

Texas Wesleyan University Course Syllabus

Fall 2018

Course: CSC2320-01
(Data Structures)

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Meet: STC111, TTH 1:30pm

Office: McFadden 103
Office Hours: M-F: 11-12, MWF 1-2
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Course Description

Prerequisite: CSC1322

An introduction to abstract data types, algorithms and computational complexity, and implementation of data types and algorithms in programs. Data types include arrays, stacks, queues, linked lists, trees, and graphs. Sorting and searching algorithms.

Learning Objectives

This course is intended for students who are majored in computer science or interested in computer programming. Students completing this course will *a)* Become familiar with data structures such as stacks, queues, lists, trees, heaps, and graphs as well as searching and sorting algorithms. *b)* Be able to implement these data structures and algorithms in object-oriented programming languages such as C++.

Required Materials

- **C++ Plus Data Structures** by Nell Dale, Sixth edition, Jones and Bartlett Publishers, 2018. (ISBN-13: 9781284089189)
- Instructor's handouts

Instructional Methods

The instructions will be conducted through classroom lectures and discussion. Students will be assigned programming assignments, homework and tests.

Class Schedule ¹

Week	Topic
Week 1-2:	Introduction to objects and basic data types
Week 3-4 :	Stacks and Queues
Week 5-6:	Linked lists
Test 1	
Week 7-8:	Recursion
Week 9-11:	Trees, heaps, and graphs
Test 2	
Week 12-13:	More graphs
Week 14-15:	Sorting and search algorithms
Final Exam	

Evaluation and Grading

Category	Weight
Programming Assignments	40%
Class Participation	5%
Tests	30%
Final	25%

Assignments will be weighted by difficulty. Programming assignments are normally required to submit to Blackboard by the midnight of the due day. No late assignments will be accepted.

Absence Policy

The absence policy specified in the current Texas Wesleyan University Catalog and Student Handbook will be used. Regular and punctual attendance at all scheduled classes is expected of all students. University regulations authorize absences of students when representing the University (e.g. at athletic, student government, student development, or fine arts events). Other authorized absences are those that may be necessary to fulfill course requirements. Unless otherwise specified by the instructor in the course syllabus, **the maximum number of authorized absences during one semester is five for a Monday-Wednesday-Friday class, three for a Tuesday-Thursday class, and two for a class or laboratory meeting once a week.** Unauthorized absences may be excused when caused by illness or other emergencies and should be reported promptly to the instructor. A student is held responsible for all class assignments. When a student has a number of unauthorized absences equal to the number of hours the class meets per week, the student may be dropped from the class roll by the instructor of the class. (page 101 in 2012-13 Undergraduate Catalog)

¹This is a tentative schedule. It is subject to change as the class progresses

Academic Integrity

You are allowed and encouraged to study in groups, provided that it is done in a way that benefit all students involved. However, if one person simply tells another how to do a problem or gives another a copy of his/her program, it totally defeats the purpose of the assignment. You will get maximum benefit from an assignment if you work hard on it alone before discussing with others. In any case, the assignment you turn in with your name on it should be written in your own words and represent your own effort. Sharing homework solutions and program code is not allowed. It will be treated as a violation of the University's Academic Integrity Code. All students involved will be reported and recorded. In addition, copying solutions from the Internet or other source is illegal. Please see the University Catalog and Student Handbook regarding appropriate standards of conduct in courses at Texas Wesleyan University.

Texas Wesleyan University Policies

- Students should read the current Texas Wesleyan University Catalog and Student Handbook to become familiar with University policies. These policies include but are not limited to grade appeal, sexual harassment, student access to records, and others; policies specified in the current catalog are applicable unless otherwise stated in this syllabus.
- Texas Wesleyan University adheres to a disability policy which is in keeping with relevant federal law. The University will provide appropriate accommodation as determined by the Director of the Counseling Center, Dr. Michael Ellison. Students must notify instructors of any permanent or temporary disabilities and must provide documentation regarding those disabilities prior to the granting of an accommodation. For assistance, students should consult with Dr. Ellison at mellison@txwes.edu or (817) 531-7565.
- Course syllabi are intended to provide students with basic information concerning the course. The syllabus can be viewed as a 'blueprint' for the course; changes in the syllabus can be made and students will be informed of any substantive changes concerning examinations, the grading or attendance policies and changes in project assignments.
- Any course taken at Texas Wesleyan University and repeated for a grade must be repeated at Texas Wesleyan University. Any course taken at another university may be repeated at Texas Wesleyan, and the most recent grade on the course will be counted. When a course is repeated, the grade point average will be computed using the most recent grade achieved.
- As noted in the catalog under the Unified Discrimination and Harassment Policy, Texas Wesleyan University is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment. If you have experienced any such discrimination or harassment, including gender- or sex-based forms, know that help and support are available from the following resources:

- Complete online incident report at <https://txwes.edu/student-life/report-a-concern/>
 - Contact Campus Conduct Hotline (24 hours a day): (866) 943-5787
 - Campus security (24 hours a day): (817) 531-4911
 - Dean of Students: deanofstudents@txwes.edu OR (817) 531-4872
 - Please be aware that all Texas Wesleyan University employees, other than designated confidential resources (i.e., Community Counseling Center) are required to report credible evidence of prohibited discrimination or harassment to the University's Title IX Coordinator, or to one of the Title IX Assistant Coordinators. If you wish to speak to someone confidentially, please contact the Community Counseling Center at (817) 531-4859 to schedule an appointment.
- Due to the limitless variety of potentially hazardous chemicals that may be found in a scientific or other laboratory environment, students having known, or potential, health-related concerns, such as allergies, asthma, contact dermatitis, pregnancy, or other physiological sensitivities should check with their physician on the advisability of laboratory work. The instructor and/or chair of the teaching department will provide, upon request, a list of chemicals that will be used in experiments during the semester. More detailed information (that is, Materials Safety Data Sheets) will be furnished by the deans upon written request.

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