



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Computer Science Department

CS101 Introduction To Programming

Summer Semester 2022-2023

Course Catalog

3 Credit Hours. This course introduces the student to programming through a study of the concepts of program specification and design, algorithm development, and coding and testing using a modern software development environment. Students learn how to write programs in a high-level programming language. Topics covered include fundamentals of algorithms, flowcharts, problem solving, programming concepts, methods, control structures, arrays, and strings. Throughout the semester, problem solving skills will be stressed and applied to solving computing problems. Weekly laboratory experiments will provide hands-on experience in topics covered in this course.

Text Book

Title	netacad / Introduction to programming
Author(s)	cisco networking academy
Edition	1st Edition
Short Name	Textbook 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Textbook 2	C++ Programming: From Problem Analysis to Program Design	D. S. Malik	8th Edition	

Instructor

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Instructor	
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Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 08:30 - 10:00 Room: G2121 Section 3: Lecture Time: Sun, Mon, Tue, Wed : 10:00 - 11:30 Room: C5020

Prerequisites		
Line Number	Course Name	Prerequisite Type
1740990	Cls099 Computer Skills (Remedial Course)	Pre./Con.

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to computer programming: C++ basics, variables, and data types	Ch. 1 From Textbook 1, Ch. 2 From Textbook 2
Week 2	Input and Output: operators, expressions, and priorities	Ch. 1 From Textbook 1, Ch. 3 From Textbook 2
Week 3	Relational operators and one-way decisions	Ch. 1 From Textbook 1, Ch. 4 From Textbook 2
Week 3	Selection statements: IF, IF-Else and Switch	Ch. 2 From Textbook 1, Ch. 4 From Textbook 2
Week 4	Repetition (Loops): while, for, and nested loops	Ch. 2 From Textbook 1, Ch. 5 From Textbook 2
Week 5	Arrays: one-dimensional and two-dimensional	Ch. 2 From Textbook 1, Ch. 8 From Textbook 2
Weeks 6, 7	Functions: definition, passing parameters, and overloading	Ch. 3 From Textbook 1, Ch. 6 From Textbook 2
Week 7	Strings: data manipulation	Ch. 4 From Textbook 1, Ch. 8 From Textbook 2

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understanding the C++ arithmetic operators, input/output methods and appropriate manipulators for formatting. [1SO1]	20%	Midterm Exam, Final Exam
Practicing the decision control using appropriate selection statements such as if, if-else and switch, as well as the repetition control with appropriate looping statements such as while, for and do-while. [1SO1]	25%	Midterm Exam, Final Exam
Using both one dimensional, multi-dimensional arrays, and strings as an array of characters. [1SO1]	20%	Final Exam
Defining and calling functions with parameters passed by value and by reference. [1SO1]	15%	Final Exam
Designing, implementing, and running programs using the essential programming statements, selections, repetitions, arrays, strings, and functions. [1SO2]	20%	LAB. Work/Quizzes

Relationship to Program Student Outcomes (Out of 100%)					
SO1	SO2	SO3	SO4	SO5	SO6
80	20				

Evaluation	
Assessment Tool	Weight
Midterm Exam	30%
LAB. Work/Quizzes	20%
Final Exam	50%

Policy	
Attendance	Attendance is very important for the course: LECTURE and LAB. In accordance with university policy, students missing more than 20% of total classes are subject to failure. Penalties may be assessed without regard to the student's performance. Attendance will be recorded at the beginning or end of each class.
Exams	All exams will be CLOSE-BOOK; necessary algorithms/equations/relations will be supplied if required.

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