CSC 156-001 Spring 2020 - Discrete Structures
Prof. A. Wittenstein

Contact Information

Office: Science 415 Course Web Page: http://www.adelphi.edu/~wi16133/csc156/s20
Email: Wittenstein@adelphi.edu Office Hours: MW 5:30-6:00pm in PSH 106, or by appointment in SCB 415

Class Meetings M/W 4:15-5:30pm, PSH 106 (M 1/27 → W 5/13)

M 3/16 No Adelphi classes – Spring Break
W 3/18 No Adelphi classes – Spring Break
F 5/8 & M 5/11: Makeup Days (if needed)
W 5/13: Final Exam 3:30-5:30pm

Prerequisites none

General Education Requirements

This course satisfies:

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

Course Description

- Learn the concepts of Set Theory, Mathematical Logic, and Boolean Algebra, and their underlying similarities. Learn how to use quantifiers. Learn the basic proof technique of Induction**.** Learn how to analyze algorithms. Learn how to use and apply Permutations, Combinations, Recurrence Relations, and Combinatorial Circuits.
- This is basically a math course, but it's a completely different kind of math from precalculus or calculus; it feels like it uses a different part of your brain.

Course Learning Goals

Students completing this course will:

- Use the laws of deductive logic
- Read and write mathematical proofs using Induction
- Solve combinatorial counting problems
- Create and analyze mathematical models of real-world problems

Grading

Assignments/Quizzes = 45% Exam 1 = 15% Exam 2 = 15% Final Exam = 25%

*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 is required. After four absences, your grade will be lowered by one-third of a grade (e.g., A to A-, A- to B+, etc.). You are also responsible for whatever work is covered in class ***whether or not you are there***. Absence from quizzes, exams, and in-class assignments 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, then miss an entire class session. If you know in advance that you will be absent or late for a class, please e-mail me to let me know. If you need to be absent for any class meetings due to religious observance, please notify me within the first two weeks of the semester.

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.***

Course Materials

Required Textbook

- *Discrete Structures*, 8th Edition by Richard Johnsonbaugh published by Pearson. ISBN: 978-0-558-68102-9. *(Print book or e-book acceptable – make sure it is the CORRECT EDITION!)*

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.

Course Topics

Sections 1.1-1.6: Sets and Logic
Section 2.4: Mathematical Induction
Sections 3.1-3.4: Functions, Sequences, and Relations
Sections 5.1-5.3: Number Theory and Algorithms
Sections 6.1-6.2: Counting, Permutations, and Combinations
Sections 7.1-7.2: Recurrence Relations
Sections 11.1-11.3: Combinatorial Circuits and Boolean Algebras

*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. *Quizzes and exams will assess understanding of classroom and textbook material. So, make sure to ask about anything you do not fully understand prior to each assignment due date, quiz, or exam.*

Practice Homework Exercises

For each section of the text we cover, a list of selected practice exercises from the textbook will be provided. While these will not always be graded, completion and understanding of the exercises is necessary to succeed on quizzes and exams in this course.

Graded Assignments

In-Class and Homework 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 computer trouble 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.

Class Meetings

- Students are not to use phones or computers during class time, unless needed for note taking. *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 during class time. *The penalty for this will be a grade of ZERO on that assignment – no warnings or exceptions!*

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.**

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

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.

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

If you have a disability that may significantly impact your ability to carry out assigned coursework, please contact the Student Access Office**,** (formerly the Office of Disability Support Services) located in Post Hall, First Floor, 516-877-3145, sao@adelphi.edu. The staff will review your concerns and determine, with you, appropriate and necessary accommodations. When possible, please allow for a reasonable time frame for requesting ASL Interpreters or Transcription Services; a minimum of four (4) weeks prior to the start of the semester is required.

Student Counseling Center

The Student Counseling Center (SCC) provides confidential and professional mental health 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. To schedule an appointment, please call (516) 877-3646, stop by the SCC, or e-mail *scc@adelphi.edu*. If you need immediate assistance, walk-in services are available during the fall and spring semesters Monday-Thursday, 8:30am-7:00pm; Friday 8:30am-4:00pm. Additional information can also be found by visiting *https://scc.adelphi.edu*.

Need support when the SCC is not available? For 24/7 emergency counseling, referral, or assistance, please contact:

Off-Campus Resources
Long Island Crisis Center (516) 679-1111
National Suicide Prevention Lifeline (800) 273-TALK (8255)
911 (for immediate health-related emergency)

Adelphi Office of Public Safety
Crisis Text Line: Text 741741
Off campus: (516) 877-3511
On campus: Extension 5 on any campus phone

STUDENT ACKNOWLEDGEMENT:
I HAVE READ AND UNDERSTOOD THE SYLLABUS FOR SPRING 2020 CSC 156-001

Signature:_____ Printed Name:_____ Date: _____

Allergies:_____

Accommodations:_____

Any dates you will need to miss class: _____