### CSc 144: Discrete Mathematics for CS I

Spring 2024 — Section 002

**Course Information Overview** 

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## Announcements

(Expect a slide or two of announcements at the start of each class.)

- Handouts:
  - 1. Syllabus Summary a fraction of the full version!
  - 2. Background Survey distributed/collected at end
- There are two sections of CSc 144
  - This is Section 002
  - Sections 001 and 002 are NOT interchangeable!
    - · Different profs, assignments, exams, TAs, ...
    - · Attend only the section for which you registered.

## Catalog Info

Class:	CSc 144–002,	<b>Discrete Mathematics</b>	for	Computer	Science	I
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Credits: 3

Meets: 2:00 – 2:50 p.m. Mondays, Wednesdays, and Fridays

Room: Bio East 100

Prereqs: 'C' or better in 1st Semester Computer Programming, and 'C' or better in College Algebra or higher

Desc: The first of a two-course sequence introducing mathematical concepts for Computer Science. Topics include: matrices, sets, functions, and relations; propositional and predicate logic; foundational combinatories; discrete probability; modular arithmetic; and proofs.

Final: Friday, May 3rd, 2024, 1:00 – 3:00 p.m.

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## Instructor and UGTAs

Instructor:	Lester I. McC	Cann, Ph.D.	, Professor	of Practice
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UGTAs: Kevin Li<sup>\*\*</sup> (Class Coordinator) Jake Bode<sup>\*</sup> (Coordinator–in–Training) Soumay Agarwal<sup>\*</sup> Cumhur Aygar Aman Dwivedi<sup>\*\*</sup> Claire Lodermeier<sup>\*\*</sup> Adrian Moore<sup>\*</sup> Savannah Rabasa MohammadHossein Rezaei<sup>\*\*</sup>

\* UGTA for CSc 144 or 245 w/ McCann previously
 \* Took CSc 144 or 245 w/ McCann previously

## Information Resources

Looking for class information and materials?

• Class D2L Site (textbook, links to web page content):

o d21.arizona.edu/d21/home/1399905

• Class Web Page (guided & completed slides, handouts):

o cs.arizona.edu/classes/cs144/spring24-002

• Piazza (Q&A):

• piazza.com/class/lqik36ra4mli8

We'll also have office hours (OHs) for in-person help and practice, and tutoring in the CS Tutor Center (G–S 914). Times to be announced!

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## **Noteworthy Dates**

Exams:

- Exam #1: Friday, February 16
- Exam #2: Friday, March 22
- Exam #3: Friday, April 19
- Final Exam: Friday, May 3rd, 1–3 p.m.

#### No Class Meetings On:

- Monday, January 15th (MLK Day)
- March 4th, 6th, 8th (Spring Break)

#### Late Day to Withdraw:

• Tuesday, March 26th (from individual classes)

## Grades and Grading (1 / 5)

Grade Breakdown:

7 Homeworks = 28% (total; 4% each) n Quizzes = 16% (total of your best n = 8, 9 or 10) 3 Midterm Exams = 42% (total; 14% each) Final Exam = 14% (comprehensive!) TOTAL = 100%

We do not grade on attendance or class participation, but you'll still want to attend regularly (e.g., for quizzes)

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# Grades and Grading (2 / 5)

#### Homeworks

- Typically 50 points each
- Due at the start of class one week after being assigned
  You have three 'late days,' maximum one per homework
- Question types are mostly problem-solving
  - Though there will be some programming!
- You will submit answers as PDFs to Gradescope
  We recommend that you word–process your answers
- Graded by the UGTAs within one week
- Regrade requests accepted for one week thereafter

### See the full version of the syllabus for the details!

# Grades and Grading (3 / 5)

#### Quizzes

- I plan to have 12 <u>unannounced</u> quizzes this semester
  O Usually given in the last 10 minutes of the period
- We'll only count your best 10, or ...
  - $\,\circ\,$  . . . best 9 if class evals are submitted by >50% of students, or
  - $\circ~$  . . . best 8 if class evals are submitted by > 66.7% of students

(This means you can miss some quizzes and still do fine.)

- Electronic devices may not be used on quizzes!
- Regrade requests accepted for 1 week after grading is done

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# Grades and Grading (4 / 5)

#### Midterm Exams

- Will cover the material since the last midterm
- Question types mostly short–answer & problem–solving
- Like quizzes, electronics may not be used on exams
- I do not give make–up exams!

(Why not? Because I replace your lowest midterm's score with a copy of your final exam's score!)

- Graded by the class staff within two class meetings
- Regrade requests accepted for a week by email to McCann

### See the full version of the syllabus for the details!

# Grades and Grading (5 / 5)

#### Final Exam

- Is comprehensive (covers all topics, including math review)
- Consists of short-answer & problem-solving questions
- I review finals of students near the next-higher letter grade
  Thus, regrade requests should not be needed
- I replace your lowest midterm with your final exam score
  - Allows you to miss a midterm, or have an off-day, and still do well in the class

#### See the full version of the syllabus for the details!

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## "Why Should I Read the Full Version of the Syllabus?"

#### Because:

- There are many more details within it, such as:
  - A detailed topic outline, links to free online textbooks, when to expect replies to questions, applying for disability accommodations, etc.
- It has links to Department, University, and ABoR policies that you should know about, including:
  - Attendance, codes of conduct, FERPA, incompletes, etc.
- Friday's Practice Quiz (Quiz #0) will ask you questions about the content of the syllabus.
- Ignorance of the syllabus will not excuse you from its content
- And, importantly, it covers ...

## Academic Dishonesty (a.k.a., Cheating)

Four words cover it: **Do Your Own Work!** 

- The homeworks and quizzes in this class are **individual** assignments, meant to help prepare you for the exams (which are also individual activities!).
  - If you can't do homeworks, how will you handle exams?
- If we catch you cheating, the *minimum* sanction is a zero on the assignment and completion of an expensive academic integrity workshop.
- Stuck? The TAs and I are here to help you get unstuck!
  We have office hours, Piazza, and CS tutors!
- Not sure that an action is acceptable? Ask us first!

## Schedule for Weeks 1 and 2

- This week (Week 1):
  - Today: Info, Start Math Review, Background Survey
  - Friday: More Math Review, Practice Quiz (Quiz #0)
- Next week (Week 2):
  - Monday: No Classes (MLK Day)
  - Wednesday: Math Review continues
  - Friday: Finish Math Review; Quiz #1, Homework #1

Curious about the items in red?

# Administrative Drops (A Last Syllabus Detail)

Students who do not turn in AT LEAST ONE of:

- Background Survey,
- Practice Quiz (Quiz #0), and
- Quiz #1

will be administratively dropped from the class.

(Why? Such 'ghosts' almost always either withdraw later, or 'disappear' without withdrawing and thus get a failing grade.)

Plan to submit them all! Note that of those three items, only Quiz #1 counts toward your class grade.

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# The CS "Theory" Course Sequence

- 1. CSc 144 (Discrete Math for CS I)
  - Logic, basic proofs, sets, matrices, relations, functions, ...
- 2. CSc 244 (Discrete Math for CS II)
  - Inductive proofs, recurrence relations, graph theory, counting, probability, ...
- 3. CSc 345 (Analysis of Discrete Structures)
  - Algorithm analysis, structural induction, trees and more graphs, hashing, sorting, ...
- 4. [B.S. Degree Theory & Writing Elective] Your Choice of:
  - CSc 437 (Geometric Algorithms),
  - CSc 445 (Algorithms), or
  - CSc 473 (Automata, Grammars, and Languages)

### Instructions

- The Background Survey is NOT graded! (No stress!)
- Take one copy, pass the rest down the row
- Read and follow the directions
- When you are done, hand your paper to me or to a TA; you're free to go!

Enjoy the rest of your day! We'll see you next time!

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