CIS-121-700 Computer Science I

Fall 2021

Instructor Name	Helen Wang	**Credit Hours**	4
Instructor Email	hwang@elgin.edu	**Room Number**	Online
Alternate Email	n/a	**State Date**	August 23, 2021
Instructor Phone	847-214-7498	**End Date**	December 16, 2021
Alternate Phone	847-214-7240 (Dean's Office)	**Meeting Dates**	Online
Office Location	F129	**Class Time**	Online

Office Hours

Monday	2:40 pm – 3:40 pm	**Online**
Tuesday	8:00 pm – 9:00 pm	**Online**
Wednesday	1:00 pm – 3:00 pm 8:00 pm – 9:00 pm	**Online**
Thursday	1:00 pm – 3:00 pm 8:00 pm – 9:00 pm	**Online**
Friday	1:00 pm – 3:00 pm	**Online**
Saturday	By Appointment	**Online**

Course Requirements

Textbook	Textbook: Problem Solving with C++ (10th edition) by Walter Savitch 2018. ISBN: 9780134448282
Course Pre-Requisites	Grade of C or better in MTH 098 or MTH 099 or in two years high school algebra or consent of instructor
Computer/Software Requirements	Access to a computer is required in order to visit the D2L course site. Microsoft Visio Studio as C++ Software environment Students will receive a Microsoft Azure account
D2L Requirements	Class information, all assignments, and required course content will all be posted on D2L. Students are expected to regularly check D2L and submit all assignments via D2L. You will use your AccessECC username and password to log on to D2L.
Other Required Materials	Access to MyProgrammingLab on Pearson is recommended.

* Note: This syllabus is subject to change, as needed, by the instructor at any time.

Course Description

This course is an introduction to computer programming, emphasizing a disciplined approach to problem-solving and algorithm development. Students will learn program design and structured programming techniques using selection, repetition, and sequence control structures. Topics will include storage and variables, procedural and data abstraction, parameter passing, arrays, data files, Object Oriented programming, program testing, documentation, and proper programming style.

Course Learning Outcomes

By the end of this course, students will:

- Students completing this course should be able to take a problem and outline a solution, describe the solution in steps, test the designs and then code and test the correctness of the solution.
- Students will use modular design and structured code in programming. Problems will use various data types and control structures, arrays, and data files.
- Students should be able to have a solid foundation in the most basic of programming concepts.
- Students should be able to make decisions and write the control structures in their programs by using relational operators, relational expressions and control the flow of a program with control statements.
- Students should be able to modularize programs, use functions and pass arguments.
- The students should be able to know how to use classes for file I/O stream.

Special topics coverage includes:

- Introduction
- Computers and C++ Programming Language
- Steps in program design
- Data storage
- Basic Programming Concepts
- Program control statements: decisions and looping
- Structured programming techniques
- Flowcharting and Pseudocode
- Design Looping
- Input/Output operations
- Arithmetic, Logical, and Boolean functions
- Conditional Structures
- Repetition structures
- Procedures and parameter passing
- Proper documentation and programming style
- File input/output
- Arrays
- Strings
- Object-Oriented Programming

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Grading Standards

Grading Policies and Procedures

The final grade will be based upon the percentage of points earned on your quizzes, programming assignments/exercises, final project and midterm/final exam which includes content from the course.

There will be approximately 14 short quizzes. The questions will cover materials from current topic.

There will be a Lab Exercises for every module. It will be used for learning of the lecture concepts by the completion the exercises.

There will be 5 programming assignments throughout the semester. Each will be a program that will use concepts presented in class. These assignments are published online at our course's D2L site (ecc.desire2learn.com). Any incorrect submission format will result in a failure on the assignment.

Programs that were obviously thrown together at the last minute will not be graded and will be returned with a 0 for a grade. Programs that do not compile will be returned with a 0 for a grade.

Each assignment will be graded on three aspects:
(1) Clarity and correctness of the solution and code.
(2) Clarity of the documentation (comments and variable name selection).
(3) Clarity and correctness of the program's output.

There will be Discussion questions every topic. Students will also be graded on participation in the class. To earn a full participation grade, you will be expected to contribute to class discussion on a regular basis.

Grading Summary Table

Graded Items	Percent
Lab Exercises	28%
Quizzes	10%
Assignments	18%
Midterm Exam	15%
Final Exam	25%
Discussion and Participation	4%

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Make-up Exam and/or Late Work

Exams may be made up if a suitable reason is provided for missing exam class periods.

Late programming assignments will be accepted with a 10% deduction for every day. It is late up to five days. After five days, late work will not be accepted.

Grading Scale

Letter Grade	Minimum Points / Percentage	Maximum Points / Percentage
A	90%	100%
B	80%	89%
C	70%	79%
D	60%	69%
F	0	59%

Mid-term & Withdrawal Dates

Mid-Term Date	The Week of October 18, 2021
The last day to withdraw from this course with a grade of W is:	Sunday, November 7, 2021

After the withdrawal date listed above, the only grades that will be assigned are A, B, C, D or F.

Important Dates

FALL SEMESTER 2021

Tues., Aug. 17 – Wed., Aug. 18..... New Full-Time Faculty Orientation
Thurs., Aug. 19 ..... College Convocation
Fri., Aug. 20..... New Student Convocation
Mon., Aug. 23 ..... Fall Semester Begins
Sat., Sept. 4 – Mon., Sept. 6..... All Facilities Closed: Labor Day (No Classes Labor Day Weekend)
Mon., Sept. 27..... 12-Week Fall Session Begins
Mon., Oct. 18 ..... 2nd 8-Week Fall Session Begins
5:00 p.m. Wed., Nov. 24 – Sun., Nov. 28 ..... All Facilities Closed: Thanksgiving Recess
Thurs., Dec. 16..... Fall Semester Classes End
Fri., Dec. 17 ..... Grading Day/Semester Ends
Sat., Dec. 18..... Graduation
Mon., Dec. 20 ..... Grades Due by 4 p.m.
5:00 p.m. Wed., Dec. 22 – Mon. Jan.3..... All Facilities Closed: Winter Recess

Classroom Policies

Attendance, Tardiness, and Student Illness Policy

* Note: This syllabus is subject to change, as needed, by the instructor at any time.

Students are expected to attend all classes in which they are enrolled and to know the attendance policy of each of their instructors. Under no circumstances should a student stop attending class without formally withdrawing. This can result in a failing grade on the student's permanent record. Attendance at the first class is expected. Registered students who do not attend the first day and do not contact the instructor may be dropped from the class for non-attendance.

Instructor's Attendance Policy	Weekly participation and assignments submissions.
Instructor's Student Illness Policy	Documentation is required.

Behavioral Expectations

Professional classroom behavior is expected during class. Students are expected to abide by the Elgin Community College Student Code of Conduct (see www.elgin.edu/codeofconduct). Any behavior that violates the conduct norms will not be tolerated. Professionalism consists of demonstrating a public persona that is suitable for the classroom. This includes

- attending all synchronous classes
- arriving on time
- handing in work on time
- having consideration and respect for others.

Academic Integrity

ECC strives to foster an environment of respect for and achievement of the highest levels of academic integrity for all members of its academic community. Academic integrity and honesty are essential hallmarks of the institution's contributions to the great society and cannot be abridged without considerable harm to those who must rely upon the intellectual pursuits of the institution.

Plagiarism, submitting someone else's work as your own, is a serious offense. Having a parent, spouse, classmate, or friend of your work, knowingly or unknowingly, accomplishes nothing except placing unreasonable demands on people who care for you. This includes work on assignments as well as tests and quizzes. Furthermore, plagiarism is easy for an instructor to spot. I reserve the right to give a zero for any plagiarized work including, but not limited to, assignments and tests. Repeated cases may result in a withdrawal from the class or a failing grade.

Academic Integrity (for information see www.elgin.edu/academicintegrity)

Course Outline and Schedule

Evaluation/Assessment Methods – Course Assignments

The grading rubrics and the point values assigned to each assignment will be posted on D2L.
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All lecture notes and course assignments will be available on D2L
All submissions will be made to the drop-box on D2L

Confused? Ask Questions Anonymously on Piazza!

This semester, we will be using a new Q&A platform called Piazza. Piazza is an online forum used at many universities where you can ask questions as well as see what questions your classmates are asking. To help you feel more comfortable asking for help, Piazza allows you to post your question anonymously!

Make sure to sign in! **Find our class page at: https://piazza.com/elgin/spring2021/cis121/home**

Topical Outline – Class Schedule

Class Meeting Date	Topic Covered	Assignments	Due Date
Module 1	Introduction to C++: History of Computers, data types		
Module 2	Programming a computer, Algorithms		
Module 3	Variables, Data Types, Constants, Assignment Statements, Arithmetic Operators, Comments, Syntax	Asn One	
Module 4	Selection Statements, if/else, Boolean Expressions,		Asn one Due
Module 5	Nested if/else, switch. More about Loop Control	Asn Two	
Module 6	Repetition Statements, Loop design and top-down design		Asn Two Due
Module 7	Functions, math library, rand(), parameters, Function Prototypes	Asn Three	
Module 8	More about Functions, program design Void functions, void, call by reference, variable scope, procedural abstraction, testing functions		Asn Three Due
Module 9	I/O Streams and File I/O Midterm	Midterm	
Module 10	Character I/O		
Module 11	Array Basics	Asn Four	
Module 12	Sorting and Searching More about Arrays		Asn Four Due
Module 13	String Class , NULL terminated character array, C-String to Numbers, string class	Asn Five	
Module 14	Object Oriented Programming, ADTs, Classes, objects, member functions, constructors, private, public		Asn Five Due
Module 15	Final review/Final Exam	Final Exam	

Resources

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Tutoring and Study Labs

Tutoring and study labs are available to students. For more information, visit www.elgin.edu/tutoring

Student Resource Guide

To view the Student Resource Guide PDF document click here: Student Resource Guide

Emergency Closing Information

For information regarding emergency closing situations at ECC please visit: Rave Alert - Emergency Notification System

ECC Technical Help

ECC is committed to supporting students who will be transitioning to alternative modes of instruction, particularly online, and to addressing the technology needs of ECC students to the greatest extent possible. For more information, visit https://elgin.edu/life-at-ecc/services-resources/technical-help/

ECC Library

For information regarding the ECC Library please visit: ECC Renner Library

Disability Accommodations

ECC welcomes students with disabilities and is committed to supporting them as they attend college. If a student has a disability (visual, aural, speech, emotional/psychiatric, orthopedic, health, or learning), s/he may be entitled to some accommodation, service, or support. While the College will not compromise or waive essential skill requirements in any course or degree, students with disabilities may be supported with accommodations to help meet these requirements. The laws state a person does not have to reveal a disability, but if support is needed, documentation of the disability must be provided. If none is provided, the college does not have to make any exceptions to standard procedures. To request accommodations, sign a release form to have documentation sent to the college, or bring in documentation. If you have questions, call the Disability Services office (Building B, room 115) at 847-214-7220 (TTY - 847-214-7392) or e-mail Annabelle Rhoades at arhoades@elgin.edu. (See additional information at www.elgin.edu/disability).

Wellness Services

Focuses on health and well-being to maximize personal and academic growth and development. The mission of wellness services is to provide support for personal well-being so students can focus on academic success. We offer students one-on-one sessions about psychosocial issues that impact

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academic performance. Students may drop in and/or make an appointment in the Student Success office, Building B, room 120. Office hours at Mon-Thurs: 8 am - 7 pm and Friday: 8 am - 4 pm.

Veterans' Assistance Policy

Elgin Community College would like to thank you for your military service! Whether you are starting college for the first-time or re-entering college, we have services to make your transition from troop to student a little easier. If you have any questions, or for additional information please contact Anitra King, Career and Veterans Specialist, at (847) 214-7531 or email: aking@elgin.edu. http://www.elgin.edu/students.aspx?id=8412

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