

EXAM II STUDY GUIDE

About the exam: There will be between 5 and 7 questions. The coverage is all the material represented by Homework assignment 6 through 14, except as noted below. What follows are specific things on which one should focus. (Some of the exercises listed below may not have been homework problems, but are very similar to ones you have attempted.)

1. One or two problems drawn from exercises similar to 14, 17, 23, 24, pp. 66, 67, and 12, 18, 22, pp. 75.
2. Know how to calculate a determinant by either row expansion, column expansion, row operations, or column operations.
3. Disregard material related to the adjoint of a matrix. In particular, disregard **Theorems 2.1.2** and 2.1.4 and related problems.
4. One or two problems drawn from exercises similar to 5 - 9, p. 94, and 3, 4, 7, 12a, 13 - 15, pp. 101, 102.
5. Section 2.3 is very important. Know the theorems and lemmas in this section. **Theorem 2.3.6** is absolutely fundamental. Know how to find eigenvalues and eigenvectors.
6. One or two problems drawn from exercises similar to 1 - 7, 9, 14, 15, 16, 18, pp. 109 - 111.
7. One or two problems drawn from exercises similar to 1 - 11 (odd), 13, 15, 16, 19, 25, pp. 178, 179.
8. In section 4.2 you must know how to find a standard matrix. You can memorize tables 2 - 5, 8, and 9, but you should be able to reproduce them easily. I'll provide information from tables 6 and 7 if it is needed.
9. One or two problems drawn from exercises similar to 1 - 21 (odd) pp. 193 - 195.

Please let me know if you find any inconsistencies.