COSC 320: Advanced Data Structures & Algorithm Analysis
Course Syllabus
Spring 2020

Lecturer: Dr. Joseph Anderson
Office: 128 Henson Hall

Course Webpage: [http://faculty.salisbury.edu/~jtanderson/teaching/cosc320/sp20/index.html](http://faculty.salisbury.edu/~jtanderson/teaching/cosc320/sp20/index.html)

Office Hours: See course webpage

Email: jtanderson@salisbury.edu

Lecture: MWF 11am - 11:50am, HS 123

Lab: Th 11am - 12:40pm, HS 150


Prerequisites: COSC 220 and MATH 210, both completed with a C or better.

Course Summary: This course will cover in depth algorithm complexity analysis, algorithm design techniques (greedy, divide and conquer, dynamic programming), and efficient algorithms for various problems will be introduced. Advanced data structures such as hash tables, binary search trees, and red-black trees will be studied. The complexity classes P and NP will also be covered. There are three hours of lecture and two hours of lab per week.

Course Policies

Grading: The final grade will be calculated from two exams (15% each), the course final (20%), labs (20%), and assignments/projects (30%). A 100 point scale will be used on all graded work, however it is at the discretion of the lecturer to apply any curve to the grading scale (typically to the benefit of the students). Final grades are at the discretion of the lecturer. **NOTE: You must pass the final exam (D grade or better) in order to pass the course with a C.**

Students have one week from the day an assignment or exam is returned in class to raise questions about its grade. After one week has passed, you may still ask for technical clarification, but a grade change will not be accommodated. This is to ensure that students take timely responsibility for their work and to be confident in the grade they have received.
Assignments: Homework will be announced in class and posted on the course webpage. All written homework assignments are due at the start of class (or earlier if you know you will be unable to attend). Written homework may be accepted until 11:59pm on the day it is due, but at a 50% reduced score if it is turned in after class. All digital homework (programs, projects, etc.) will be due through the canvas system by 11:59pm on the due date. All other late homework will not be accepted and will receive a score of 0.

All programming projects must compile on the department Linux server, using standard g++. Compilation instructions must be provided with the project, along with a functional Makefile.

Labs: Weekly labs will be used to study implementation of the advanced concepts covered in lecture. Labs will be due by the start of the next lab. Occasionally, labs will span two weeks, be sure to check the due date at the top of the lab instructions. Prior to attending lab, students should read the pre-lab material and complete any pre-lab written material to be turned in at the start of the lab session.

Labs must compile and run on the department Linux server with g++. Labs must come with compilation instructions and a functional Makefile. Any lab submissions which do not compile or run will receive zero points.

Exceptions will only be made to the above policies when explicitly arranged in advance with the instructor.

Online sources: Any submitted that is non-original (from online resources, previous students, etc.) will receive a grade of zero; if the use of external resources is needed, they should be properly cited, and adapted for the situation at hand. When in doubt, consult with the professor. If you work with a student on an assignment and, together, you arrive at a solution and both submit that solution, provide documentation to that effect. Do not copy/paste others work and submit it as your own. You will receive no credit and face academic misconduct proceedings.

Email: Email should primarily be used to set up a one-on-one meeting with me if my office hours conflict with your schedule. I strongly encourage you to ask questions about the syllabus and assignments as early as you can. For more in-depth discussions (such as guidance on assignments) please plan to meet in person. This policy is not designed to limit or inhibit communication; rather it is designed to promote student independence and meaningful interaction.

Furthermore, all email communication should happen over the official SU email system. I will not answer questions about the course from external email addresses (anything other than @salisbury.edu). Emails that do not use proper/professional email etiquette are not guaranteed a response.

Office Hours: Specific dates and times for office hours are listed above. However, in general, if I am in my office with the door open, students should feel free to come in for discussion or questions.

Attendance: Class attendance is not required, however frequently missing class may impact your grade by up to 10%. Students are responsible for any material they miss during lecture without appropriate excuse. Office hours will not be used to re-iterate lecture material at length.

Other department, university and school policies and resources:

- Student Disability Support Services: [http://www.salisbury.edu/students/dss/](http://www.salisbury.edu/students/dss/)
- Henson School of Science and Technology Course Repeat Policy: [http://www.salisbury.edu/henson/advising/course_repeat_policy.html](http://www.salisbury.edu/henson/advising/course_repeat_policy.html)
- Academic Misconduct: [http://www.salisbury.edu/provost/AcademicMisconductPolicy.html](http://www.salisbury.edu/provost/AcademicMisconductPolicy.html)
- University Writing Center: [http://www.salisbury.edu/uwc/](http://www.salisbury.edu/uwc/)
- Mathematics and Computer Science Tutoring Program: [http://www.salisbury.edu/mathcosc/TutoringCenter.html](http://www.salisbury.edu/mathcosc/TutoringCenter.html)