

CS 3353: Data Structures and Algorithm Analysis I Spring 2021

Course Information (Last Revised on January 25, 2021)

0. Class Meeting Times/Places and Physical Class-Attendance Arrangement

1. Lecture: Monday/Wednesday 2:30 - 3:45; Nancy Randolph Davis West 201
2. Current enrollment: 60; seating capacity: at least 60
Read below on “Course Website, Lecture Notes, Conference Videos and Recordings”.

1. General Information

	<u>Instructor: H. K. Dai</u>	<u>Teaching Assistant: K. Saifuddin</u>
Office Location:	Mathematics, Statistics, and Computer Science Building Room 209	
Office Hours:	Through Canvas-Conference and email Thursday 6:30 pm - 7:15 pm	Through Canvas-Conference and email Tuesday/Thursday 4:00 - 4:45
Office Phone:	744-7207	
email Address:	dai@cs.okstate.edu	ksaifud@ostatemail.okstate.edu
Universal Resource Locator:	http://www.cs.okstate.edu/~dai/	

2. Course Description in Current University Catalog

CS 3353: Data Structures and Algorithm Analysis I. Prerequisites: CS 2133 (Computer Science II) and CS 3653 (Discrete Mathematics for Computer Science). Storage, structures, data and information structures, list processing, trees and tree processing, graphs and graph processing, searching, and sorting.

3. Course Goals

Study of analysis and implementation of data structures and algorithms. Basic techniques for asymptotic analysis of algorithm-time bounds. Fundamental and advanced data structures. Basic algorithm-design techniques such as divide-and-conquer, dynamic programming, and greedy techniques for optimization. Applications of these design and analysis techniques to fundamental problems such as sorting, searching, and graph algorithms.

4. Course Materials/References

1. Text: [CLRS09] T. Cormen, C. Leiserson, R. Rivest, and C. Stein. *Introduction to Algorithms*. MIT Press, Third Edition, 2009.
2. Text Web site: <http://mitpress.mit.edu/algorithms/>

5. Course Website, Class-Streaming, Recording-Videos, and Lecture Notes

Our course Website is maintained on the campus-wide online learning system Canvas, which can be accessed through “<https://canvas.okstate.edu>”.

Since the information in our class pages will be constantly updated, please check in Canvas regularly (Announcements, Assignments, Conferences, Modules, etc.).

General notes:

1. Our regular classes (Monday/Wednesday 2:30 - 3:45) will be live-streamed via Canvas-Conferences program, and their recording-videos will be available in Canvas-Conference and/or Canvas Module.
2. All class materials (announcements, lecture notes, assignments, etc.) will be disseminated on Canvas.

6. Homework and Examinations

There will be about six homework assignments, one test, and one final examination. The formats and details of the test/examination will follow university guidelines and will be announced.

7. Course Grade

The course grade is based on the homework (40%), test (25%), and final examination (35%). The passing letter-grade is determined by the following partition of the course grades:

D : [50, 60); C : [60, 70); B : [70, 85); and A : [85, 100]

8. Miscellaneous

1. **Lectures:** Lectures are not mandatory, but historically, students with active attendance/coursework have done significantly better on examinations than their less frequently attending classmates.
2. **Homework:** Problem sets form an important part of the learning in the course, and thus, you are required to do them in order to pass.
3. **Collaboration and Sharing:** You are encouraged to discuss approaches with other students on solutions of assigned coursework, but you must write up solutions on your own **independently** and acknowledge your source in the write-up for each problem. If you obtain a solution with help (e.g., through library or publicly available work, or academic work by other students — whether in this or previous semesters), acknowledge your source, and write up the solution on your own.

Notes: Read relevant documents/guidelines about academic integrity at Oklahoma State University in Academic Integrity Resources at the following URL:

<https://academicaffairs.okstate.edu/academic-integrity/index.html>

9. Student Disability Services

Student Disability Services and other Student Services are committed to providing support services to students with physical and learning disabilities. Please advise the instructor of desired academic accommodations, and notify Student Disability Services.

10. Academic Dishonesty or Misconduct

Refer to the section in “University Academic Regulations” in current “University Catalog” (<http://registrar.okstate.edu/>)

11. Adding/Dropping/Withdrawing, Important Dates, and Syllabus Attachment

1. **Test and Final Examination:** Tentative date for the test is March 10 (Wednesday), 2021.
The exact format and details of the final examination will be announced. The examination will be scheduled on the same date stated in the university’s “Spring 2021 Final Exam Schedule”: 2:00 – 3:50 pm, May 3 (Monday), 2021.
Refer to the section in “Spring 2021 Final Exams”:
https://registrar.okstate.edu/class_schedule_short_courses/exams.html
2. **Adding/Dropping/Withdrawing and Important Dates:** Refer to the section in “Academic Calendar”:
<http://registrar.okstate.edu/>
3. **Syllabus Attachment:** Refer to:
<https://academicaffairs.okstate.edu/student-support/index.html>