

Preliminary Information about Exam 2, Math 309, Fall 2015. This information will also be posted as a link in the syllabus.

I expect any changes from what is written here to be only small ones. I will notify you if necessary of changes as the exam is constructed.

1. Exam 2 is on WEDNESDAY, NOVEMBER 4, IN LAB SCIENCES 300, 7-9 PM, in Lab Sciences 300 (both sections of the class in the same room). Students who are working with the DRC should be in touch with that office about times and location.

2. Same as Exam 1: you cannot have any books, notes, calculators, electronics of any kind, "notecards", etc. You only need your writing tools: pen or pencils, eraser. You will be asked to leave all backpacks, large bags, etc. at the front of the exam room; it's easier not to bring them at all if you can avoid it. No electronic communications during exams. Cell phones, etc. should be put away and turned off.

3. The exam will cover, I think, all the material we covered since Exam 1, including any handouts or related material posted online.

From Chapter 3.1-3.2. In Section 3.3, we skipped Cramer's Rule and the subsection titled "application to engineering"; but you are responsible for the material on pp. 182-186 (determinants as areas and volumes, and linear transformations).

In Chapter 4, you're responsible for the material in 4.1-4.5, and the statement/simple uses of the "Rank Theorem" from 4.6. (We will also probably cover the material about "row space" in 4.6 this week, but I won't ask about the row space on the exam.). Again, you also need to be familiar with any related material posted online (such as the linearity property of determinants; and rotation of axes).

There will be no questions that "target" the material covered on Exam 1. But of course, there are previous ideas and skills that you still need to know in order to work with the newer material. For example, I won't ask a question "find the inverse of this matrix" on Exam 2; but you might need to be able to do so as "background skills" for some problem in the later material.

4. As with Exam 1: much of the exam will be multiple-choice and true false, with answers recorded on a machine readable card. This will get you a partial score on your exam within 1-2 days. A second shorter part of the exam will be hand graded: it will contain some short calculations, ask for definitions or ask you to state some result or give an example. This second part of the exam will probably take about a week to finish grading.

5. Here is one practice exam for you. Choose the link for Math 309 at

<http://wumath.wustl.edu/math-exam-archives> (this link will also be embedded in the syllabus)

Then open the folder for Fall 2012: in that file, you want to open

- i) m309_E2f12.pdf for Exam 2 from Fall 2012, without solutions
- ii) m309_E2sf12.pdf for the same exam with solution

The only questions on this old exam that I noticed that are not applicable are: T/F, Q10 (where the answer mentions the row space), Q15, Q18 (which mention eigenvalues and eigenvectors), and Part II, 5 (which mentions eigenvectors).

I recommend that you get a lot of your studying done before giving it a try; work it through, and only then look at the solutions.

These exams from Fall 2012 are from when I taught the course, so you can get there a good idea of the style of my exams and the nature of the questions I ask. (Of course, I'm always trying to be inventive about new ways to test the material and ask good questions.)

The Math 309 Exams in the archive from other semesters might provide some useful practice, but they were written by other faculty so they might be misleading in style or emphasis, and there might not be complete exam sets there.