Syllabus
CIS 2168 - Data Structures
Fall 2017

Dr. Andrew Rosen

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1   Course Details

An introduction to Computer Science. Topics include:

- Generics

- Inheritance

- Array Lists

- Time Complexity

- Linked Lists

- Stacks

- Queues

- Recursion - featuring mazes and chess

- Trees

- Heaps

- Huffman Trees

- Sorting Algorithms

- Hash Tables

- Graphs

Time and Place

Sections 001 and 002 meet Monday and Wednesday 12:30pm-1:50pm in Tuttle-man 302. The evening sections 007 meet Tuesday from 5:30 to 8:00.

Labs

001 Friday 12pm in SERC 357

002 Thursday 9am in SERC 204

007 Thursday 5:30 in SERC 357

Prerequisites

A grade of C or better in CIS 1166 and 1068. We will assume that you know how to use Java and have started to learn how to think abstractly.

Textbook

- Data Structures: Abstraction and Design Using Java, Second Edition Elliot B. Koffman, Paul A. T. Wolfgang Wiley 2010

I will be roughly following the material presented in the book and will cover all chapters except possibly 9, and only for reasons of time constraints. I recommend getting the book.

Office hours

My office is SERC 349. My office hours are Monday and Wednesday 2:30-3:30, and by appointment. If you cannot meet me during my office hours or need to meet me for help at some other time, please email me to arrange an appointment. I can meet via Webex at odd hours.

TA Information

TAs will be present during labs to assist you. You can walk in for office hours during these times, or make an appointment at an alternate time. You can meet with a TA listed below even if you are not in their section.

TA	Email	Office Hours	Office Location
Linxiao Dai	linxiao.dai@temple.edu	1:00-200 T	SERC 332
Djordje Gligorijevic	gligorijevic@temple.edu	1:00-3:00 R	SERC 334
Ning Wang	ning.wang@temple.edu	9:30-11:30 T	SERC 332

Attendance

Attendance is expected for both lectures and labs. If you arrive late, please do your best to enter quietly. Lectures will cover more content than is present in the book and it is highly unlikely you will succeed without attending lectures. I am also prone to mentioning what will and won't be on the test, up to and including exact questions.

Academic Honesty

All work submitted for grading must be the student's own work. A student that submits an assignment that copies the work of another, in whole or in part, will be assigned a grade of zero for that assignment. Any student found to be cheating on an examination will receive a score of zero for that exam. Cheating on an assignment or exam may result in dismissal from the course and notification of the Dean of Students.

When in doubt, provide a citation. Working with others and creating your own unique solutions is not cheating. We encourage you to ask your classmates for help and to collaborate. Copying someone else's work is cheating and will be dealt with accordingly.

Disabilities

Any student who has a need for accommodation based on the impact of a documented disability should contact me so we can privately discuss how I can help. If you have not done so already, please contact Disability Resources and Services (DRS) at 215-204-1280 in 100 Ritter Annex to learn more about the resources available to you. I will work with DRS to coordinate reasonable accommodations for all students with documented disabilities.

Recordings

I will be recording my lectures via my laptop. This is not meant as a substitute for class, but as a study aid, as my webcam cannot capture the entire whiteboard.

2 Assignments and Labs

Assignments and Labs are intrinsically tied. Your assignments are posted electronically on Blackboard. You will receive an assignment approximately every week on Thursday and due at 6am on Saturday the following week (or two weeks later for a tough assignment).

Lab sessions are dedicated time for you to work on assignments. I or the TA will explain the assignment at the beginning of lab and we will be available to aid you and answer any questions you have. Attendance is expected.

Turning in

To get a grade on your assignment, it must be

1. Submitted online to Blackboard. This is so we have an electronic "paper trail" for your assignment.

2. Demoed to the me or a TA. Demoing your work involves showing that your program works, explaining pieces of your source code, and answering some questions.

We accept your late work.

Late Policy

Late assignments will be accepted with a penalty, as described below.

$$grade = score \cdot 0.95^l$$

Where l is the number of days late. While this looks a bit intimidating, this scheme does provide more points than just a straight deduction every day. **It is your responsibility to demo late work. Work not demoed will receive a 0 at the end of the course.**

Late grades are determined by when you turn it in, not when you demo it, but the sooner you demo, the sooner you can correct a possible mistake.

Example

Alice turns in an assignment that would have gotten an 100, but it's 5 days late. Her grade is

$$100 \cdot 0.95^5 = 77.38$$

A 77 isn't ideal, but it's within striking range of a B and a great deal more than 0.

3   Exams

Exams make up the majority of your grade. Practice exams may be provided and reviewed. Please do not miss any exam. Makeup exams will be given on a case by case basis.

You can expect two exams and a final, with the first exam occurring during the week 5 lab and the second occurring at the week 10 lab. This is subject to change. Your final exam details can be found in the university calendar.

Exams are open note, **except for the first 2168 exam.**

Final Exam

Sections 001 and 002 take a common final exam on December 19th at 3:30 to 5:30. The location is TBA.

Section 007 takes a different exam on December 14th at 5:45. This will be in the normal classroom unless otherwise noted.

If you have more than two finals on the same day, university policy allows you to request a professor provide a different time to take your final.

Grading

Letter grades will be assigned at no higher than A$\geq$90, B$\geq$80, etc. In general, you need above a 70 to pass the class. There may be extra credit opportunities available in on exams and on assignments. I will not give out extra assignments or tests for you to make up your grade, but I usually drop a lab. Plus/minus grading will be used.

Composition

Your final grade in the class will be the average of each item, weighted accordingly.

Participation and Attendance	5 %	at most
Labs	30 %	at most
Exams	65 %	at least

Disclaimer

The syllabus is here to serve as a guide and may be subject to changes. Up to date information, assignments, and class material can be found on online.

This syllabus may be updated to reflect changes.

Students and Faculty Academic Rights and Responsibilities

Student and Faculty Academic Rights and Responsibilities can be found in the link.

4   Schedule

This is a rough schedule and highly subject to change.

Week	Topic	Material	Work
1	Generics	Chapter 1	Lab 1

Tips for Succeeding

- Don't be afraid to ask questions in class. If you have a question, I guarantee another student has the same question.

- This goes doubly so for math. If you don't understand or remember a concept when we bring it up *let us know.*

- Get into the habit of studying a couple of days early.

- Do your homework.

- Give yourself more time than you think you need.

- Use a clear, easy-to-read, monospaced font while coding.

- Do your homework.

- Ask questions. Take advantage of our office hours.

- Do your homework. In the previous classes I've taught, the vast majority of students who turned in all their homeworks managed to earn A's and B's, even when they had a bad day on a test.

- Likewise, not turning in homeworks corresponds very strongly with failing.

- Don't program in Notepad. Get a real text editor.

- Do your homework. Seriously. It is nigh impossible to pass without doing your homework.