these policies can be found here.

Disability Services

The University has a continuing commitment to providing access and reasonable accommodations for students with disabilities, including mental health diagnoses and chronic or temporary medical conditions. Students who may need accommodations or would like referrals to explore a potential diagnosis are urged to contact Disability Services (DS) as soon as possible. DS will facilitate accommodations and assist the instructor in minimizing barriers to provide an accessible educational experience. Please contact DS at DisabilityServices@otterbein.edu. More info can also be found here. Your instructor is happy to discuss accommodations privately with you as well.

Counseling Services

Given the level of uncertainty about issues related to COVID-19, many students might experience feelings of threat, fear, and uneasiness. For extra support – in the way of just being able to verbalize your feelings to an interested outsider, gaining some reassurance and validation of your feelings, making plans to move forward optimistically and safely – reach out to any staff. Otterbein staff want to provide not only respect but also verbal and emotional support and encouragement. The Counseling Center can be reached at (614) 823-1333. You can also call or text 988, the Suicide and Crisis Lifeline of Ohio, for 24/7 access to a mental health professional.

Academic Support Center

The Academic Support Center (ASC) helps students develop and strengthen the skills necessary to attain their academic goals. They support student learning and success through: tutoring, teaching, disability services, and academic coaching. All services are free for Otterbein students. Their purpose is to help students be academically successful. Please contact them to request a tutor or learn more about the ASC by calling (614) 823-1610 or visiting the ASC website.

Library Services

The Courtright Memorial Library provides a broad range of services and resources, from color printing and a game collection to 24/7 access to more than 220 scholarly databases and e-books here. On-campus students can access in-person help, quiet study spaces, and open computer labs during the library's open hours.

Students can also access the many e-textbooks on reserve by clicking the Course Reserves tab on the library web page or find help for a specific subject area by searching LibGuides.

Need more help? Students can chat with a librarian by clicking the Ask Me tab on the right side of the library homepage. Students also may e-mail the library at library@otterbein.edu. For in-depth research help, make an appointment for a virtual research consultation with your personal librarian.

Tentative Schedule

The following is a tentative schedule of the topics to be covered in each week. This schedule is subject to change as need dictates. Students will be informed of changes by the instructor in class. A schedule will be kept on the course webpage.

Week	Starting	Topics	Chapters	Notes
1	08/21/23	Introduction	1 and 2	
2	08/28/23	Primitive data types	3	
3	09/04/23	Basic operations	3	Project 1 Due
4	09/11/23	Conditionals	4	
5	09/18/23	Loops	5	Exam 1
6	09/25/23	More loops	5	Project 2 Due
7	10/02/23	Arrays	6	
8	10/09/23	Static methods	8	October Break
9	10/16/23	Advanced method use	8	Project 3 Due
10	10/23/23	Classes and objects	9	
11	10/30/23	Custom classes	9	Exam 2
12	11/06/23	Searching and sorting	Notes	Project 4 Due
13	11/13/23	Image processing	Notes and 11	
14	11/20/23	Advanced topics	20	Thanksgiving
15	11/27/23	Review	All	Project 5 Due