About the exams of
MATH 2207, Linear Algebra
Semester 2, 2017

Information specific to the midterm:

- The midterm is one hour.
- No calculators are allowed.
- There is an easy proof question, where you will be judged for how you write as well as the equations.
- The questions are on everything up to and including the class of Friday 24 February i.e. all the slides labelled Weeks 1-5, and slides 1-17 of Week 6. This will include Sections 1.1-1.5, 1.7-1.9, 2.1-2.3, 3.1-3.3, 4.1.

About the questions in this class in general (quizzes, midterm, final):

- The questions (or part-questions) are **not** in order of difficulty.
- Some questions are very short and some questions are very long.
- The questions will require you to put together ideas from different topics.
- The questions are in many parts:
  - The parts are loosely related (e.g. they may be about the same matrix).
  - There are usually both easy parts and hard parts within the same question.
  - You don't always need the answer to part a) to answer part b).
  - Sometimes part b) depends on the information given in the question of part a), but not on the answer to part a).
  - Even when part b) depends on the answer to part a): If you have the wrong answer to part a) and therefore a wrong answer to part b), you may still get full marks for part b) if I think you would've got the right answer if you had the right answer to part a).
- There will be some very hard questions, to challenge you - you are not expected to solve them completely.
  - There will be partial credit for good ideas and attempts.
  - Ideas that don't work will not gain or lose points.
  - You may lose points for mathematically incorrect statements.
- There are usually questions which have a simple conceptual solution, that can also be solved by a long computation.

Some suggestions for how to study:

1. Review the material:
   - Make sure you know your computations (e.g. row-reduction, determinant).
   - Make sure you know the definitions, not just how to calculate them.
   - Make a list of the important definitions and theorems (e.g. pp42-43 of week 2).
2. Do practice problems:
   - Close your notes and redo homework problems or in-class exercises that you had trouble with;

- The exercises in the textbook have answers in the back;
- You can look online for more problems - linear algebra is a popular course so there are many class webpages that may have good notes or problems.
- If you want to check your solutions to any problems, you can always bring them to office hours.

In the exam itself:

- Please show **all the steps** in your calculations: a final answer without supporting work will not get full credit.
- Please check your answers after each step! (e.g. after solving $A\mathbf{x} = \mathbf{b}$, you should calculate the product of A and your $\mathbf{x}$ to make sure it equals $\mathbf{b}$.) Getting a wrong answer in one step might make the next step much harder. You don't need to show me your answer-checking, but I may be harsh on arithmetic error in questions where you can check your answer. If you really cannot find your mistake, at least tell me e.g. "my solution does not satisfy $A\mathbf{x} = \mathbf{b}$ so I must have made an arithmetic error".
- Please explain your proofs fully - make it clear to me that you understand and are not guessing.
- Do not write statements that are mathematically incorrect: this tells me that you don't understand, and you may lose points.