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	Information system
3. Course title/code	znxlmo4
4. Programme(s) to which it contributes	classroom
5. Modes of Attendance offered	e-learning
6. Semester/Year	2st smester
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	

9. Aims of the Course
1. The student will be able to understand and understand the mechanics of their algorithmic data repair problems in terms of their degree of complexity.
2. Trees, how to build them in C++, self-recall, and how to deal with them
3.. that the student be able to understand the working mechanics of algorithms for data structures
4. What are the best search algorithms, and the criteria for choosing the type of algorithm?
5.sorting algorithm

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding This article is based on knowledge
B. Subject-specific skills Learn to program in C++ in a professional way
Teaching and Learning Methods
Understand code and algorithms and implement them in different ways and new steps
Assessment methods
Each student performs part of a problem and then gives a set of questions to each lecture for the student to solve
C. Thinking Skills The student will have the ability to imagine and suggest hybrid methods between data structures, for example, a hybrid data structure that combines two different models of data structures. And also ways to embed and deal with evidence
Teaching and Learning Methods
The giver and the receiver Writing the code Write action steps in an algorithm
Assessment methods
Each student performs part of a problem and then gives a set of questions to each lecture for the student to solve

D. General and Transferable Skills (other skills relevant to employability and personal development)

This course opens the horizon for the student to represent data in digital form and deal with it professionally

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	2	The general structure of the subject and the study vocabulary	general vocabulary	An individual explanation from the instructor	
2	2	Define algorithms, their properties, and how to write them Know the	Introduction to the article	adopt scheme	
3	2	complexity of the algorithm in terms of time and execution	Calculate the complexity of the algorithm in terms of time and steps	Solve a set of code collectively	
4	2	Recursion	Recursion	Converting a normal code to a Recursion code	
5	2	Study all previous lectures with homework	Solve the assessment methods in the previous 3 lectures	Give other examples	
6	2	How to choose the type of sorting algorithm according to the data	Introduction for sorting algorithm	Solve numeric examples	
7	2	Understand the workings of the algorithm	selection sort algorithm	Solve numeric examples	
8	2	Understand the workings of the algorithm	Insertion sort algorithm	Solve numeric examples	

9	2	Understand the workings of the algorithm	Bubble sort algorithm	Solve numeric examples	
10	2	Study all previous lectures	Solve the assessment methods in the previous 3 lectures	Give other examples	
11	2	Exam			
12	2	Representing data as a tree	the trees	Convert tree to code	
13	2	Programmatically represent the tree	Print, delete and add to the tree in the form of code	adopt scheme give examples	
14	2	How to search in trees	search algorithms	Solve a set of code collectively	
15	2	second semester exam			

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	عصام الصفار, هياكل البيانات,2001
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	https://www.programiz.com/dsa/algorithm • https://www.tutorialspoint.com/data_structures_algorithms/index.htm

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	33