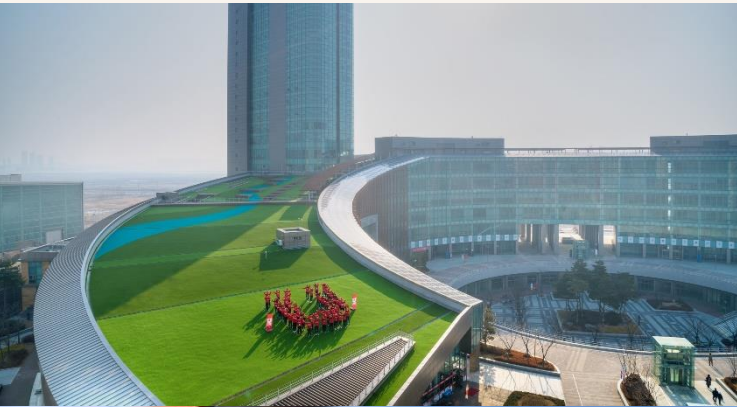


Habtamu Minassie Aychew, PhD
Department of Electrical and Computer Engineering



Department of Electrical and Computer Engineering
Spring 2022

Course Title: Introduction to Algorithms and Data Structure
Course Number: CS 2420

Instructor: Habtamu Minassie Aychew
Email: habtamu.aycheh@utah.edu
Office : U759

Course Objective

- The course provides the basics of efficient computational problems solving techniques.
 - Algorithms for solving problems efficiently
 - Data structures for efficiently storing, accessing, and modifying data
 - Algorithms and data structures are two topics that are almost always taught together
 - Algorithms make use of data structures and data structures need algorithms to function

Syllabus

Week	Day	Date	Topic
1	Mon	21/02/2022	Introduction
	Wed	23/02/2022	C++ Quick Review I
2	Mon	28/02/2022	Reading Day
	Wed	02/03/2022	C++ Quick Review II
3	Mon	07/03/2022	C++ Quick Review III
	Wed	09/03/2022	-Presidential Election day
4	Mon	14/03/2022	Computational complexity analysis
	Wed	16/03/2022	<ul style="list-style-type: none"> Asymptotic Analysis Algorithm Analysis
5	Mon	21/03/2022	Array
	Wed	23/03/2022	Sorting
6	Mon	28/03/2022	
	Wed	30/03/2022	Spring Recess
7	Mon	04/04/2022	List <ul style="list-style-type: none"> Dynamic Array Linked List
	Wed	06/04/2022	
8	Mon	11/04/2022	
	Wed	13/04/2022	

Mid Term Exam

Week	Day	Date	Topic
9	Mon	18/04/2022	Stack
	Wed	20/04/2022	
10	Mon	25/04/2022	Queue
	Wed	27/04/2022	
11	Mon	02/05/2022	Priority Queue
	Wed	04/05/2022	Binary Heap
12	Mon	09/05/2022	Buddha's Birthday
	Wed	11/05/2022	More on Binary Heap
13	Mon	16/05/2022	Heap Sort
	Wed	18/05/2022	Tree
14	Mon	23/05/2022	
	Wed	25/05/2022	Graph
15	Mon	30/05/2022	
	Wed	01/06/2022	Local Election Day
16	Mon	06/06/2022	Memorial Day
	Wed	08/06/2020	

Final Exam

Class Logistics

■ Class

- Time: Monday & Wednesday: 1:00pm – 2:20pm

- Location: U302

■ Lab

- Time: Monday: 2:30pm – 3:20pm

- Location: LAB507

■ Office Hour

- By appointment

■ Course materials

- Uploaded to Canvas

- Please check canvas for lecture slides before class
- quizzes, assignments, etc..

- GitHub: <https://github.com/habtamuMin/cs2420>

Evaluation

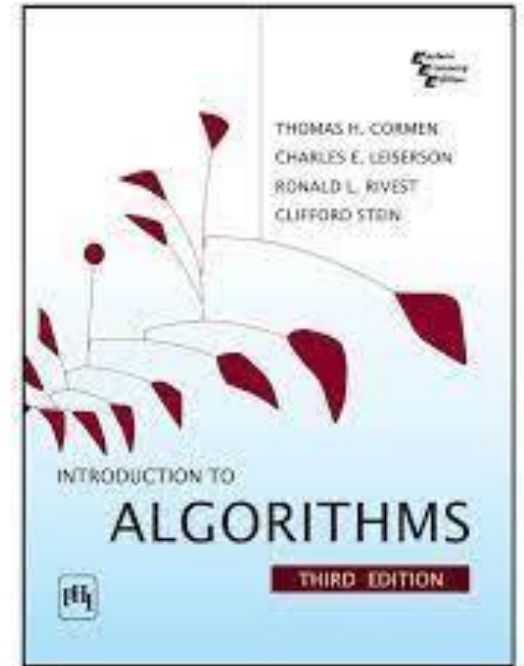
- Class activity: 10%
- Quiz : 10%
- Lab assignments : 30%
- Mid test : 25%
- Final test: 25%

Academic integrity

- You have to be honest in all your academic course work
- Violation will be recorded in your transcript
 - <https://regulations.utah.edu/academics/6-400.php>
- Submit assignment by the deadline
- You must attend classes and lab sessions to successfully complete the course. Note that labs are designed to help you get hands-on-practice!

Textbook

- Textbook: Introduction to Algorithms
 - 3rd Edition (The MIT Press)
 - This is the “bible” of algorithm book



- Problem Solving with Algorithms and Data Structures using C++

<https://runestone.academy/ns/books/published/cppds/index.html>

**Good luck and
have a great
semester!**

