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| | Ministry of Higher Education and Scientific Research - Iraq<br><br>University of Warith Al_Anbiyaa<br>College of Engineering<br>Civil Engineering Department | |

# MODULE DESCRIPTOR FORM

## Module Information

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|---|---|---|---|---|
| **Module Title** | COMPUTER SCIENCE | | **Module Delivery** | |
| **Module Type** | BASIC | | **Theory**<br>**lecture**<br>**lab** | |
| **Module Code** | UoW022 | | | |
| **ECTS Credits** | 3 | | | |
| **SWL (hr/sem)** | 75 | | | |
| **Module Level** | 1 | **Semester of Delivery** | 2 | |
| **Administering Department** | Civil engineering | **College** | Engineering | |
| **Module Leader** | Thaer Taher Atshan | **e-mail** | thaertahir@uowa.edu.iq | |
| **Module Leader's Acad. Title** | Assistant Lecturer | **Module Leader's Qualification** | M.Sc. | |
| **Module Tutor** | | **e-mail** | | |
| **Peer Reviewer Name** | | **e-mail** | | |
| **Review Committee Approval** | 2024/9/26 | **Version Number** | 2024 | |

## Relation With Other Modules

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| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents | |
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| **Module Aims** | 1. This course aims to define students everything related to the computer in terms of its physical parts or operational programs.<br>2. Study the Windows operating program, what are its parts, and how to deal with it.<br>3. Studying the most used application software on computers, which is the Office program with all its parts such as Word, Excel and PowerPoint.<br>4. Studying the BASIC language in writing programs and how to apply them in a way that suits the specialty of civil engineering.<br>5. Practical application of all that we study on the computer in a way that is appropriate for civil engineering. |
| **Module Learning Outcomes** | 1. Define Types of Computers, Computers Operations, Computer Hardware, System Units, Memory Speed, Types of Memory, Computer Software.<br>2. Define Numbering Systems, Decimal System, Binary system, Octal System, Hexadecimal System.<br>3. Define Windows 7 and Microsoft office2010<br>4. Programming in QBasic<br>5. Programming Control Statements and Loop in QBasic<br>6. Programming Matrices in QBasic |
| **Indicative Contents** | Indicative content includes the following.<br><br>Introduction to Computers, Types of Computers, Computers Operations, Computer Hardware, System Units, Memory Speed, Types of Memory, Computer Software [10 hrs].<br><br>Numbering Systems, Decimal System, Binary system, Octal System, Hexadecimal System [6 hrs]<br><br>Windows 7 (The Desktop, Task Bar, The start menu, The Search Box, Libraries, Control Panel.) [6 hrs]<br><br>Microsoft office2010 (Microsoft word, Microsoft exel, Microsoft PowerPoint) [12 hrs]<br><br>Programming in QBasic: Introduction, Starting QBASIC , Keys in Qbasic, QBASIC language Contents Constants and Variables In QBASIC [12 hrs]<br><br>Arithmetic Expression and Library Functions, Flow Charts [7 hrs]<br>Statements in QBASIC. [16 hrs]<br>Control Statements and Loop [16 hrs]<br>Matrices [10 hrs] |

| Learning and Teaching Strategies | |
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| **Strategies** | The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students. |

| Student Workload (SWL) | | | |
|---|---|---|---|
| **Structured SWL (h/sem)** | 48 | **Structured SWL (h/w)** | 6.5 |
| **Unstructured SWL (h/sem)** | 27 | **Unstructured SWL (h/w)** | 4 |
| **Total SWL (h/sem)** | 75 | | |

| Module Evaluation | | | | | |
|---|---|---|---|---|---|
| | | **Time/ Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 10% (10) | 5, 10 | LO #1, 2, 3 and 6 |
| | **Assignments** | 2 | 10% (10) | 2, 12 | LO # 3, 4, 5 and 6 |
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | - | 0% (10) | - | - |
| **Summative assessment** | **Midterm Exam** | 2 hr | 20% (10) | 7 | LO # 1-6 |
| | **Final Exam** | 2hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | 100%(100) |

| Delivery Plan (Weekly Syllabus) | |
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| | **Material Covered** |
| **Week 1** | Introduction to Computers (Types of Computers, Computers Operations, Computer Hardware), System Units, Memory Speed, Types of Memory, Computer Software and Numbering Systems. |
| **Week 2** | Windows 7 |
| **Week 3** | Windows 7 |

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| **Week 4** | Microsoft office |
| **Week 5** | Microsoft office |
| **Week 6** | Microsoft office |
| **Week 7** | Programming in QBasic: Introduction, Starting QBASIC , Keys in Qbasic<br>QBASIC language Contents Constants and Variables In QBASIC |
| **Week 8** | Arithmetic Expression and Library Functions, Flow Charts |
| **Week 9** | Statements in QBASIC )Rem Statement, Cls Statement, Const Statement, Let Statement, Read-Data Statement, Input statement, Print Statement, End Statement) |
| **Week 10** | Control Statements (GOTO Statement, ON…GOTO Statement, IF…THEN Statement, Compound IF … then, Counter Instructions, The For and Next statements) |
| **Week 11** | Loops and Loops type |
| **Week 12** | Loops and Loops type |
| **Week 13** | Multiplication for Matrices& Algebraic Sum for Matrices |
| **Week 14** | Matrices' Variables |
| **Week 15** | Preparatory week before the final Exam |

| **Delivery Plan (Weekly Lab. Syllabus)** | |
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| | **Material Covered** |
| **Week 1** | Lab 1: Application for Microsoft word2010 |
| **Week 2** | Lab 2: Application for Microsoft exel2010 |
| **Week 3** | Lab 3 Application for Microsoft PowerPoint 2010 |
| **Week 4** | Lab 4: Application for writing in QBasic. |
| **Week 5** | Lab 5: Application for writing control statements in QBasic. |
| **Week 6** | Lab 6: Application for writing Loops in QBasic. |
| **Week 7** | Lab 7: Application for writing Matrices in QBasic. |

| **Learning and Teaching Resources** | | |
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| | **Text** | **Available in the Library?** |
| **Required Texts** | • البرمجة بلغة البيسك ل مهدي فاضل موسى | Yes |

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| **Recommended Texts** | • QBASIC Programming Without Stress by Akinola Adeniyi<br>• A Manual for BASIC BY Trustees<br>• Beginner's Programming Tutorial in QBasic by susan A.K.<br>• Computer Programming in QBasic by Felix lyme<br>• PROGRAMMING IN QBASIC by Lubna Zaghlul<br>• Practical Computing with QBASIC by C. K. Ayo<br>• نسخة معتمدة من اليونسكو ICDL الرخصة الدولية لقيادة الحاسب الآلي<br>• اساسيات البرمجة بلغة البيسك ل ميخائيل رياض<br>• برمجة الكويك بيسك ل أسامة الخ | No. |
| **Websites** | - | |

**APPENDIX:**

| GRADING SCHEME | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks (%)** | **Definition** |
| **Success Group (50 - 100)** | **A** - Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B** - Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C** - Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D** - Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E** - Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX** – Fail | مقبول بقرار | (45-49) | More work required but credit awarded |
| | **F** – Fail | راسب | (0-44) | Considerable amount of work required |
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Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.