

midterm 1

Exam Outline

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motivation

- Exam window: Sunday September 27 – Wednesday September 30
- Multiple choice, short answer, short code (possibly)

where is the computer-based testing facility?

The Computer-based Testing Facility (CBTF) is in the basement of the Digital Computer Laboratory (DCL) building in room L416.

When at DCL go down to the basement and locate the EWS labs, which looks like this:



where is the computer-based testing facility?

The Computer-based Testing Facility (CBTF) is in the basement of the Digital Computer Laboratory (DCL) building in room L416.

Then you need to find the actual CBTF room L416, which looks like this:



when should i arrive?

You should go to the CTF exactly 5 minutes before the start of your exam. Please do not go earlier due to fire hazard restrictions. You can wait on the ground floor of DCL.

what should i bring? what shouldn't i bring?

You should bring a writing implement and your icard. Please have your icard out when you enter the lab so we can scan it.

Bags are not allowed in the CBTF room. There are lockers in the basement of DCL, but they do cost money (a quarter: \$0.25) and aren't very big (large laptops might not fit).

Having a phone, smartwatch, or similar device in the CBTF is an academic integrity infraction and will be prosecuted to the maximum extent under Article 1, Part 4 of the Student Code.

We will provide scratch paper. Do not take your scratch paper out of the CBTF; instead place it in the bin for recycling.

how can i know how much time is left on the exam?

On the desktop of the computer, there is a clock. Typically exams will end at 10 minutes before the next hour.

what should i do if i have dres accomodations?

DRES students should inform the proctors of their status and requirements. DRES students must be signed up for an exam slot with enough extra time in following slots to allow accommodations (e.g., if you need 2X time, then don't sign up for the last slot of the day).

anything else i should know?

For security purposes, users of the CBTF are subject to automatic and manual monitoring, including but not limited to video recording, screen capture, keystroke logging, and network data capture.

exam studying

Content:

- Quizes
- Parts of the homework
- inclass flows
- slides

exam studying

Big ideas (incomplete list)

- Types in Python
- List versus an array. Why is it faster?
- Floating point representation in IEEE-754 and smaller systems.
- Floating point ranges and general properties.
- Machine precision. Denormalized values.
- Rounding vs Truncation error
- Cancellation, underflow, overflow.
- Timing things. Algebraic vs Geometric growth.
- Properties of random generators.
- The basics of Monte Carlo.
- The basics of a Taylor Series approximation.