

How to Master CS 5301

CS 5301
Fall 2018

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How to master this class:

- Prepare and practice each week!
- Do the practice problems from the outline, writing your own solution from scratch. Do not use a solution online or from another student.
- Practice in the labs: DERR 231 or MCS 590 (eclipse or codeblocks) or on your own computer
- Make sure your solutions are correct (compile, run, execute, test on sample data)
- Do some practice on paper, to prepare for quizzes
- In general, do NOT memorize code
- If you get stuck on a practice problem, get help! (come to office hours, etc.)

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Problem solving is a skill

- You learn to solve problems by trying to solve problems.
- Not by memorizing code.
- You need to attempt to solve problems before you go to lab class.
- You need to review the textbook and slides and understand the concepts before you attempt to solve the problems.
- Try to simulate the lab conditions as much as possible (solve on a computer).
- If you wait until lab class to attempt to solve problems, you will not have had the experience of attempting to solve similar problems. You will learn, but you will take too much time and not finish the lab exercises.

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Problem solving steps

- Understand the problem description
- Generate a hypothetical solution
 - Think in terms of steps computer must perform
- Encode the solution (write the C++ code)
- Check your work
 - Trace your code, go through it step by step, carry out the instructions to see if they will solve the problem (you must be able to read code)
 - Look for errors in your solution (incorrect syntax, missing or misplaced { }, undefined variables, etc).

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