**COURSE SPECIFICATION**

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| This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. |

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| University of Baghdad | 1. Teaching Institution |
| College of Engineering / Electronics and Communication Department | 2. University Department/Centre |
| Computer Programming II | 3. Course title/code |
| MATLAB Programming | 4. Programme(s) to which it contributes |
| In Class face-to face mode | 5. Modes of Attendance offered |
| 1st\_2nd 2015-2016 | 6. Semester/Year |
| 4 hrs per week/ 120 hrs total | 7. Number of hours tuition (total) |
| 3/5/2016 | 8. Date of production/revision of this specification |
| 9. Aims of the Course | |
| To teach the students the basics of C++ through procedural and Object Oriented | |
| Programming. | |
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| 10· Learning Outcomes, Teaching ,Learning and Assessment Methode |
| 1. Knowledge and Understanding   A1.Basic Concepts of C++ Programming  A2.  A3.  A4.  A5.  A6 . |
| B. Subject-specific skills  B1.Procedural Programming  B2.Object Oriented Programming  B3. |
| Teaching and Learning Methods |
| 1. Lectures. 2. Laboratory. 3. Tests and Exams. 4. In-Class Questions and Discussions. |
| Assessment methods |
| 1. 1st term exam: 15% 2. 2nd term exam: 15% 3. Laboratory work 20% 4. Final Examination 50% |
| C. Thinking Skills  C1.  C2.  C3.  C4. |

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| D. General and Transferable Skills (other skills relevant to employability and personal development)  D1.  D2.  D3.  D4. |

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| 11. Course Structure | | | | | |
| Assessment Method | Teaching  Method | Unit/Module or Topic Title | ILOs | Hours | Week |
| Exam/ Quiz | Lecture/ Laboratory | **Introduction to computer system** |  |  | 1 |
| Exam/ Quiz | Lecture/ Laboratory | **The history of programming Languages** |  |  | 2 |
| Exam/ Quiz | Lecture/ Laboratory | **Introduction to C++** |  |  | 3 |
| Exam /Quiz | Lecture/ Laboratory | **Operators and Expressions** |  |  | 4 |
| Exam/ Quiz | Lecture/ Laboratory | **Operators and Expressions** |  |  | 5 |
| Exam/ Quiz | Lecture/ Laboratory | **Operators and Expressions** |  |  | 6 |
| Exam/ Quiz | Lecture/ Laboratory | **Making decisions in C++ programming** |  |  | 7 |
| Exam/ Quiz | Lecture/ Laboratory | **Making decisions in C++ programming** |  |  | 8 |
| Exam/ Quiz | Lecture/ Laboratory | **Program Looping** |  |  | 9 |
| Exam/ Quiz | Lecture/ Laboratory | **Program Looping** |  |  | 10 |
| Exam /Quiz | Lecture/ Laboratory | **Arrays** |  |  | 11 |
| Exam/ Quiz | Lecture/ Laboratory | **Strings** |  |  | 12 |
| Exam/ Quiz | Lecture/ Laboratory | **Pointers** |  |  | 13 |
| Exam/ Quiz | Lecture/ Laboratory | **Functions** |  |  | 14 |
| Exam/ Quiz | Lecture/ Laboratory | **Functions** |  |  | 15 |
| Exam/ Quiz | Lecture/ Laboratory | **Structures and Unions** |  |  | 16 |
| Exam/ Quiz | Lecture/ Laboratory | **Structures and Unions** |  |  | 17 |
| Exam/ Quiz | Lecture/ Laboratory | **Introduction to Object Oriented Programming** |  |  | 18 |
| Exam/ Quiz | Lecture/ Laboratory | **Introduction to Class and Objects** |  |  | 19 |
| Exam/ Quiz | Lecture/ Laboratory | **Constructors and Destructors** |  |  | 20 |
| Exam /Quiz | Lecture/ Laboratory | **Arrays of Objects** |  |  | 21 |
| Exam/ Quiz | Lecture/ Laboratory | **Pointers to Objects** |  |  | 22 |
| Exam/ Quiz | Lecture/ Laboratory | **Using Functions with Objects** |  |  | 23 |
| Exam/ Quiz | Lecture/ Laboratory | **Friends of A class** |  |  | 24 |
| Exam/ Quiz | Lectures/ Laboratory | **Operator Overloading** |  |  | 25 |
| Exam/ Quiz | Lecture/ Laboratory | **Inheritance** |  |  | 26 |
| Exam/ Quiz | Lecture/ Laboratory | **Inheritance** |  |  | 27 |
| Exam /Quiz | Lecture/ Laboratory | **Introduction to C++ File system** |  |  | 28 |
| Exam/ Quiz | Lecture/ Laboratory | **Reading and Writing text files** |  |  | 29 |
| Exam/ Quiz | Lecture/ Laboratory | **Reading and Writing blocks of data** |  |  | 30 |

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| 12. Infrastructure | |
| Gaddis T., "Starting Out With C++", 4th Edition, Canda, Scott/Jones, 2004. | Required reading:  · CORE TEXTS  · COURSE MATERIALS  · OTHER |
| None | Special requirements (include for example workshops, periodicals, IT software, websites) |
| None | Community-based facilities  (include for example, guest  Lectures , internship , field studies) |

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| 13. Admissions | |
| According to ministry requirements | Pre-requisites |
| 10 | Minimum number of students |
| 50 | Maximum number of students |