

Clackamas Community College

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Section #1 General Course Information

Department: Business & Computer Science: Computer Science

Submitter

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Course Prefix and Number: CS - 161

Credits: 4

Contact hours

Lecture (# of hours): 44

Lec/lab (# of hours):

Lab (# of hours):

Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Computer Science I

Course Description:

Introduction to fundamental concepts of structured programming, including problem solving, algorithm and program design, data types, loops, control structures, subroutines, and arrays. Learn to write structured programs in a high level programming language.

Type of Course: Lower Division Collegiate

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Computer Science AAS & Certificate

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations:

Requirements: MTH-111 or placement in MTH-112, or 4 years high school math

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

Yes

Area: Computation

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- ✓ Fall
- ✓ Winter

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

1. list and apply the computer program design process to simple programming problems;
2. describe the software life cycle;
3. specify, design, implement, debug and document simple programs using C++;
4. write C++ programs that correctly use the following components: variables, constants, functions, selection structures, repetition structures, and arrays;
5. describe and correctly use call-by-value and call-by-reference parameters;
6. demonstrate using top-down design to decompose a complex problem;
7. demonstrate using a modern programming environment to edit, compile, debug and execute C++ programs.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Algorithm and Program Development
2. C++ basics (syntax, keywords, operators)
3. Variables and Constants
4. Output Statements
5. Selection structures (if and switch)
6. Repetition structures (while, for, do while)
7. Functions (implementing, arguments/parameters, pass by value/reference)
8. Arrays
9. Strings

Does the content of this class relate to job skills in any of the following areas:

1. Increased energy efficiency **No**

- | | |
|--------------------------------------|-----------|
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course Transferability

Concern over students taking many courses that do not have a high transfer value has led to increasing attention to the transferability of LDC courses. The state currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these questions.

1. Is there an equivalent lower division course at the University?
2. Will a department accept the course for its major or minor requirements?
3. Will the course be accepted as part of the University's distribution requirements?

If a course transfers as an elective only, it may still be accepted or approved as an LDC course, depending on the nature of the course, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

PSU (Portland State University)

Identify comparable course(s) at OUS school(s)

How does it transfer? (Check all that apply)

required or support for major

:

First term to be offered:

Next available term after approval

:
