

WAYNE STATE UNIVERSITY

COLLEGE OF ENGINEERING

Computer Science Department

CSC 2200: Computer Science II

Winter 2021

MW 1:00 - 2:15 pm, Synchronous Online Course

Faculty contact information:

Name: Dr. Daniel Grosu

Office address: 5057 Woodward, Suite 14001.4

Office hours (via Zoom): Monday and Wednesday 4:30 pm - 5:20 pm or by appointment

Phone: (313) 577-5171

Email: dgrosu@wayne.edu

Course Description:

Design and implementation of fundamental abstract data types of computer science (such as stacks, queues, trees, lists, hashing, and graphs), using an object-oriented language. Programming requirements include the implementation of abstract data types using arrays and dynamic links; recursion; sorting and searching; hashing; and string processing. Introduction to algorithm analysis.

Credit Hours: 3

Prerequisite:

CSC 1500 and CSC 1501, CSC 2110 and CSC 2111, all with grade of C or better;
MAT 2010 with grade of C-minus or better;

Co-requisites:

CSC 2201

Text(s) Book:

Weiss, Mark Allen. Data Structures and Algorithm Analysis in C++ (4th edition), Addison- Wesley Publishers. 2013.

Source code in text: http://www.cs.fiu.edu/~weiss/dsaa_c++4/code/

Errata: http://www.cs.fiu.edu/~weiss/dsaa_c++4/errata.html

You may find the following book useful for programming assignments:

Harvey Deitel and Paul J Deitel. C++ How To Program (10th Edition).

Prentice Hall. 2016.

Course contents:

The class will cover the following topics:

Math review. Recursion
C++ Review
Algorithm Analysis
Lists, Stacks and Queues
Trees (Binary, BST, AVL, Splay, B)
Hashing
Priority Queues
Sorting
Disjoint Sets
Graphs
Algorithm Design Techniques

Course Learning Objectives:

Upon successful completion of this class, the student will be able to:

#	CSC 2200 Course Learning Objectives
1	Understand the fundamental data structures and their associated algorithms
2	Develop programs using the fundamental data structures.
3	Apply design skills when developing a program.
4	Understand how to measure the cost of data structures and algorithms.

Assessment:

Midterm Exam: 30%

There will be one midterm exam on Monday, March 1, 2021.

Final Exam: 40%

There will be one final exam on Wednesday April 28, 2021.

Homework: 10%

There will be a minimum of 8 Homework assignments.

Quizzes: 20%

There will be a minimum of 4 in-class quizzes (20-30 min long). The number of quizzes is subject to change.

Grading Scale:

A(100-95), A-(94-90), B+(89-85), B(84-80), B-(79-75), C+(74-70), C(69-65), C-(64-60), F (below 60).

GTAs:

Lecture: Tayebah Bahreini (tayebah.bahreini@wayne.edu)
Labs: Hongsen Xin (hongsen@wayne.edu)

Grading Policies:

Homework assignments and projects must be handed in by due time. No late assignments will be accepted unless compelling reasons can be supplied and verified. Late assignments will receive no grade.

No make-up exams will be given except for university sanctioned excused absences. If you miss an exam (for a good reason), it is your responsibility to contact me before the exam, or soon after the exam as possible. Leave a message at the above number or send me email.

Synchronous Online Course:

The synchronous classroom requires real time meetings. We will use Zoom software for all meetings. You are strongly encouraged to download the Zoom Desktop Client. Doing so gives you access to many features. You can download Zoom on your computer and smart devices, including smart phones and tablets. See below link for how to download and setup Zoom on your device: <https://tech.wayne.edu/kb/academic-services/zoom/500261>

Religious Holidays:

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Student Disabilities Services:

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. The SDS telephone number is 313-577-1851 or 313-202-4216 for videophone use. Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University. You can learn more about the disability office at <http://www.studentdisability.wayne.edu>

To register with Student Disability Services, complete the online registration form at: https://wayne-accommodate.symplcity.com/public_accommodation/

Counseling and Psychological Services (CAPS):

It is quite common for college students to experience mental health challenges, such as stress, anxiety and depression, that interfere with academic performance and negatively impact daily life. Help is available for any currently enrolled WSU student who is struggling with a mental health difficulty, at WSU Counseling and Psychological Services (caps.wayne.edu; 313 577-3398). Other options, for students and nonstudents, include the Counseling and Testing Center, and the Counseling Psychology Training Clinic, in the WSU College of Education (coe.wayne.edu/tbf/counseling/center-index.php). Services at all three clinics are free and confidential. Remember that getting help, before stress reaches a crisis point, is a smart and courageous thing to do – for yourself, and for those you care about. Also, know that the WSU Police Department (313 577-2222) has personnel trained to respond sensitively to mental health emergencies at all hours.

Academic Dishonesty - Plagiarism and Cheating:

Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (<http://www.doso.wayne.edu/student-conduct-services.html>). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- **Cheating:** Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student's test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
- **Fabrication:** Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.
- **Plagiarism:** To take and use another's words or ideas as one's own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
- **Other** forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student's access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

Course Drops and Withdrawals:

In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: <http://reg.wayne.edu/pdf-policies/students.pdf>

Student services:

- The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit www.success.wayne.edu for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).
- The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit <http://clasweb.clas.wayne.edu/writing> to obtain information on tutors, appointments, and the type of help they can provide.

Class recordings:

Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student's personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information.

The instructor reserves the right to alter this syllabus as necessary.