

Department of Mathematics and Computer Science, Adelphi University

0145-156-002 Fall 2023 – Prof. A. Wittenstein

CSC 156 Discrete Structures (3 credits)

Contact Information

Office: Science 415

Course Web Page: <http://www.adelphi.edu/~wi16133/csc156/f23>

Email: Wittenstein@adelphi.edu

Office Hours: MW 5:30-6:00pm in HHE 211, or by appointment

Class Meetings M/W 4:15-5:30pm, HHE 211 (M 8/28 → W 12/13)

M 9/4 No Adelphi classes – Labor Day

W 11/22 No Adelphi classes – Thanksgiving Recess

M 9/25 No class – instructor unavailable

W 12/13 Last class - Makeup class for Monday 9/25

M 10/9 No Adelphi classes – Indigenous Peoples' Day

W 12/20: Final Exam 3:30-5:30pm

General Education Requirements

This course satisfies:

- Learning Goals: Quantitative (Q).
- Distribution Requirement: Formal Science (FS).

Prerequisites

none, other than knowledge of H.S. Algebra

Catalog Course Description

Learn about Mathematical Logic, Boolean Algebra, Combinatorial Circuits, Set Theory, and their underlying similarities. Learn about numbers and their representations, including binary, hexadecimal, and modular number systems. Learn about mathematical theory related to data structures, including lists, graphs, and trees.

Course Learning Goals

In this course, you will learn how to:

- Analyze, simplify, represent, and explain logical statements
- Perform mathematical operations in binary, hexadecimal, and modular number systems
- Represent information and calculate using mathematical data structures

Grading

Assignments/Quizzes = 45%

Exam 1 = 15%

Final Exam = 20%

Participation Exercises = 5%

Exam 2 = 15%

*The final course grade corresponding to each final numerical course grade will be no lower than:

A+ = 97 & up	A = 93-96.9	A- = 90-92.9	B+ = 87-89.9	B = 83-86.9	B- = 80-82.9
C+ = 77-79.9	C = 73-76.9	C- = 70-72.9	D+ = 67-69.9	D = 63-66.9	D- = 60-62.9
					F = 0-59.9

Attendance

- Attendance in class is *mandatory*. Just as not showing up to a job negatively impacts your paycheck, if you miss a class then your grade may be negatively impacted.
- If you miss a regular class session (one where an exam is not scheduled), then it is your responsibility to:
 - e-mail the professor before class time to explain the circumstances (or within 24 hours of the missed class if there was a last-minute emergency preventing your attendance)
 - contact a classmate to get the notes that you missed and *hand-write* a copy of the notes
 - e-mail the professor a copy of these handwritten notes before the start of the next class

If you follow these steps and your absence was for a valid reason, it will likely be considered excused.

Otherwise, it will be considered unexcused and will result in a deduction of 1% from your final grade.

- Absence from quizzes and exams will be excused only for a good and **well-documented** reason. The decision to allow a make-up quiz or exam will be made in accordance with the policies of Adelphi University.
- Please arrive to class *on time* whenever possible. Also, lateness or leaving early will count as partial absences. But, I would much rather you arrive late or leave early, than have you miss an entire class session. If you know in advance that you will be absent or late for a class, please e-mail me in advance (if possible) to let me know.
- This is a Traditional In-Person class, and most (80%-100%) class meetings will be in-person. On occasion, the class may meet synchronously on Zoom (when announced in advance on Moodle/AU e-mail by the professor).

- If I know in advance that I will be absent or late for a class, then I will post this information to Moodle, and Moodle will automatically send an e-mail to your Adelphi e-mail account. ***In the rare case that I am not there at the start of class and there is no announcement on Moodle or the classroom door, then you should wait in the classroom until at least 4:35pm, as I am probably just running late.***

Mask Policy

Adelphi University has a mask-optional policy in most public spaces. Masks will be optional in most, but not all, spaces on campus. The policy for this class is mask-optional. Please support every individual's choice and comfort level about masking. Should you become ill with COVID-19, please take the following steps:

- Contact Health Services at 516.877.6003 or e-mail at healthandwellness@adelphi.edu for further guidance.
- Contact the professor to discuss arrangements for completing coursework while absent.

Classroom Policies and Expectations

- Students are expected to take handwritten notes during class. When PowerPoints are provided in advance, students are expected to print them on their own before class and to take additional handwritten notes on them.
- Students are not to use phones or computers during class time, unless needed for note taking due to a documented learning accommodation. *Students not following this policy may be asked to leave the class, in which case they will be marked absent for the day.*
- Homework assignments are not to be worked on and not to be submitted online during class time (M/W 4:15-5:30pm) for any reason (unless specifically announced by the professor). *The penalty for this will be a grade of ZERO on that assignment – no warnings or exceptions!*

Course Materials

Required Textbook (online only)

- Our textbook this semester is an electronic book called *CSC 156: Discrete Structures* which was created specifically for this course. Our zyBook contains material from the Discrete Mathematics ZyBook.
- Please purchase **on or after Monday August 14th (but not before)** using these instructions:
 1. Sign in or create an account at learn.zybooks.com
 2. Enter zyBook code: ADELPHICSC156WittensteinFall2023
 3. Subscribe for \$64.

Moodle Learning System

- All grades (for assignments, quizzes, and exams) will be posted to Moodle.
- All lecture PowerPoint slides & assignments will be posted to Moodle.
- If a class meeting is cancelled for any reason, you are required to log on to the class Moodle page for instructions and assignments. **If the University is closed for more than two days due to an emergency, log onto MOODLE each class day for instructions and assignments.**
- Whenever announced, assignments are to be submitted through Moodle.

Other

- You should be prepared to write in class every day; always bring a pencil/pen and a notebook.
- You may use a calculator in this course; either a scientific or a graphing calculator is sufficient.
- You are responsible for checking your Adelphi e-mail account regularly and responding promptly and professionally. When you have a question, please include as much relevant information as possible.

Major Course Topics

1. Logic & Boolean Algebra
 2. Number Theory (includes: modular arithmetic, binary & hexadecimal numbers, integers, bitwise operations)
 3. Data Structures (includes: Set Theory, Sequences & Recursion, Permutations & Combinations, Graphs & Trees)
- *A day-by-day calendar can be found on Moodle. This calendar will be updated throughout the semester as dates may shift, such as when a topic which is planned for 1 day actually takes 2 days, or vice-versa.

Course Assignments

Since this course meets for three credit hours per week, it is expected that on average you do about 6 hours of work for this course per week outside of class time (including reading / studying / assignment completion):

Reading Assignments

While class meetings will highlight most parts of the material, you are expected to complete the reading assignments on the calendar for each class meeting, as it provides additional examples and explanations of the material. *Assignments, exit tickets, quizzes, and exams will assess understanding of classroom and textbook material. Make sure to ask about anything you do not fully understand prior to an exam, quiz, or assignment.*

Graded Assignments

Be sure to prepare for these assignments by first completing the reading assignments and practice exercises. Assignments that are graded will be graded for accuracy and completeness, not just on whether they were attempted. Late assignments will be penalized 10% per calendar day (including weekends and holidays). However, if the instructor is notified in advance that an assignment will be late for a valid reason (starting the assignment too late, not knowing how to do an assignment, and/or calculator/computer issues on or near the due date are NOT valid reasons), the late penalty may be reduced or eliminated. *Also, late submissions may not be accepted for any credit once grading and/or post-mortem feedback have been provided to the class and/or any of its students for a particular assignment.* In general, class time cannot be allotted to the post-mortem review of homework. For review of graded homework, please attend my office hours and/or see the course tutors.

Academic Honesty

Students enrolled in this course are expected to abide by Adelphi University's Honor Code and its policies on Academic Honesty, which can be viewed on the web at <http://academics.adelphi.edu/policies/honesty.php>. The purpose of the Honor Code is to protect the academic integrity of the University by encouraging consistent ethical behavior in assigned coursework by students. The following is excerpted from the Student Honor Code:

The code of academic honesty prohibits behavior, which can broadly be described as lying, cheating, or stealing.

Violations of the code of academic honesty will include, but are not limited to, the following:

- 1. Fabricating data or citations**
- 2. Collaborating in areas prohibited by the professor**
- 3. Unauthorized multiple submission of work**
- 4. Sabotage of others' work, including library vandalism or manipulation**
- 5. Plagiarism: presenting any work as one's own that is not one's own**
- 6. The creation of unfair advantage**
- 7. The facilitation of dishonesty**
- 8. Tampering with or falsifying records**
- 9. Cheating on examinations through the use of written materials or giving or receiving help in any form during the exam, including talking, signals, electronic devices, etc.**

****Use of any electronic device (other than scientific/graphing calculators) including cellular phones and smart watches, at any time during an exam regardless of reason is considered a violation of #6 and #9 above.****

In this course, no credit will be given to assignments, or portions thereof, that are substantially similar. I will not try to figure out who copied from whom; it is your responsibility to not let anyone copy your work.

Violations of these standards, including (but not limited to) plagiarism of any portion of an assignment or misconduct during quizzes & exams, will be dealt with in accordance with University regulations & procedures.

Student Course Evaluations

About 2 weeks before the start of Final Exams, the course evaluation will become available to you on eCampus. Availability will end just before the first day of the Final Exam Period. Your feedback is valuable to me in making improvements to the course for future students. Please be assured that your responses are anonymous and that the results will not be available to me until after your final course grades are submitted to the University.

Student Access Office:

<https://access-office.adelphi.edu/> sao@adelphi.edu (516) 877-3806 Post Hall 107

If you have a disability that may significantly impact your ability to carry out assigned coursework, please contact the Student Access Office (SAO) at 516-877-3806 or send an email to sao@adelphi.edu. The staff will review your

concerns and determine, with you, appropriate and necessary accommodations. Please allow for a reasonable time frame for requesting ASL Interpreters or Transcription Services. All information and documentation of disability is confidential.

The Student Counseling Center (SCC):

<https://students.adelphi.edu/catalog/counseling-services/> scc@adelphi.edu (516) 877-3646 Nexus 132

Provides confidential and professional psychological counseling services, resources, and referrals to support the academic and personal success, health, and well-being of Adelphi students without additional charge. Counselors are available to help students cope with a variety of stressors and personal issues that may interfere with their academic and personal experiences. The Center also supports students who may be feeling suicidal or in crisis.

Need support when the SCC is not available? Get Help: <https://scc.adelphi.edu/contact/>

For 24/7 emergency counseling, referral, or assistance, please contact:

Long Island Crisis Center (516) 679-1111 **911** (for immediate health-related emergency)

National Suicide Prevention Lifeline (800) 273-TALK (8255)

Public Safety: Off campus: (516) 877-3500, On campus: Extension 5

Learning and Writing Centers:

<https://adelphi.edu/learning-writing-centers/> learningcenter@adelphi.edu (516) 877-3200 Nexus 132

The Learning and Writing Centers comprise a single department and student support service, with missions rooted in helping students achieve academic success. Services, delivered via fellow peers working as student tutors, are centered around providing academic support and engagement outside of class and are free to all Adelphi students.

Learning Center tutors mainly focus on specific academic areas — like Biology, Nursing, Accounting, or Computer Science — while the Writing Center tutors focus on writing, across all academic disciplines and across the entire writing process—from thesis construction, research, and organization to grammar, language, and citation.

Student Participation & Recording/Sharing of Video Course Content

Students enrolled in this course are expected to actively participate in the course, which includes consenting to be part of recorded class sessions. Classes may be recorded at the instructor's discretion to provide students with access to recordings outside of class (asynchronously). Students enrolled in this course may also be recorded while taking remote exams (if remote exams are necessary due to public health conditions).

On any days that the class meets synchronously on Zoom, students are encouraged to remain on camera while learning to facilitate interactions with instructors and classmates. All students are encouraged to speak with their instructors at the beginning of the semester about any challenges or potential limitations to their on-camera participation in a remote, live-streamed, or online class.

Additionally, in order to protect the privacy of other students enrolled in the course, students will refrain from allowing family members or others participate, listen in, or otherwise impinge upon the shared virtual space of the remote or online learning classroom. Students are prohibited from recording or sharing in any way video content from in-person or online classes with others, pursuant to The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99), that protects student privacy. Sharing of content is defined as discussing or disclosing any and all information about a student in the presence of others, electronically, in person, or otherwise. *See also*, the Adelphi University Code of Conduct.

STUDENT ACKNOWLEDGEMENT:

I HAVE READ AND UNDERSTOOD THE SYLLABUS FOR FALL 2023 CSC 156-002

Signature: _____ Printed Name: _____ Date: _____

Allergies: _____

Accommodations: _____

Any dates you will need to miss class: _____