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| المملكة العربية السعودية  وزارة التعليم العالي  **جامعة أم القرى**  الكلية الجامعية بالجموم – قسم الحاسب الآلي |  | Kingdom of Saudi Arabia  Ministry of Higher Education  **Umm Al-Qura University**  University College in Al-Jamoum  Computer Dept. |

Course Specification

1. **Course number and name:** (2316101-3) Introduction to Computer Science
2. **Credits and contact hours:** 3 Credits

(Lecture: 2/week – Practical Session: 2/week)

1. **Instructor’s or course coordinator’s name:** Youseef Alotaibi
2. **Text books**
3. **Main Text book:** T.J. O’Leary, L.I. O’Leary, Computing Essentials 2012, McGraw Hill, 2012.
4. **Reference:** H.M. Deitel, P.J. Deitel, C++ How to Program, 9th Edition, Prentice Hall, 2012.
5. **Specific course information**
6. **brief description of the content of the course (Catalog Description):**

Upon completing this course, the student will have learned, through appropriate classroom and laboratory experiences, the basics of computers, networking, and software. Moreover, he should explain how computers store and manipulate information and understand what an operating system does, and give some examples of operating systems. Finally, he should also design simple algorithms and write their computer programs.

1. **prerequisites or co-requisites:** −
2. **indicate whether a required, elective, or selected elective course in the program:** required
3. **Specific goals for the course**

The student will be able to:

1. Understand the fundamental topics in computer systems, including hardware architectures and operating systems, and use the basic computer terminology.
2. Understand the rules of using the Internet and its access and application software.
3. Demonstrate efficient IT capabilities.
4. Demonstrate the basic knowledge of fundamentals algorithms design.
5. Use appropriate programming languages to design simple computer programs.

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| *Course*  *Goals* | *Program Outcomes* | | | | | | | | | | |
| SOa | SOb | SOc | SOd | SOe | SOf | SOg | SOh | SOi | SOj | SOk |
| 1 | ✓ |  |  |  |  |  |  |  |  |  |  |
| 2 | ✓ |  |  |  |  |  |  |  |  |  |  |
| 3 | ✓ |  |  |  |  |  |  |  |  |  |  |
| 4 | ✓ |  |  |  |  |  |  |  |  |  |  |
| 5 | ✓ |  |  |  |  |  |  |  |  |  |  |

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| **Relationship of Course Goals to the Program Student Outcomes** | |
| **SOa** | An ability to apply knowledge of computing and mathematics appropriate to the discipline   * Students will be able to apply basic computing skills by the end of the course |

1. **Brief list of topics to be covered**

* Overview of the computer and software components
* Software: Basic Application Software – Specialized Application Software – System Software
* Hardware: The System Unit - Input and Output - Secondary Storage - Communications and Networks
* Windows Operating System
* The Internet and the Web
* Data representation and number systems
* Programming and Languages
* Algorithms and flowcharts
* C++ Programming: Input and output statements – Operations – Selection Statements