

Course Description

1. **Course Name: COMPUTER SCIENCE**

2. **Course Code: UoW022**

3. **Semester / Year: Second Semester / 2026**

4. **Date of preparation of this description: 12/1/2026**

5. **Available Attendance Modes: Bologna Process**

6. **Total Study Hours / Total Units: SSWL 75 + USSWL -; ECTS 3**

7. **Course Coordinator Name (Nidaa Habeeb Ibrahim)**

8. **Course Objectives**

1. This course aims to define students everything related to the computer in terms of its physical parts or operational programs.
2. Study the Windows operating program, what are its parts, and how to deal with it.
3. Studying the most used application software on computers, which is the Office program with all its parts such as Word, Excel and PowerPoint.
4. Studying the BASIC language in writing programs and how to apply them in a way that suits the specialty of civil engineering.
5. Practical application of all that we study on the computer in a way that is appropriate for civil engineering.

Aims

1. **Teaching and Learning Strategy**

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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.

Strategy

Course Structure .1

Assessment Method	Learning Method	Topic	Intended Learning Outcomes	Hours	Week
Classroom exams, assignments	attendance	Computer Science	Introduction to Computers (Types of Computers, Computers Operations, Computer Hardware), System Units, Memory Speed, Types of Memory, Computer Software and Numbering Systems.	3	1
			Windows 7	3	2
			Windows 7	3	3
			Microsoft office	3	4
			Microsoft office	3	5
			Microsoft office	3	6
		Computer Science	Programming in QBasic: Introduction, Starting QBASIC , Keys in Qbasic QBASIC language Contents Constants and Variables In QBASIC	3	7
			Arithmetic Expression and Library Functions, Flow Charts	3	8
			Statements in QBASIC (Rem Statement, Cls Statement, Const Statement, Let Statement, Read-	3	9

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Questions			Data Statement, Input statement, Print Statement, End Statement)		
			Control Statements (GOTO Statement, ON...GOTO Statement, IF...THEN Statement, Compound IF ... then, Counter Instructions, The For and Next statements) Loops and Loops type	3	10
			Loops and Loops type	3	11
				3	12
				3	13
			Multiplication for Matrices & Algebraic Sum for Matrices		14
			Matrices' Variables	3	15
			Preparatory week before the final Exam	3	16
			Final Exam	3	

2. Course Evaluation

Midterm Exam = 10%
 Quizzes = 10%
 Projects/Lab = 10%
 Assignments = 10%
 Attendance = 5%
 Assessment = 5%
 Final Exam = 50%

3. Learning and Teaching Resources

-	Required Textbooks (Methodology, if any)
Programming in BASIC by Mahdi Fadhil Musa	Main References (Sources)
QBASIC Programming Without Stress by Akinola Adeniyi	Supportive Books and References (Scientific Journals, Reports, ...)
• A Manual for BASIC BY Trustees • Beginner's Programming Tutorial in QBasic by susan A.K. • Computer Programming in QBasic by Felix lyme • PROGRAMMING IN QBASIC by Lubna Zaghlul • Practical Computing with QBASIC by C. K. Ayo • ICDL (International Computer Driving License) - UNESCO Certified Copy	

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- Fundamentals of Programming in BASIC Language, by Mikhail Riad
- QuickBASIC Programming, by Osama El-Khalaf

Electronic References, Internet Sites


أ.م.د. قاسم علي حسين
رئيس قسم الهندسة المدنية

نداء حبيب رحيمي


