Contact Information

Instructor: Dr Nada Attar

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https://www.sjsu.edu/people/nada.attar/ (https://www.sjsu.edu/people/nada.attar/)

Office Hours

Monday, 2:45 PM to 3:45 PM, MH218 (In Person)

Tuesday, 2:45 PM to 3:45 PM, Zoom

https://sjsu.zoom.us/j/83923495067?pwd=mAsZRNPbkh3Y9dG8FP7dPdpqSTzK9x.1
(https://www.google.com/url?q=https://sjsu.zoom.us/j/83923495067?

Letter Graded

Classroom Protocols

- The lectures for this course will be conducted in person. Regular class attendance is highly recommended and strongly encouraged.
- This section includes one online office hour and one in-person office hour each week. During online office hours, please ensure your camera is turned on, if possible.
- Do not publicly share or upload any course materials, such as exam questions, lecture notes, or solutions, without the instructor's consent. Sharing course materials without permission is strictly prohibited.

6. Solve recurrence relations representing the running time of an algorithm designed using a divide-and-conquer strategy
7. Understand the basic concept of NP-completeness and realize that they may not be able to efficiently solve all problems they encounter in their careers
8. Understand algorithms designed using greedy, divide-and-conquer, and dynamic programming techniques

Course Materials

Introduction to Algorithms

Cormen, Leiserson, Rivest, and Stein
MIT Press, 2009
3rd Edition
ISBN-10: 0262033844ISBN-13: 978-0262033848

You can find errata (bug reports) for the book http://www.cs.dartmouth.edu/~thc/clrs-bugs/bugs-3e.php,for whichever printing of the book you get

Course Requirements and Assignments

Grading Information

Criteria

Your grade for the course will be based on the following components:

Assignments	20%		
Lab and Class Activities	10 %		
Quizzes			

02/03/2025 10:30 AM - 11:45 AM	Divide and Conquer technique: Merge Sort, other examples	
02/05/2025 10:30 AM - 11:45 AM	Solving recurrences	
02/10/2025 10:30 AM - 11:45 AM	Master Theorem	
02/12/2025 10:30 AM - 11:45 AM	Heapsort, Priority Queues	
02/17/2025 10:30 AM - 11:45 AM	Sorting in linear time	
02/19/2025 10:30 AM - 11:45 AM	Counting sort, Radix Sort	
02/24/2025 10:30 AM - 11:45 AM		
02/26/2025 10:30 AM - 11:45 AM	Hash Tables	
03/03/2025 10:30 AM - 11:45 AM	Quicksort	

03/05/2025 10:30 AM - 11:45 AM	Binary Search Trees	
03/10/2025 10:30 AM - 11:45 AM	Red-Black trees	
03/12/2025 10:30 AM - 11:45 AM	2-3 Trees	
03/17/2025 10:30 AM - 11:45 AM	Dynamic Programming	
03/19/2025 10:30 AM - 11:45 AM	Dynamic Programming	
03/24/2025 10:30 AM - 11:45 AM	Elementary Graph Algorithms, Undirected graph	
03/26/2025 10:30 AM - 11:45 AM	BFS, DFS	
03/31/2025 10:30 AM - 11:45 AM	Spring Break	
04/02/2025 10:30 AM - 11:45 AM	Spring Break	

04/07/2025 10:30 AM - 11:45 AM	BFS, DFS	
04/09/2025 10:30 AM - 11:45 AM		
04/14/2025 10:30 AM - 11:45 AM	Directed graph, Topological Sort	
04/16/2025 10:30 AM - 11:45 AM	Strongly connected components	
04/21/2025 10:30 AM - 11:45 AM	Review	
04/23/2025 10:30 AM - 11:45 AM	Review	
04/28/2025 10:30 AM - 11:45 AM	Minimum Spanning Tree – Prim's and Kruskal's Algorithm	
04/30/2025 10:30 AM - 11:45 AM	Single Source Shortest Paths: Dijkstra's Algorithm	
05/05/2025 10:30 AM - 11:45 AM	NP-complete problems	

05/07/2025 10:30 AM - 11:45 AM	NP-complete problems	
		Friday, May 16 | 10:45 AM-12:45 PM