



# COMP 121: Introduction to Programming in C for STEAM

Fall 2022: Section 01

Location: Sierra Hall 1222

Instructor: Jason Isaacs
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Office Hours: T 4-6 PM

## Course Description:

Introduces student to problem solving using algorithmic methods via procedural programming paradigm using a high-level language. Fundamental programming constructs are presented in a manner appropriate for students with no prior programming experience. The emphasis is on engineering and scientific applications, and includes programming and practical hands-on problem solving, as well as introduction to programming microcomputers.

## Student Learning Outcomes

By the successful completion of this course, you will be able to:

- Solve scientific, technology, engineering, artistic, and mathematical problems using algorithmic and structured approaches
- Develop algorithms using pseudocode, flowcharts, and other design methods
- Describe the basic procedural programming constructs of C/C++
- Design, implement, test, and debug C/C++ programs
- Utilize computing resources effectively, including allocation/deallocation of memory
- Use programming skills to solve a variety of numerical, mathematical, engineering, and scientific problems
- Use programming skills to program basic microcomputers.

## Learning Environment:

Each week will be a blend of lecture and lab. The first meeting of the week is a lecture and will cover new material. The second meeting period of the week will laboratory programming exercises. It is expected that students attend all class sessions and review the appropriate material prior to class.

## Grading:

The course grade will be determined by a weighted average of the following assignment categories.

### **Participation Activities – 10%**

- The online ZyBook contains a series of ungraded self-paced practice exercises that you can repeat as many times as you want. Grade is based on completion of assigned Participation Activities. Credit for reading the book!

### **Challenge Activities – 15%**

- The online ZyBook contains a series of repeatable graded exercises that are mixed into the contents of the book. If you miss the problem you are given a hint and offered a new similar question to answer.

### **Lab – 25%**

- It is expected that you will prepare for each lab day by completing the reading assignments, participation activities, and challenge activities prior to class. Lab sessions will consist of one or more programming exercises meant to allow you to practice the material from the lecture.

### **Exams –50%**

- All exams will be in-person and may be a mixture of theory related questions and programming assignments.
- No make-up exams will be allowed. Medical exceptions are possible with proper documentation.
- Exam 1 – Date: September 20, 2022, 2:00 PM to 3:50 PM
- Exam 2 – Date: October 25, 2022, 2:00 PM to 3:50 PM
- Exam 3 – Date: November 29, 2022, 2:00 PM to 3:50 PM

## Instructor Communication Policy:

I will make every effort to respond to your email questions within 24 hours Monday through Friday. However, I will not respond to emails outside of the hours 8 AM to 5 PM. If for some reason you have not received a reply after 24 hours, please feel free to email me again. I will not respond to your email after 5 pm on Friday until Monday morning.

## Recommended Materials:

### **Textbook Required**

Title: Programming in C with zyLabs

Author: Roman Lysecky and Frank Vahid

Publisher: ZyBooks

## Course Policies:

### Academic Dishonesty

- By enrolling at CSU Channel Islands, students are responsible for upholding the University's policies and the Student Conduct Code. Academic integrity and scholarship are values of the institution that ensure respect for the academic reputation of the University, students, faculty, and staff. Cheating, plagiarism, unauthorized collaboration with another student, knowingly furnishing false information to the University, buying, selling or stealing any material for an examination, or substituting for another person may be considered violations of the *Student Conduct Code* (located at <http://www.csuci.edu/campuslife/student-conduct/academic-dishonesty.htm>). Please ask about my expectations regarding academic dishonesty in this course if they are unclear.

If a student is found responsible for committing an act of academic dishonesty in this course, the student may receive academic penalties including a failing grade on an assignment or in the course and a disciplinary referral will be made and submitted to the Dean of Students office. Students are expected to familiarize themselves with the University *Student Conduct Code* at the following link: <http://www.csuci.edu/campuslife/student-conduct/academic-dishonesty.htm>). Please ask about my expectations regarding academic dishonesty in this course if they are unclear.

### Disability Statement

- If you are a student with a disability requesting reasonable accommodations in this course, please visit Disability Accommodations and Support Services (DASS) located on the second floor of Arroyo Hall, or call 805-437-3331. All requests for reasonable accommodations require registration with DASS in advance of need. You can [apply for DASS services here](#). Faculty, students and DASS will work together regarding classroom accommodations. You are encouraged to discuss approved accommodations with your faculty

### Attendance Policy

- Course attendance is mandatory. Two unexcused absences will result in a full-letter grade deduction, with a further ½ grade reduction for every additional absence.
- For absences with extenuating circumstances related to a medical condition or disability for which you may require reasonable accommodation, please refer to the Disability Statement.

### Late Work

- Assignments can be submitted late but will incur a 10% grade deduction for each day they are late. For example, if the assignment is due at noon on Thursday, if you turn it in by noon on Friday you will incur a 10% penalty, by noon on Saturday a 20% penalty, and so on.

### Course Policies Subject to Change

- It is the student's responsibility to check CILearn for corrections or updates to the syllabus. Any changes will be posted in CILearn.

## Tentative Schedule:

- Module 1 | Introduction to C | Dates: 8/23/22 - 8/25/22
- Module 2 | Variables and Assignment | Dates: 8/30/22 - 9/1/22
- Module 3 | Branches | Dates: 9/6/22 - 9/8/22
- Module 4 | Loops | Dates: 9/13/22 - 9/15/22
- Module 5 | Exam 1 | Dates: 9/20/22 - 9/22/22
- Module 6 | Arrays | Dates: 9/27/22 - 9/29/22
- Module 7 | User-defined Functions | Dates: 10/4/22 - 10/6/22
- Module 8 | Structs | Dates: 10/11/22 - 10/13/22
- Module 9 | Pointers | Dates: 10/18/22 - 10/20/22
- Module 10 | Exam 2 | Dates: 10/25/22 - 10/27/22
- Module 11 | Inputs and Outputs | Dates: 11/1/22 - 11/3/22
- Module 12 | Recursion | Dates: 11/8/22 - 11/10/22
- Module 13 | Searching and Sorting Algorithms | 11/15/22 - 11/17/22
- Module 14 | Additional Material | Dates: 11/22/22 - 11/24/22
- Module 15 | Exam 3 | Dates: 11/29/22 - 12/1/22