



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

CS101 Introduction To Programming

First Semester 2021-2022

**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**

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

**Course References**

| Short name | Book name  | Author(s)   | Edition     | Other Information |
|------------|--|-------------|-------------|-------------------|
| Textbook 2 | C++ Programming: From Problem Analysis to Program Design | D. S. Malik | 6th Edition |                   |

**Instructor**

|                 |                        |
|-----------------|------------------------|
| Name            | Mrs. Wafa' Alqarqaz    |
| Office Location | -                      |
| Office Hours    |                        |
| Email           | waalqarqaz@just.edu.jo |

| Instructor      |  |
|-----------------|--|
| Name            | <b>Miss Noor Zaghal</b>  |
| Office Location | A1 L3  |
| Office Hours    | Sun : 08:00 - 08:30<br>Sun : 13:00 - 14:00<br>Mon : 08:00 - 08:30<br>Mon : 11:30 - 12:30<br>Tue : 08:00 - 08:30<br>Tue : 13:00 - 14:00<br>Wed : 08:00 - 08:30<br>Wed : 11:30 - 12:30 |
| Email           | noorzaghal@just.edu.jo   |

| Instructor      |                            |
|-----------------|----------------------------|
| Name            | <b>Abdalaheem Al Smadi</b> |
| Office Location | -                          |
| Office Hours    |                            |
| Email           | afalsmadi@just.edu.jo      |

| Instructor      |  |
|-----------------|--|
| Name            | <b>Dr. Ahmad Alzubi</b>  |
| Office Location | A1 Level-3   |
| Office Hours    | Sun : 11:00 - 12:30<br>Mon : 10:00 - 11:30<br>Tue : 11:00 - 12:30<br>Wed : 10:00 - 11:30 |
| Email           | agalzubi@just.edu.jo   |

| Instructor      |                     |
|-----------------|---------------------|
| Name            | <b>Sanaa Bsoul</b>  |
| Office Location | -                   |
| Office Hours    |                     |
| Email           | skbsoul@just.edu.jo |

| Instructor      |                             |
|-----------------|-----------------------------|
| Name            | <b>Miss Ghadeer Obeidat</b> |
| Office Location | A1-L3                       |
| Office Hours    |                             |
| Email           | gnobiedat@just.edu.jo       |

| Instructor      |                           |
|-----------------|---------------------------|
| Name            | <b>Dr. Malak Abdullah</b> |
| Office Location | A1-L3                     |

|              |  |
|--------------|--|
| Office Hours | Sun : 14:00 - 16:00<br>Mon : 11:00 - 12:00<br>Tue : 14:00 - 16:00<br>Thu : 11:30 - 13:00 |
| Email        | mabdullah@just.edu.jo  |

| Class Schedule & Room |
|-----------------------|
|-----------------------|

Section 1:

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

Room: CS06-C5L1

Section 2:

Lecture Time: Sun, Tue : 10:00 - 11:00

Room: CS06-C5L1

Section 3:

Lecture Time: Sun, Tue : 11:30 - 12:30

Room: E2115

Section 4:

Lecture Time: Mon, Wed : 08:30 - 09:30

Room: CS01-PH3 L-1

Section 5:

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

Room: CS03-PH1L-1

Section 6:

Lecture Time: Mon, Wed : 08:30 - 09:30

Room: CS05-M2L-3

Section 7:

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

Room: CS04-M1L-1

Section 8:

Lecture Time: Sun, Tue : 11:30 - 12:30

Room: CS01-PH3 L-1

Section 9:

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

Room: CS04-M1L-1

Section 10:

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

Room: CS01-PH3 L-1

Section 11:

Lecture Time: Sun, Tue : 10:00 - 11:00

Room: CS01-PH3 L-1

Section 12:

Lecture Time: Sun, Tue : 10:00 - 11:00

Room: CS04-M1L-1

Section 13:

Lecture Time: Sun, Tue : 13:00 - 14:00

Room: CS01-PH3 L-1

Section 14:

Lecture Time: Mon, Wed : 11:30 - 12:30

Room: CS01-PH3 L-1

Section 16:

Lecture Time: Mon, Wed : 08:30 - 09:30

Room: CS03-PH1L-1

Section 17:

Lecture Time: Mon, Wed : 08:30 - 09:30

Room: CS04-M1L-1

Section 18:

Lecture Time: Mon, Wed : 14:30 - 15:30

Room: N4201

Section 21:

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

Room: CS02-PH1L-1

Section 22:

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

Room: CS03-PH1L-1

Section 23:

Lecture Time: Mon, Wed : 11:30 - 12:30

Room: M2008

Section 24:

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

Room: CH2109

Section 27:

Lecture Time: Sun, Tue : 13:00 - 14:00

Room: PH2101

Section 28:

Lecture Time: Sun, Tue : 14:30 - 15:30

Room: PH2102

Section 29:

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

Room: N4203

Section 30:

Lecture Time: Sun, Tue : 11:30 - 12:30

Room: CS04-M1L-1

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

| <b>Mapping of Course Outcomes to Program Student Outcomes</b>   | <b>Course Outcome Weight (Out of 100%)</b> | <b>Assessment method</b>                             |
|---|--|--|
| The student will identify 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, 1SO2] | 10%  | Midterm Exam,<br>LAB.<br>Work/Quizzes                |
| The student will write a program using the C++ arithmetic operators, input/output methods and appropriate manipulators for formatting. [1SO1, 1SO2]   | 17%  | Midterm Exam,<br>LAB.<br>Work/Quizzes,<br>Final Exam |
| The student will write a program using appropriate selection statements such as if, if-else and switch. [1SO1, 1SO2]  | 16%  | Midterm Exam,<br>LAB.<br>Work/Quizzes,<br>Final Exam |
| The student will write a program using appropriate looping statements such as while, for and do-while. [1SO1, 1SO2]   | 20%  | Midterm Exam,<br>LAB.<br>Work/Quizzes,<br>Final Exam |
| The student will use both one dimensional and multi-dimensional arrays. [1SO1, 1SO2]  | 13%  | LAB.<br>Work/Quizzes,<br>Final Exam                  |

|   |     |            |
|---|-----|------------|
| The student will write a program using functions with parameters passed by value and by reference. [1SO1, 1SO2] | 24% | Final Exam |
|---|-----|------------|

| Relationship to Program Student Outcomes (Out of 100%) |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|
| SO1  | SO2 | SO3 | SO4 | SO5 | SO6 |
| 50   | 50  |     |     |     |     |

| 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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