## TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## 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 | University of Anbar |
| :--- | :--- |
| 2. University Department/Centre | College of computer science and information <br> technology <br> Information System Department |
| 3. Course title/code | Structure Programming (C++) I |
| 4. Programme(s) to which it contributes | First stage |
| 5. Modes of Attendance offered | Theoretical and practical |
| 6. Semester/Year | First Semester 2022\2021 |
| 7. Number of hours tuition (total) |  |
| 8. Date of production/revision of this <br> specification |  |
| 9. Aims of the Course |  |
| Learn how to use the algorithms |  |
| How to draw a flowcharts |  |
| The main principles of programming and the development of programming languages week |  |
| Learn the principles of Structure programming |  |
| Learn How to programming with C++ |  |

## 11. Course Structure

| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First Week | 3 h | Program ming principle | Overview to Programming Language | Explain Menu, Getting Started with C++. |  |
| Second Week | 3 h. | $\begin{aligned} & \text { Algorith } \\ & \text { ms } \end{aligned}$ | Algorithms and Flow Charts | Algorithms and Flow Charts |  |
| Third Week | 3 h. | C++ program ming | Character set Identifiers Getting Started with C++. Variables Declaration | Character set <br> Identifiers Getting <br> Started with $\mathrm{C}++$. <br> Variables <br> Declaration | Quiz |
| Fourth Week | 3 h. | Variables in C++ | Variables Constants In Arithmetic Operations The "math.h" Library Unary Minus Increment and /decrement Operators. | In program Explain Variables Constants Program Arithmetic Operations The "math.h" Library |  |
| Fifth Week | 3 h. | Unary Operator s | Unary Minus IncrementP and /decrement Operators. | Program of Unary Minus Increment and /decrement Operators. |  |
| Sixth Week | 3 h. | Operatio nal Operator s | Operational Assignment <br> Operators Relational <br> Operators Logical <br> Operators. Bitwise O <br> Operator Logical <br> Operators. Bitwise <br> Operator  | Program <br> Operational <br> Assignment <br> Operators <br> Relational <br> Operators Program <br> Logical Operators. <br> Bitwise Operator | Quiz |
| Seventh Week | 3 h. | Selection Statemen ts | Selection Statements the <br> Single. TheSwitch <br> Selection <br> Statement  <br> (Selector   | Programs in Lectures |  |
| Eighth Week | 3 h. | $\begin{aligned} & \text { If } \\ & \text { Statemen } \end{aligned}$ ts | Nested If and If/else <br> Statements If Statement <br> Structure Conditional <br> Statement | Programs in Lectures |  |
| Ninth Week | 3 h. | To evaluate the students | Monthly exam |  | By exam |
| Tenth Week | 3 h. | Switch Statemen ts | The Switch Selection Statement | Programs in Lectures |  |
| Eleventh Week | 3 h. | Loop Statemen ts | While Repetition <br> Structure. Do/While <br> Statement for Statement | Programs in Lectures |  |
| Twelfth Week | 3 h. | $\begin{aligned} & \text { Do/Whil I } \\ & \text { e } \\ & \text { Statemen } \end{aligned}$ | Do/While Statement for Statement | Programs in Lectures |  |


| Thirteenth <br> Week | 3 h. | For <br> Statemen <br> t | For Statement | Programs in <br> Lectures |  |
| :---: | :--- | :--- | :--- | :--- | :--- |
| Fourteenth <br> Week | 3 h. | Nested <br> loop | Break and Continue <br> Control Statements Nested <br> Loops | Programs in <br> Lectures |  |
| Fifteenth <br> Week | 3 h. | To <br> evaluate <br> the <br> students | Monthly exam | By exam |  |

## 12. Infrastructure

Required reading:
Mastering C++, shomme's series

- CORE TEXTS
- COURSE MATERIALS
- OTHER

Special requirements (include for example workshops, periodicals,
https://www.learncpp.com/

IT software, websites)
Community-based facilities (include for example, guest
Lectures, internship, field
studies)

| 13. Admissions |  |
| :--- | :--- |
| Pre-requisites |  |
| Minimum number of students | $25-30$ |
| Maximum number of students | $50-60$ |

