CSc 144: Discrete Mathematics for CS I

Fall 2023 — 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 later
- There are two sections of CSc 144 this fall
 - 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, Discrete Mathematics for Computer Science I

Credits: 3

Meets: 3:00 – 3:50 p.m. Mondays, Wednesdays, and Fridays

Room: Koffler Building, Room 204

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 con-

cepts for Computer Science. Topics include: sets, functions, and relations; propositional and predicate logic; foundational combina-

torics; discrete probability; modular arithmetic; and proofs.

Final: Thursday, December 14th, 2023, 8:00 – 10:00 a.m.

(common final exam time with Section 001)

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Instructor and UGTAs

Instructor: Lester I. McCann, Ph.D., Professor of Practice

UGTAs: Kevin Li* (Class Coordinator)

Jake Bode* (Coordinator-in-Training)

Nimet Beyza Bozdag*

Claire Lodermeier*

Sartaj Rauf*

MohammadHossein Rezaei*

Kekhrie (KK) Tsurho*

^{*} UGTA for CSc 144 w/ McCann last spring

^{*} Took CSc 144 w/ McCann last spring

^{*} Took CSc 245 (previous version of 144 and 244) w/ McCann

Information Resources

Looking for class information and materials?

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

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o d21.arizona.edu/d21/home/1322194
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Class Web Page (guided & completed slides, handouts):

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o cs.arizona.edu/classes/cs144/fall23-002
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• Piazza (Q&A):

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o piazza.com/class/lkucsa6fd8z7oe
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We'll have office hours (OHs) for in–person help, supplemental instruction (SI) sessions for additional 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, September 22
- Exam #2: Friday, October 20
- Exam #3: Friday, November 17
- Final Exam: Thursday, December 14, 8–10 a.m.

No Class Meetings On:

- Monday, September 4th (Labor Day)
- Friday, September 29th (Honors Convocation, 3-5pm)
- Friday, November 10th (Veteran's Day)
- Friday, November 24th (Thanksgiving)

Grades and Grading (1 / 5)

Grade Breakdown:

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7 	ext{ Homeworks} = 28\% 	ext{ (total; 4\% each)}
n 	ext{ Quizzes} = 16\% 	ext{ (total; best } n = 8, 9 	ext{ or 10)}
3 	ext{ Midterm Exams} = 42\% 	ext{ (total; 14\% each)}
Final 	ext{ Exam} = 14\% 	ext{ (comprehensive!)}
TOTAL = 100\%
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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 unannounced quizzes this semester
 - 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 OK.)

- 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 are 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 UGTAs and me within two class meetings
- Regrade requests accepted for a week by email to me

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)
- Is at a common time with the other CSc 144 section
 - Don't blame me; not my idea!
- Consists of short–answer & problem–solving questions
- I review finals of students near the next-higher letter grade
 - Thus, regrade requests are not needed
- I replace your lowest midterm with your final exam score
 - Allows you to miss a midterm, or have an off-day

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.
- The 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, SIs, & Piazza (and CS tutors!)
- Not sure that an action is acceptable? Ask us first!

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Schedule for Weeks 1 and 2

- This week (Week 1):
 - Today: Basic Info, Math Review, Background Survey
 - Wednesday: Math Review continues
 - Friday: Finish Math Review, Practice Quiz (Quiz #0)
- Next week (Week 2):
 - Monday: Topic 2 (Logic)
 - Wednesday: Topic 2 continues
 - Friday: Topic 2 continues; 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, relations, functions, counting, probability, . . .
- 2. CSc 244 (Discrete Math for CS II)
 - Inductive proofs, recurrence relations, graph theory, finite state machines, regular languages, . . .
- 3. CSc 345 (Analysis of Discrete Structures)
 - Algorithm analysis, structural induction, trees and 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)

Let's Do The Background Survey!

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 Wednesday!

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