

Introduction to Computer Science and Programming

COMP SCI 142 - Fall 2022

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Office: 2816 @ UWO Fox Cities Campus

Office Hours: MWF 2:00-3:00pm by virtual appointment

Lecture: MWF 11:30-12:30 Fox Cities Main Building 2819

Lab:

Prerequisites: Mathematics 103 with a grade of C or better, or qualifying for either Mathematics 104 or Mathematics 171 via Math Placement Test.

Required Textbook: *A Balanced Introduction to Computer Science*, Third Edition, David Reed, Prentice Hall and (*Optional*) *JavaScript Absolute Beginner's Guide*, Kriupa Chinnathambi, Que.

Course Website: UWO Canvas - (<http://canvas.uwosh.edu/>) you should check the UWO Canvas on a regular basis - it will contain lecture notes, handouts, assignments, announcements, and grades. I'll do my best to let you know when something new and important comes up, but it is your responsibility to check the course web site frequently for information that you might not get otherwise.

Note: If you have special needs, please do come and talk to me at the end of the first class.

Current Catalog Description:

In this course, students will be introduced to the science of computing. The history of Computer Science, Elementary computer organization, big ideas in computing, algorithmic problem solving, and introductory programming concepts will be discussed. Programming concepts include data types, expressions, input/output, conditional statements, repetition, data processing, procedures and basic object-oriented principles. Programming concepts will be taught through the use of a specific programming language. The course assumes no previous programming experience.

Course Outcomes:

At the end of this course, you will be expected to:

1. Identify the core areas and big ideas in computer science.
2. Describe the difference between an algorithm and a computer program.
3. Identify the main components of the von Neumann architecture.
4. Describe the architecture and major components of a web application in a client server environment.
5. Given a description of a problem, apply the problem-solving steps used in computer programming to create a solution design.
6. Working from a solution design, implement a solution to a problem as a JavaScript program that runs in a web browser such as Firefox or Chrome or Edge.
7. Select the appropriate data types when implementing a solution to a problem using JavaScript.

8. Identify and implement selection control structures using if, if-else, and if-else-if statements in JavaScript.
9. Identify and implement repetition control structures using loops in JavaScript.
10. Identify and implement functions in JavaScript.
11. Design an HTML form for collecting user input with validation in JavaScript.
12. Process an array or collection of items in JavaScript.

Course Grading Policy:

Your final grade for this course will be based on four components, namely exams, programming projects, homework and class participation. Your overall numerical grade for the course will be computed as the weighted sum of the component grades using the following weights:

| Component | Weight |
|---------------------------------|--------|
| Exams (3) | 45% |
| Programming Projects | 20% |
| Labs | 25% |
| Quizzes and Class Participation | 10% |

Tentative Exam Dates are as follows:

- **Exam 1 – Wednesday, 10/5**
- **Exam 2 – Wednesday, 11/2**
- **Exam 3 – Wednesday, 12/14**

Your letter grade for the course will be computed as follows:

| Numerical Score | Grade | Numerical Score | Grade |
|-----------------|-------|-----------------|-------|
| >=92 | A | 72-78 | C |
| 90-92 | A- | 70-72 | C- |
| 88-90 | B+ | 68-70 | D+ |
| 82-88 | B | 62-68 | D |
| 80-82 | B- | 60-62 | D- |
| 78-80 | C+ | <60 | F |

While this overall grading scheme is fixed, I will be happy to discuss any issue you may have with individual grades. If you notice a mistake or have a question regarding a specific grade, please come and talk to me *as soon as possible*. Do not wait until the end of the semester to bring up grading issues.

Project and Lab Deadlines:

Each lab will come with a deadline (day and time) by which it must be submitted. Late lab submissions will NOT be accepted.

Each project will also come with a deadline (day and time) by which it must be submitted. You are allotted *three* assignment credit days you can use through the semester. A credit

day is exactly 24 hours or less. You can use unused credit days to submit a project after its deadline, without penalty. Any project submitted after the deadline, plus any credit days you have unused, will receive a zero.

For example, if you have 2 unused credit days available and a project is due on Tuesday at 5:00PM, you can submit it anytime by exactly Thursday at 5:00PM without penalty. Do note that if you submit your project on Thursday at 5:01PM, you will be penalized 100% of the score of the project and thus receive a zero! Note also that if you submit your project on Wednesday at 5:01PM, you will be charged two credit days (but no penalty, obviously).

Attendance and Participation:

While attendance at lectures is optional, there will be frequent class participation exercises and unannounced quizzes to reinforce the material presented during lecture. You will, obviously, have to be present during lecture to get any credit for these. In summary, I do suggest that you not only attend **every** class meeting but also come **prepared** for and **participate** actively in it. I **strongly encourage you to ask any question** or raise any issue you have with the course either during or at the end of class, or during my office hours. I will also gladly meet with you by appointment.

Absences and Extensions:

Extensions on deadlines may be granted at the discretion of the instructor if you provide a valid justification (in the form of a written excuse from a medical doctor or the Dean of Students Office) **before** the due date.

If you miss a scheduled exam (tentative dates are provided), you **may** be able to take a make-up exam provided you give the instructor a valid justification (see above) ahead of time if possible. Only one make-up exam will be given. It will be a comprehensive exam scheduled at the end of the semester. Similarly, there will be no make-up quizzes unless the instructor is provided with a valid justification (see above) for your absence on the day of the quiz.

Disability accommodations

If you would benefit from any disability-related accommodations or assistance in this classroom, let me know as soon as possible and I will do everything I can to help. You will want to contact Disability Services (Dean of Students Office in Student Services) for the University accommodation request form and documentation requirements if you have not already done so.

“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/resoruces/consumer-information/>.”

Collaborating versus Cheating:

Unless otherwise stated in the assignment or project, all submissions must be entirely your own work. While it is acceptable to discuss the assignments at a high level (for example, at the design level) with others, you must submit your own work. **You may not “borrow” any piece of code or design of any length from someone else, the internet, or any other source, unless you can live with a zero and the other potential academic sanctions of cheating** (see [UWO Student Discipline Code 2016](#), Chapter UWS 14).

Academic Misconduct:

As a UW Oshkosh student, it is your responsibility to be informed about what constitutes academic misconduct, how to avoid it and what happens if you decide to engage in it.

Examples of academic misconduct include (but are not limited to):

- plagiarism (turning in work of another person and not giving them credit),
- stealing an exam or course materials,
- copying another student’s homework, paper, exam
- cheating on an exam (copying from another student, turning in an exam for re-grading after making changes, working on an exam after the designated time allowance)
- falsifying academic documents

Please refer to UWS Chapter 14 (University of Wisconsin Student Academic Disciplinary Procedures) for information on academic misconduct. Pay particular attention to UWS

14.03 (definition of academic misconduct) and UWS 14.04 (disciplinary sanctions). Please note that all incidents of academic dishonesty will be reported to the appropriate university authorities. It is not acceptable for two or more students to work together and turn in the same work unless the assignment is specifically a group assignment. In the case of a group assignment, groups are treated as a unit and 3th/3e sharing of work between groups is not permitted. Plagiarism is defined as the use of another's work without attribution. It is acceptable to use a published solution to a particular problem if the solution's source is documented. If you are using material from a published source or an organization's internal documents, that source must be documented or referenced. If proprietary materials are utilized, appropriate permissions must be obtained.

<https://uwosh.edu/deanofstudents/student-conduct/academic-misconduct/>.