Designing Midterms

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Key Points for Midterms

• Test what you teach: make the exam 15-20% warm up, 60-65% core skills and clear data, 10-20% challenging. This gives a 70% average and clear feedback.

• Cognitive levels should match student ability and assignments. It is easy to write creative but impossible questions.

• Formatting the exam and answer format makes the exam clearer and the grading faster.

• Time – the exam should take you no more than \( \frac{1}{4} \) to \( \frac{1}{2} \) the time available to the students.
Open or Closed Book?

• I like to test higher cognitive levels (not rote learning) so I always give open book exams.
• I also encourage them to generate a “cheat sheet” of their own – this is a study tool and a long term reminder of the course.
• I give 2 midterms in 2nd year, so they get one side of the sheet for the first midterm, 2 sides for the second midterm and the final.
• For 4th years, we allow notes as well.
Cognitive Levels

- 2nd year – Knowledge and application
- 3rd year – Application and synthesis
- 4th year – Synthesis and evaluation

This point is the most important concept for accurate and robust testing.
Two Exams – 2\textsuperscript{nd} year

• Critique each exam
  – Identify the cognitive levels
  – Where are there points that are not clear?
  – How could they be improved?
  – What is good about each?

• Note the difference in format
Final Exams

• I like 3 hour finals
• Open book
• Some answers are formatted, some are in the exam book.
• Always ask practical questions for understanding as well as questions for accuracy in computation and execution.
• Reserve some points for getting the right answer at the end.