

# Data Structures and Algorithm Analysis I

CS 3353: Fall 2020  
Department of Computer Science  
Oklahoma State University

August 17, 2020

## Class Time

Monday, Wednesday 4:00 PM - 5:15 PM.

## Location

Stillwater - Engineering North 450

## Instructor Information

- Instructor: Esra Akbas
- Email: eakbas@okstate.edu
- Online Office hours : Monday - 2:00 - 3:30 PM, Wednesday - 1:30 PM - 03:00 PM

## TA Information

- TA: Ifte Islam
- Email: ifte.islam@okstate.edu
- Online Office Hours: Monday 10:00 Am - 12:00 PM

## Class Homepage

The class will also have a Canvas page that contains all information related to this class including lecture slides, assignments, grades and announcements.

## Course Objectives

Upon successful completion of this course of study, the student will be familiar with:

- understand basic data structures and abstract data types including stacks, queues, lists, sets, maps and graphs.
- use recursion as a powerful problem solving technique in design and development of data structures and understand when it is not appropriate to use.
- gain an appreciation of the variety, theoretical nature, and practical uses of data structures.
- analyze the efficiency of data structures and select the most appropriate data structure for applications.
- build data structures and use them as building blocks to form more complex and advanced data structures in a hierarchical manner.

# Course Description

As the first introductory course for data structure and algorithm, CS3353 studies the fundamentals of data structures and algorithm. Materials include, but are not limited to storage, structures(link list, stack, queue,) data and information structures, list processing, trees and tree processing, graphs and graph processing, searching, and sorting.

Tentative Class schedule can be found on [this LINK](#)

## Textbook

### The recommended textbook

“Cormen, Leiserson, Rivest, and Stein. Introduction to Algorithms, ISBN: 978 0 262 03384 8, 3/E, MIT Press, 2009”.

### References

M. T. Goodrich, R. Tamassia and M. H. Goldwasser, Data Structures and Algorithms in Java. Sixth Edition, Wiley. ISBN: 978-1-118-77133-4

In addition to these you can use the lecture notes, third party online documentation and extra reading material handed out in class.

## Prerequisites

CS 2133, CS 3653

## Format and activities

The course is lecture-based with two midterm and one final exams. There are individual assignments.

- **Lectures and Class Participation:** We strongly encourage (not required) students to attend classes, because effective lectures rely on students’ participation to raise questions and contribute in discussions. We will strive to maintain interactive class discussions if possible. We will provide lecture notes before class, which will be posted on the Canvas page.
- **Questions:** We encourage students discussing their questions and problems first with their group peers and classmates. This way, you can get immediate help and also learn to communicate “professionally” with your peers. In any case for more thorough discussion, come to the office hours of TA’s and the instructor’s. Any announcement will be posted on the course page and Canvas. Make sure to check it frequently enough to stay informed.
- **Assignment:** There will be a 5 written assignments spaced out over the course of the semester. All the assignments should be done individually by the students. Assignments should be submitted before the due dates on Canvas.

## Grading Policy

The final course grade will be computed as follows:

Assignments	5*10=50%
Midterm	15*2=30%
Final	20%

Requests for regrading should be within a week of grades being posted on Canvas.

The final grade will be calculated according to your numerical average as shown in the table below.

A	90-100
B	80 - 89
C	70 - 79
D	60 - 69
F	0 - 59

## Late Assignment Policy

- There will be %15 penalty for each day of late submission. More than 3 day Late assignments will not ordinarily be accepted. If, for some compelling reason, you cannot hand in an assignment on time, please contact the TA or instructor as far in advance as possible. Written assignments;
- No make-up exams (except under extremely unusual circumstances).

## Academic Dishonesty

The Computer Science departmental policy for academic dishonesty and misconduct applies to this class. In addition, a student attempting to gain unfair advantage by keeping an examination paper longer than the time permitted is guilty of academic misconduct. Assignments/projects/exams are to be done individually, unless specified otherwise. It is a violation of the Academic Honor Code to take credit for the work done by other people. It is also a violation to assist another person in violating the Code. Examples of cheating behaviors include:

- Discuss the solution for a homework question.
- Copy programs for programming assignments.
- Turning in group work for assignments where you are expected to work as an individual.
- Use and submit existing programs/reports on the world wide web as written assignments.
- Submit programs/reports/assignments done by a third party, including hired and contracted.
- Plagiarize sentences/paragraphs from others without giving the appropriate references.

Penalty for violating the Academic Honesty: Students who do not comply with the described policy will receive a grade of F in the course. Furthermore, the case will be reported to the University Officials

## Covid-19 Policy

All OSU students, employees, and visitors must wear a facial covering (mask) upon entering any campus building and when near or encountering others. This includes during class. Students who fail to wear their facial covering in class will be asked to leave the classroom and return after retrieving their facial covering.

Students who continuously fail to comply with this university expectation will be referred to Student Conduct for the Student Code of Conduct's Failure to Comply policy.

COVID-19 can be spread when people are asymptomatic, which means they do not know they are sick yet. Wearing facial coverings has been shown to reduce the spread of COVID-19 to others. It is important that OSU is a safe place to work and study, and taking this step creates a safe environment for all of us as advised by the CDC.

[More on facial covering guidelines](#)

## Accommodation for Disabilities

The Computer Science departmental policy for students with disabilities applies to this class. Anyone who has a need for examinations by special arrangements should see the instructor as the earliest possible opportunity during scheduled office hours.

## Syllabus Change Policy

This syllabus is a tentative guide for the course and is subject to change. You'll be informed in class if there's a change in the syllabus.

\*Syllabus Attachment: [Can be found here](#)