Comp 280 -- Discrete Mathematics
Comp 280 Web Page

http://www.owlnet.rice.edu/~comp280/10spring/
Instructors

Professor Ron Goldman
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Tuesday, Thursday 2:00-3:00PM (or by appointment)

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Labbies

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Text and Syllabus

Text

- Discrete Math and Its Applications (Sixth Edition) -- Rosen

Syllabus

- Chapters -- 1, 2, 3.1-3.3, 4-10, 12 (not Chapter 11)
- May Skip Some Sections
- Will Begin in Chapter 4 (Induction and Recursion)
- Pace -- 1 or 2 Sections/Lecture
Topics

I. Induction and Recursion (Chapter 4) -- 2 Weeks
II. Complexity (Chapter 3) -- 1 Lecture
III. Graphs and Trees (Chapters 9, 10) -- 2-3 Weeks
IV. Logic (Chapter 1) -- 1 Week
V. Naive Set Theory (Chapter 2) -- 1 Week
VI. Functions and Relations (Chapters 2, 8) -- 2 Weeks
VII. Counting and Combinatorics (Chapters 5, 7) -- 2 Weeks
VIII. Discrete Probability (Chapter 6) -- 1 Week
IX. Finite Automata (Chapter 12) -- 2 Weeks
Homework

Weekly

• Due each Thursday at **START** of Lecture
• 10-15 Exercises from Textbook (Rosen)
• Even Numbered  (Odd Numbered Solutions in Book)
• Solutions Sets -- After Homework is Collected

Grading

• 25% of Final Grade ≈ 2% per Week
• Must Work Alone, NOT in Study Groups  (Honor System)
  -- Can Seek Help **Only** from Instructors
Programming Projects

• Some weeks the class may be assigned programming projects instead of written exercises.

• Still under consideration.
Written Essays

Daily
• Due at START of Every Lecture

Purpose
• To Prepare Students for Class Discussion

Format
• One Typed Page
• Grammatically Correct and Coherent English Sentences
  -- See Ron’s Rules for Good Writing
  -- Violators of Ron’s Rules Must Rewrite their Essay
Written Essays (continued)

Topic Headings

• Main Themes of the Text -- Not a Summary

• What I Learned from Reading the Text -- Not a Summary

• What I Did Not Understand in the Text

• Questions on the Text and on the Exercises
Extra Credit Homework

Weekly
• Due each Thursday at the Start of Lecture
• 1 or 2 Hard Problems -- From Text or Made Up by Me

Purpose
• Raise Your Final Grade
• Exempt A Students from Final Exam

Rules
• Must Work Alone, NOT in Groups (Honor System)
• Can Discuss ONLY with Me
Extra Credit Projects (Optional)

Program or Essay

• Topic by Consent of the Instructor

Purpose

• Raise your Final Grade

• Exempt A Students from Final Exam
Rules for Handing in Homework

Exercises

• One Problem per Page
• Type or Ink -- Pencil Forbidden
• Write Large

Essays

• Must be Typed
• Do NOT Summarize the Text
• Try to Keep to One Page

VIOLATORS WILL RECEIVE ZERO CREDIT
Exams

Quantity

• 3 Exams -- 1 Every 5 Weeks
• Each Exam = 25% of Final Grade
• More than Half the Questions are Exercises from the Text and from the Homework

Format

• Timed Take Home
• Closed Book and Closed Notes
  -- One Page of Formulas, Handed in with Exam
• Must Work Alone (Honor System)
Grading

Exams
• 3 Exams -- Each Exam is 25% of Final Grade

Homework
• Weekly Assignment = 25% of Final Grade ≈ 2% per Week

Attendance and Daily Essay
• Mandatory -- Minus One Point on Your FINAL GRADE for Each UNEXCUSED Absence or Missing Essay
**Late Policy**

*Slip Days*

- Each Student gets 3 Slip Days during the Semester.

- If you are ill or have another reasonable excuse, you do NOT need to take a Slip Day.

- Slip Days may be Used Only for Weekly Exercises, NOT for Written Essays or Exams.

- Once your 3 slip days are used up, any work you hand in late will receive zero credit.
How to Study

1. *Solve Problems, Solve Problems, Solve Problems*

2. *Do Unassigned Exercises in the Text Every Week*
   - Do NOT Wait Till Exam Week -- Too Many Problems
   - Do NOT Attempt All the Exercises -- Too Many

3. *Spend Time = 10 Hours/Week*
   - 2.5 Hours = Lecture
   - 2.5 Hours = Reading the Text
   - 5 Hours = Exercises
Definition of a C Student
Definition of a C Student

*A Student who Does Only the Assigned Work*
Weekly Lab

Purpose
• Work on Problems
• Ask Questions
• Review Material

Date and Time -- Optional
• Class Decision
Essay for Thursday, January 14

Read Rosen, Section 4.1 -- Pages 263-279
- Skip Example 10

Read Rosen, Appendix A-1 -- Page A-5
- Axioms for the Set of Positive Integers

Write 1 Page Essay -- Due at Start of Class on Thursday
- Main Themes of the Text -- Not a Summary
- What I Learned from Reading the Text -- Not a Summary
- What I Did Not Understand in the Text
- Questions on the Text
Symbols in Rosen

\( \lor \) means OR

\( \land \) means AND

\( \rightarrow \) means IMPLIES

\( \forall \) means FOR ALL