



## Al-Ayen University / Technical Engineering College / Department of Computer Technical Engineering

### Template of Course Specification

Name and Scientific title of the subject instructor: M.Sc. Fatima Ghali

Name of Course: Programming 1

### Course Specification

**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**

1.	Teaching Institution	Al-Ayen University / Technical Engineering College
2.	University Department / Center	Computer Technical Engineering
3.	Course Title / Code	Programming 1
4.	Program(s) to which it contributes	B.Sc.
5.	Modes of Attendance offered	Theoretical and practical lectures
6.	Semester/Year	1 <sup>st</sup> / 2022
7.	Number of hours tuition (total)	150
8.	Date of production/revision of this Specification	2021-2022
9.	Aims of the Course	
i.	Giving the student information about the basic concepts of the components and rules of the C++ language and a method for an idea of writing code to solve a particular problem	
ii.	Learn how to program a computer using C++ language	
iii.	Learn how to use language in solving issues related to the specialty	
10.	Learning Outcomes, Teaching, Learning and Assessment Methods	
A.	A1 - The student learns how to interface computer programs with other electronic devices. A2- The student knows the reasons for using programming languages. A3 - The student learns how to solve problems using programming languages	



B.	<b>Subject-specific skills</b> <b>B1- The student acquires a skill in programming.</b> <b>B2 - The student acquires the skill of applying modern practical methods in the use of programming languages.</b> <b>B3 - The student acquires a skill in how to write programs.</b> <b>B4 - The student acquires the skill of using the best methods in solving software problems.</b>
C.	<b>Assessment methods</b> 1. The method of giving lectures 2. Student totals 3. Workshops 4. Reports and Studies 5. Use of illustrations and digital projectors for subjects that require this
E.	<b>Teaching and learning methods</b> 1. The method of giving lectures 2. Student Group 3. Workshops 4. Reports and studies 5. Use of illustrations and digital projectors for subjects that require this
G.	<b>General and Transferable Skills (other skills relevant to employability and personal development)</b> <b>D1. verbal communication</b> <b>D2. Team work Analysis and verification</b> <b>D3. Written communication</b> <b>D4. Planning and organizing</b> <b>D5. Flexibility</b> <b>D6. time management</b> <b>D7. Initiative and motivation at work</b>

11.	Course Structure				
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Methods	Assessment Methods
1-2	8		Introduction , structure of a c++ program , keyword and identifiers	give the lecture using PowerPoint	quizzes
3-4	8		Flowchart and algorithm	give the lecture using PowerPoint	quizzes
5-6	8		Operator and expression	give the lecture using PowerPoint	quizzes
7-9	8		Control and Selection statement	give the lecture	quizzes



				using PowerPoint	
8-14	22		Iterations	give the lecture using PowerPoint	quizzes
15-18	12		Array	give the lecture using PowerPoint	quizzes
19-21	12		Function	give the lecture using PowerPoint	quizzes
22-23	4		Structures and unions	give the lecture using PowerPoint	quizzes
24-25	4		String handling	give the lecture using PowerPoint	quizzes
26-27	4		Pointer	give the lecture using PowerPoint	quizzes
28-30	12		File handling	give the lecture using PowerPoint	quizzes

12. Infrastructure	
<b>Required reading:</b> •CORE TEXTS •COURSE MATERIALS • OTHER	1."starting with C++", Tony Gaddis,Scotte Jones,5th ed.,Pearson, 2004. 2. "C++ the complete refrence", Herbert Schildt, 3rd ed., McGraw-Hill,1998.
<b>Special requirements</b> (include for example workshops, periodicals, IT software, websites)	International Journal of Advance Research in Computer Science and Management Studies
<b>Community-based facilities</b> )include for example, guest Lectures, internship, field studies)	“Learn C++” <a href="http://www.tutorialspoint.com/cplusplus/index.htm">http://www.tutorialspoint.com/cplusplus/index.htm</a>



### 13. Admissions

#### Pre-requisites

Minimum number of students	100
Maximum number of students	500

