	Ministry of Higher Education and Scientific Research. University of Anbar. Department of Information System.	

MODULE DESCRIPTOR FORM

Module Information					
Module Title	DATA STRUCTURES AND ALGORITHMS		**Module Type**	TYPE B	
Module Code	CSIT201		**ECTS Credits**	6	
Module Level	UGII		**Semester of Delivery**	Three	
Administering Department	IS		**Faculty**	CSIT	
Module Leader	Farah Maath Jasem		**e-mail**	farahmaath86@uoanbar.edu.iq	
Module Leader's Acad. Title	Assistant Lect.		**Module Leader's Qualification**	M.Sc.	
Module Tutor			**e-mail**		
Peer Reviewer Name	/		**e-mail**	/	
Review Committee Approval	DD/MM/YY		**Version Number**	2.0	

Relation With Other Modules	
Pre-requisites	CSIT112
Co-requisites	/
Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	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

Module Learning Outcomes	A- Knowledge and Understanding This article is based on knowledge B. Subject-specific skills Learn to program in C++ in a professional way
Indicative Contents	

Learning and Teaching Strategies

Strategies	The main strategy that will be adopted in delivering this module are: 1. Power point presentation (Data show). 2. Explanation on the white board using different color markers. 3. Discussions with the student during teaching. 4. Interaction with students through daily problems practice through lecture. 5. Solve different problems with more exercises. 6. Submit assignment that develop student learning.

Module Delivery

Structured workload (h/w)	4.4
Unstructured workload (h/w)	5.6
Total workload (h/w)	10

Module Evaluation

	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Quizzes	3	6% (6)	3,7 and 11	
Assignments	2	6% (6)	2 and 12	
Projects / Lab.	1	15% (15)	Continuous	
Report	1	5% (5)	13	
Midterm Exam	2 hr	18% (18)	7	
Final Exam	3 hr	50% (50)	16	
Total		100% (100 Marks)		

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts		Yes/No
Recommended Texts		Yes/No
Websites		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	The general structure of the subject and the study vocabulary. general vocabulary. general vocabulary
Week 2	Define algorithms, their properties, and how to write them Introduction to the article.
Week 3	complexity of the algorithm in terms of time and execution Calculate the complexity of the algorithm in terms of time and steps
Week 4	Recursion
Week 5	Study all previous lectures with homework Solve the assessment methods in the previous 3 lectures
Week 6	How to choose the type of sorting algorithm according to the data Introduction for sorting algorithm
Week 7	**Mid-Term Exam**
Week 8	Understand the workings of the algorithm. selection sort algorithm
Week 9	Insertion sort algorithm
Week 10	Bubble sort algorithm
Week 11	Solve the assessment methods in the previous 3 lectures
Week 12	Representing data as a tree. the trees

Week 13	Programmatically represent the tree. Print, delete and add to the tree in the form of code
Week 14	How to search in trees. search algorithms
Week 15	**Preparatory Week**
Week 16	**Final Exam**

APPENDIX:

UNIVERSITYof Anbar				
GRADING SCHEME				
Group	**ECTS Grade**	**% of Students/Marks**	**Definition**	**GPA**
Success Group (50 - 100)	**A** - Excellent	Best 10%	Outstanding Performance	**5**
	B - Very Good	Next 25%	Above average with some errors	**4**
	C - Good	Next 30%	Sound work with notable errors	**3**
	D - Satisfactory	Next 25%	Fair but with major shortcomings	**2**
	E - Sufficient	Next 10%	Work meets minimum criteria	**1**
Fail Group (0 – 49)	**FX** – Fail	(45-49)	More work required but credit awarded	
	F – Fail	(0-44)	Considerable amount of work required	
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.