

Augusta University · School of Computer and Cyber Sciences

## CSCI 1301: Principles of Computer Programming I

Section E · Fall 2021

<b>Instructor</b>	Neea Rusch
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<b>Course dates</b>	August 11 - December 1, 2021
<b>Final Exam</b>	December 7, 5:00 - 7:00 PM - location to be confirmed
<b>Lectures</b>	Allgood Hall E152 Mon, Wed 5:30 - 6:45 PM
<b>Lab</b>	Allgood Hall N344 Mon 7:00 - 8:50 PM
<b>UCA</b>	Ian Yelle <a href="mailto:iyelle@augusta.edu">iyelle@augusta.edu</a>
<b>Course Book</b>	<a href="https://csci-1301.github.io">csci-1301.github.io</a>

### Course Description

A rigorous study of the principles of computer programming with emphasis on problem solving methods which result in correct, well-structured programs. Other topics: an introduction to data representation, data types and control structures, functions, and structured data types.

### Learning Outcomes

Students who successfully complete this course will be able to:

1. Perform standard program input and program output using the keyboard and the monitor
2. Declare and use user-defined variables, and constants using the appropriate data types
3. Declare, define, and call user-defined functions
4. Write and evaluate expressions using arithmetic, relational and logical operators
5. Control the flow of program execution using the appropriate sequential, selection, and repetition statements
6. Define, create and manipulate arrays
7. Understand and implement classes and objects

By the end of this course, students will be able to solve computer-programming challenges using correct, well-structured applications written in the C# programming language. Students will have a basic knowledge and comfort using control structures, object-oriented design, classes, methods, properties, data types, and data structures. The student also will develop computational thinking skills and practices.

### Format and Procedures

CSCI 1301 is an academically rigorous four (4) credit hour course consisting of lecture and laboratory portions: both are required to succeed. Lectures consist of discussion focused on concepts and principles of computer programming. Laboratory will be devoted to hands-on practice and experiments.

The initial lab exercises assume no previous programming experience. Exercises increase in complexity and level of challenge as the course progresses. All programming exercises are designed to complement the lecture material.

Homework assignments will assist students in making sure they understand class expectations and the content of the lecture, as well as to practice their coding and problem solving skills. The progression of the students will be regularly tested and assessed through quizzes and tests. Regular participation in lectures and laboratory sessions is a baseline for success in the course.

### Student Expectations

- Read this entire syllabus carefully
- Participate actively in all course activities
- Complete homework assignments: read your notes before starting the homework assignment, make sure you understand it completely before considering it done
- Work through each lab and make sure you understand the theoretical concepts
- Seek assistance early if you have difficulties following lectures or completing course activities (see: [Academic Accommodations & Assistance](#)).

### General Class Rules

- Attendance is not mandatory but you are strongly encouraged to attend every lecture and lab. You are encouraged to come to class on time and stay until the end of the lecture. If you arrive late or must leave early, do so without distracting your fellow students.
- You are responsible for all course material and your decision to attend lectures and completing coursework. I do not repeat lectures or provide notes for those who miss class.
- It is the student's responsibility to initiate a withdrawal before midterm, but I reserve the right to withdraw a student that missed half of the quizzes and tests.
- A student not withdrawn from a course who stops attending class is subject to receiving a grade WF or F.
- All coursework is individual coursework. Identical or similar programs turned in by two or more students receive a grade of zero.
- Quiet chat and mutual help are acceptable, sharing solutions is forbidden. You may discuss your general approach and strategy with fellow students. You may not submit someone else's work as your own. The following are examples of unauthorized actions: copying or sharing files, sharing screenshots of code, dictating what to type, submitting work not created by you. If you are unsure about this distinction, ask first. Also see following section on [Academic Honesty](#) for details.

## Academic Honesty

In an academic community, honesty and integrity must prevail if the work done and the honors awarded are to receive their respect. The erosion of honesty is the academic community's ultimate loss. The responsibility for the practice and preservation of honesty must be equally assumed by all of its members. Any type of dishonesty in securing those credentials therefore invites serious sanctions, up to and including, a "WF" or "F" in the course, and expulsion from the institution. Please reference the <http://catalog.augusta.edu/content.php?catoid=27&navoid=3332&hl=honesty&returnto=search> for further details and specific definitions of cheating and plagiarism. Academic standards and procedures can also be found in the AU Student Manual (section 5 – 2018/19 Manual) - which can be found on the AU Student life website at <https://www.augusta.edu/student-affairs>.

Unethical behavior of students in any form is not acceptable and will not be tolerated in the School of Computer and Cyber Sciences. Academic dishonesty - cheating on exams, plagiarism of the work of others, unapproved collaboration on graded work, and the like - will be dealt with immediately and with clear consequences. Depending on the nature and severity of the problem, a student who is guilty of any such violation may be: 1) withdrawn from the course with a grade of WF (counted as an F in the GPA); 2) given a grade of zero on the assignment; 3) given a grade of F in the course; or 4) otherwise penalized, at the discretion of the faculty member. Two occurrences of a WF grade for academic dishonesty will result in a student's being expelled from the University, per current University policy as described in the University Catalog.

## Grading

Students will be evaluated using different types of evaluation:

1. Quizzes with questions taken from or inspired by homework and lab assignments.
2. Two Individual coding projects to be completed at home.
3. There will be two in-class exams held during the regular semester.
4. Cumulative final exam will take place during the exam period.

Homework and lab assignments are not graded. Their purpose is to prepare you for graded assessments. Your grade will be computed as follows:

Quizzes (×5)	10 %
Projects (×2)	10 %
Exam 1	20 %
Exam 2	20 %
Final Exam	40 %

## Course Grade Scale

A	B	C	D	F
≥ 90 %	80 - 89 %	70 - 79 %	60 - 69 %	< 60

I do not curve individual examinations. At the end of the course, the class average is calculated to determine if an overall scaling of grades is necessary.

**Quiz Absence**

There are no makeup quizzes.

**Exam Absence**

There will be no makeup exams, but alternative scheduling may be coordinated with me prior to the exam. Under certain circumstances and with prior permission, I may grant you permission to count your Final Exam grade as a missed exam grade. Note that this allowance is available only to replace one missed exam. Unexcused missed exams will result in a zero grade. Any student missing the final exam without a documented excuse (brought to me or to the Dean of Student Life), or who has not taken action to withdraw will receive a grade F. In case of a documented emergency at the time of the final, the student may be allowed to receive a grade I.

**Hardware Requirements**

You will need access to a desktop or laptop computer to do course exercises (MacOS, Windows, Linux). Sufficient screen size and physical keyboard are necessary for programming. Options for hardware:

- Use your own computer (recommended)
- Use computers in our lab classroom
- Visit campus computer labs: <https://www.augusta.edu/its/computers-printing.php>

**Academic Accommodations & Assistance**

I am your first point of contact for any questions regarding the content of this class, but many other resources are available:

- For tutoring resources, consult Academic Success Center (or “ASC”). Tutoring is available for Computer Science on the first floor of University Hall. You can schedule appointments at <https://augusta.campus.eab.com>.
- Testing & Disability Services can help accommodate this class. Contact Testing and Disability Services (Galloway Hall; 706.737.1469; [www.augusta.edu/tds](http://www.augusta.edu/tds)) for more information and/or to initiate the process for accessing academic accommodations.
- Student Counseling & Psychological Services (SCAPS) assistsscheduleschedule students with a variety of personal, developmental, and mental health concerns. [www.augusta.edu/counseling](http://www.augusta.edu/counseling)
- Student Assistants –an undergraduate course assistant (UCA) will assist throughout the semester. Contact UCA to request additional tutoring sessions and help with course material.

## Preliminary Course Schedule

Week	Dates	Assessments	Topics	Activities	Notes
1	8/11 - 8/15		Syllabus, introduction		
2	8/16 - 8/22		first program, displaying output data types, variables	Labs: Introduction, HelloWorld Homework 1	
3	8/23 - 8/29	<b>8/25: Quiz 1</b>	type conversion, user input	Labs: FirstProgram, Variables Homework 2	
4	8/30 - 9/5	<b>9/1: Quiz 2</b>	classes, objects, accessors, mutators	Labs: Casting, UserInput	
5	9/6 - 9/12	<b>9/10: Project 1</b>	methods, constructors	Labs: Rectangle, PreciseRectangle (* Homework 3	9/6 - no class
6	9/13 - 9/19	<b>9/15: Exam 1</b>	exam review	<i>Prepare for exam</i>	
7	9/20 - 9/26		conditional statements Boolean logic, operators, if statement	Labs: Booleans	
8	9/27 - 10/3		switch statement, if vs. switch	Labs: If, IfAndSwitch Homework 4	
9	10/4 - 10/10	<b>10/6: Quiz 3</b>	repetition statements while loop, input validation	Labs: IncrementDecrement, While	10/4 - midterm (last day to withdraw)
10	10/11 - 10/17		input validation (cont.), do while	Labs: DoWhile, ValidatingInput Homework 5	
11	10/18 - 10/24	<b>10/20: Quiz 4</b>	arrays, for loop	Labs: ArrayBasics	
12	10/25 - 10/31	<b>10/29: Project 2</b>	arrays, foreach	Labs: ArrayOperations, For	
13	11/1 - 11/7		Random, char	Labs: Foreach, Random Homework 6	
14	11/8 - 11/14	<b>11/10: Exam 2</b>	exam review	Labs: Char <i>Prepare for exam</i>	
15	11/15 - 11/21		Class Diagram, static	Labs: ClassDiagram Homework 7	
16	11/22 - 11/28	<b>11/22: Quiz 5</b>	static, theory wrap-up	Labs: Static, ChemicalElements	11/24 - no class
17	11/29 - 12/1		review for final	Homework 8 <i>Prepare for final</i>	12/1 - last day of classes
18	12/7	<b>Final Exam</b>	<b>5 PM - 7 PM</b>		

\*) There is no lab session on 9/6. You may work ahead and complete these labs independently during the week, or wait until 9/13 lab session.