



Jordan University of Science and Technology
Faculty of Science & Arts
Basic Sciences And Humanities Department

HSS101CS Introduction To Programming

First Semester 2023-2024

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	Ref #1
Other Information	Textbook 1

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	C++ Programming: From Problem Analysis to Program Design	D. S. Malik	8th Edition	2017

Instructor

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Class Schedule & Room	
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Section 1:

Lecture Time: Sun, Tue, Thu : 08:30 - 09:30

Room: PH2104

Section 2:

Lecture Time: Sun, Tue, Thu : 08:30 - 09:30

Room: PH2101

Section 3:

Lecture Time: Sun, Tue, Thu : 09:30 - 10:30

Room: PH2101

Section 4:

Lecture Time: Sun, Tue, Thu : 09:30 - 10:30

Room: M2011

Section 5:

Lecture Time: Sun, Tue, Thu : 10:30 - 11:30

Room: A2125

Section 8:

Lecture Time: Sun, Tue, Thu : 12:30 - 13:30

Room: PH2101

Section 9:

Lecture Time: Sun, Tue, Thu : 12:30 - 13:30

Room: G2121

Section 10:

Lecture Time: Sun, Tue, Thu : 13:30 - 14:30

Room: PH2101

Section 11:

Lecture Time: Mon, Wed : 08:30 - 10:00

Room: G2120

Section 13:

Lecture Time: Mon, Wed : 11:30 - 13:00

Room: A2125

Section 14:

Lecture Time: Mon, Wed : 10:00 - 11:30

Room: A2125

Prerequisites

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

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Introduction to computer programming: C++ basics, variables, and data types	Ch 1 From Ref #1, Ch 2 From Ref #2
Weeks 2, 3	Input and Output: operators, expressions, and priorities	Ch 1 From Ref #1, Ch 3 From Ref #2
Week 3	Relational operators and one-way decisions	Ch 1 From Ref #1, Ch 4 From Ref #2
Weeks 4, 5	Selection statements: IF, IF-Else and Switch	Ch 2 From Ref #1, Ch 4 From Ref #2
Weeks 6, 7	Repetition (Loops): while, for, and nested loops	Ch 2 From Ref #1, Ch 5 From Ref #2
Weeks 8, 9, 10	Arrays: one-dimensional and two-dimensional	Ch 2 From Ref #1, Ch 8 From Ref #2
Weeks 11, 12, 13, 14	Functions: definition, passing parameters, and overloading	Ch 3 From Ref #1, Ch 6 From Ref #2
Week 15	Strings: data manipulation	Ch 4 From Ref #1, Ch 8 From Ref #2

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Identifying the hardware components of a computer and will describe how they act together to form a complete system including the scientific principles on which they are based. [1SO1]	10%	
Understanding the C++ arithmetic operators, input/output methods and appropriate manipulators for formatting. [1SO1]	17%	
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]	20%	
Using both one dimensional, multi-dimensional arrays, and strings as an array of characters. [1SO1]	20%	
Defining and calling functions with parameters passed by value and by reference [1SO1]	13%	
Designing, implementing, and running programs using the essential programming statements, selections, repetitions, arrays, strings, and functions. [1SO2]	20%	

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

Evaluation	
Assessment Tool	Weight
Midterm Exam	30%
Final Exam	50%
LAB work	20%

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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