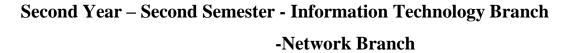
University of Technology

Computer Engineering Department

Academic Year 2023 - 2024





CE238	Data Structure and algorithms	2 Hours/Week	2 Units
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Contents of Syllabus		Hours	
• N	Math review, logs, series, recurrence relations, proof by induction.	2	
	Algorithm Analysis, max subsequence sum, longest increasing ubsequence,	4	
	Lists and garbage collection Multilinked structures and dynamic torage allocation	2	
• L	Linked lists	2	
• S	Stacks,	2	
• (Queue	2	
• p	priority queues	2	
• T	Trees, balanced trees, AVL Trees, B-Trees, Red-Black trees.	4	
• H	Hashing, linear probing, quadratic probing, double hashing.	4	
• H	Heaps, Binary Heaps	2	
• S	Sorting, Insertion Sort, Shell's Sort, Quicksort, Heapsort, Mergesort	4	

References

- 1. C++ Programming: Program Design Including Data Structures by D.S. MALIK, fourth Edition, 2009.
- 2. C++ Plus Data Structures by N. Dale ,fourth Edition,2010,Jones and Bartlett Publishers
- 3. Data Structures and Algorithms in C++ by Adam Drozdek , Second Edition, 2001.

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