

Online/Blended Course Syllabus

Course Information

Course Number/Section CS 5343/001 (MW 1pm-2:15pm)
Course Title Algorithmic Analysis and Data Structures
Term Fall 20

Professor Contact Information

Professor Mr. Greg Ozbirn
Office Phone 972-883-4725
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Email Address ozbirn@utdallas.edu
Office Location ECSS 3.608
Online Office Hours 2:30pm – 3:30pm, MW
Other Information MS Teams

Course Modality and Expectations

Instructional Mode	Remote: Synchronous online learning at the day and time of the class. The instructor delivers the instruction from home or the office. Students complete the course at a distance.
Course Platform	MS Teams. Look for an e-mail with the access code before the first class.
Expectations	You may attend the live session and ask questions during the lecture, or you may view a recording.
Asynchronous Learning Guidelines	You may choose an asynchronous mode at any time. In this case, you should view the recordings within 24 hours of the live session, finish assignments when due, and notify the instructor if you cannot take an exam at the time of the class. See this link for general information: https://www.utdallas.edu/fall-2020/asynchronous-access-for-fall-2020/

COVID-19 Guidelines and Resources

The information contained in the following link lists the University's COVID-19 resources for students and instructors of record.

Please see <http://go.utdallas.edu/syllabus-policies>.

Class Participation

Regular class participation is expected regardless of course modality. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student Accessibility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student Accessibility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

The instructor may record meetings of this course. Any recordings will be available to all students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student Accessibility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student Accessibility accommodation. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Materials

The Instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student Accessibility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Prerequisites: CS 5303 Computer Science I
CS 5333 Discrete Structures

Course Description

Formal specifications and representation of lists, arrays, trees, graphs, multilinked structures, strings and recursive pattern structures. Analysis of associated algorithms. Sorting and searching, file structures. Relational data models.

Student Learning Objectives/Outcomes

- 1) Ability to use/analyze Asymptotic notations, recurrences, algorithm analysis
- 2) Ability to use/analyze Lists, stacks, queues, hashing, priority queues
- 3) Ability to use/analyze Binary search trees, Balanced binary search trees
- 4) Ability to use/analyze Graphs, Depth-first search, Topological ordering
- 5) Ability to use/analyze Breadth-first search, Dijkstra's algorithm
- 6) Ability to use/analyze Algorithms of Prim and Kruskal, Disjoint-set Union-Find problem
- 7) Ability to understand algorithm design techniques

Required Textbooks and Materials*Required Texts*

Data Structures and Algorithm Analysis in Java, (Third Edition), by Mark Allen Weiss, Published by Addison-Wesley, 2011, ISBN-10: 0132576279, ISBN-13: 978-0132576277

Required Materials

N/A

Suggested Course Materials*Suggested Readings/Texts*

N/A

Suggested Materials

N/A

Textbooks and some other bookstore materials can be ordered online or purchased at the [UT Dallas Bookstore](#).

Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the [Getting Started with eLearning](#) webpage.

Course Access and Navigation

This course can be accessed using your UT Dallas NetID account on the [eLearning](#) website.

Please see the course access and navigation section of the [Getting Started with eLearning](#) webpage for more information.

To become familiar with the eLearning tool, please see the [Student eLearning Tutorials](#) webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The [eLearning Support Center](#) includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the [Student eLearning Tutorials](#) webpage for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

Distance Learning Student Resources

Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the [eLearning Current Students](#) webpage for more information.

Server Unavailability or Other Technical Difficulties

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online [eLearning Help Desk](#). The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

Academic Calendar

Class	Date	Material Covered
1,2	Aug 17, 19	Introduction, Chapter 1
3,4	Aug 24, 26	Chapter 1, Chapter 2
5,6	Aug 31, Sep 2	Chapter 2, Chapter 3
7	Sep 7*, 9	Holiday*, Chapter 3
8,9	Sep 14, 16	Chapter 3, Chapter 4
10,11	Sep 21, 23	Chapter 4
12,13	Sep 28, 30	Chapter 5
14,15	Oct 5, 7	Review, Exam 1 (ch. 1-5)
16,17	Oct 12, 14	Chapter 6
18,19	Oct 19, 21	Chapter 6, Chapter 7
20,21	Oct 26, 28	Chapter 7
22,23	Nov 2, 4	Chapter 8
24,25	Nov 9, 11	Chapter 9
26,27	Nov 16, 18	Chapter 9
28,29	Nov 23, 25	Review, Exam 2 (ch. 6-9)

Proctored Final Exam Procedures

UTD has purchased exam proctoring software which requires a webcam. It is yet to be determined if this software will be utilized for our exams, but please notify the instructor within the first week of classes if you are unable to use a webcam for exams.

Grading Policy

Letter grades are determined using the standard 10-point range for each letter, then dividing this range into three equal parts to determine the +/- designation.

The following weights are used in determining the final score.

Exam 1	20%
Exam 2	20%
Assignment Average	30%
Project Average	30%

Course Policies

Make-up exams

Exams must be taken on time. Exceptions require advance approval by the instructor. It is up to the instructor to determine whether an exception will be made, and will depend largely on proof of extraordinary circumstances. Otherwise, a missed exam will either incur a substantial penalty or be recorded as a zero.

Extra Credit

The lowest assignment score and the lowest project score are dropped. No other bonus work, make-up work, dropped scores, or other means of raising your grade should be expected. At the end of the semester, it is possible that grades may be curved, but a curve should not be expected.

Late Work

Due dates will be followed by a 24-hour grace period. After the 24-hour period ends, the score is recorded as a zero.

Special Assignments

N/A

Class Participation

If a student appears to have stopped participating, for example, no longer submitting assignments, the student will be reported to the department for follow-up.

Classroom Citizenship

All students are expected to conduct themselves appropriately in the course, including in the live lectures as well as in communication with the instructor and grader(s).

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

Academic Support Resources

The information contained in the following link lists the University’s academic support resources for all students.

Please go to [Academic Support Resources](#) webpage for these policies.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.

Please go to [UT Dallas Syllabus Policies](#) webpage for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.