

Effective: Fall 2024

**COURSE INFORMATION**

**Course Title:** Introduction to Computer Science & Programming I

**Course Number:** CSCI 120

**Credits:** 3

**Total Weeks:** 14 (Fall, Spring)  
12 (Summer)

**Total Hours:** 39

**Course Level:**  First Year  Second Year  
 New  Revised Course  
 Replacement Course

**Department:** Computer Science **Department Head:** M. O'Connor

**Former Course Code(s) and Number(s) (if applicable):**N/A

**Pre-requisites (If there are no prerequisites, type NONE):** PREC 12 or MATH 100 or MATH 120 and CSCI 100 or equivalent

**Co-requisite Statement (List if applicable or type NONE):** NONE

**Precluded Courses:** N/A

**COURSE DESCRIPTION**

This course is an introduction to computer science and computer programming. Students will learn the basic concepts and terminology of computer science and acquire fundamental programming skills in the Python 3 programming language. No prior programming experience is required.

**LEARNING OUTCOMES**

Upon successful completion of the course, students will be able to:

- Describe fundamental concepts behind computer science.
- Analyze problem specifications.
- Define simple algorithms using pseudocode and flowcharts.
- Construct Python programs from algorithms.
- Describe and apply techniques to debug and test programs.
- Trace the execution of Python programs.
- Define functions.
- Use functions that are built-in or defined in modules.
- Use elementary data structures such as strings and lists.
- Understand and use basic file handling.
- Implement fundamental algorithms such as the linear and binary search.
- Analyze the running time of simple iterative algorithms.
- Document a project.

**INSTRUCTION AND GRADING**

Instructional (Contact) Hours:

Type	Duration
Lecture	39
Seminars/Tutorials	
Laboratory	
Field Experience	
Other ( <i>specify</i> ):	
Total	39

**Grading System:** Letter Grades  Percentage  Pass/Fail  Satisfactory/Unsatisfactory  Other

**Specify passing grade:** 50%

**Evaluation Activities and Weighting** (total must equal 100%)

Assignments: %	Lab Work: 15%	Participation: %	Project: %
Quizzes/Test: 20%	Midterm Exam: 30%	Final Exam: 35%	Other: %

**TEXT(S) AND RESOURCE MATERIALS**

Provide a full reference for each text and/or resource material and include whether required/not required.

Free online book: <http://greenteapress.com/thinkpython2/html/index.html>

**COURSE TOPICS**

List topics and sequence covered.

<b>Week</b>	<b>Topic</b>
Week 1	Introduction to Computer Science and Programming, Create and Run a Python Program
Week 2	Algorithms, Variables, Expressions and Statements, Datatypes
Week 3	Boolean Expressions, Conditional Execution
Week 4	Conditional Execution, Repetition, Quiz 1
Week 5	Repetition
Week 6	Functions
Week 7	Functions
	<b>Midterm Exam</b>
Week 8	Functions
Week 9	Strings, Lists
Week 10	Lists, Quiz 2
Week 11	Files
Week 12	Program Development, Searching
Week 13	Algorithm Analysis
Week 14	<b>Final Exam</b>

**NOTES**

1. Students are required to follow all College policies. Policies are available on the website at: [Coquitlam College Policies](#)
2. To find out how this course transfers, visit the BC Transfer Guide at: [bctransferguide.ca](http://bctransferguide.ca)

**Last Reviewed:** September 2024

**Last Revised:** September 2024