

Exam 2 Review



AUBURN UNIVERSITY

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TOPICS: What you need to know

1. Lecture slide sets 07, 09, 10, 11
2. All text reading assignments from these slide sets All thinking assignments in these slide sets
3. Making and informed hypothesis about algorithm correctness and proving it using four proof techniques
4. Five notations of complexity order
5. Approximate analyses of algorithm efficiency – estimating Big-Oh complexity
 1. Nonrecursive algorithms
 2. Recursive algorithms
6. Detailed analyses of algorithm efficiency:
 1. Nonrecursive algorithms
 1. Calculating $T(n)$
 2. Determining complexity order
 2. Recursive algorithms
 1. Developing recurrence relations
 2. Interpreting recurrence relations
 3. Solving recurrence relations using various methods
 4. Calculating $T(n)$
 5. Determining complexity order

- 75 minutes: **Time limit strictly enforced - exam will end sharp at 10:45!**
- 30 multiple choice questions; 1 pt each for the total of 30 points
- No need to memorize anything. Any mathematical results or algorithms you need will be provided with the exam.
- The Master Theorem will be provided in the exam.
- Calculator allowed (also built into the lockdown browser), **smartphone cannot be used as a calculator.**

- Download and install Respondus Lockdown Browser on your laptop
- Make sure you can access the course Canvas via the Lockdown Browser and able to take Canvas quiz by taking the Lockdown Browser Practice Quiz
 - If you experience a problem, reach out to the Respondus Help Center as soon as possible!
 - If you failed to prepare the Lockdown Browser before the exam, **you will NOT be compensated** for any time spent installing/troubleshooting it during the exam.

During the Exam

- Bring an ID (AU ID, driver's license, passport, etc.)
 - You will NOT be allowed to take the exam if proctor cannot verify your identity
- Resist the temptation to peek at your neighbor's answers
 - If we see you engage in any kind of cheating, **YOU WILL FAIL THE COURSE** and the case will be reported
- A basic calculator is built into the exam. You may be allowed to use a physical calculator with an approval from the proctor.
- **NO ELECTRONIC DEVICES ALLOWED** except the one with which you are taking the exam
- **Any other electronic device in your possession must be turned off and kept off from the desk**
- Closed text and notes
- Read and follow instructions on the exam carefully
- Manage your time carefully
- Do not get stuck on any single problem; else you will run out of time
- Ask proctor for sheets if you need sheets for scratch work

- Turn in the exam AND the scratch papers
- **BEFORE LEAVING, record your name and the time of completion on the sign-off paper**
 - If you fail to sign your name or we see you accessing the exam past the recorded time of completion, then you will receive a grade of **ZERO**



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