

MATH 2360-008: EXAM 2 INFO/LOGISTICS/ADVICE

• INFO:

WHEN:	Friday (10/23) at 9:00am	DURATION:	50 mins
PROBLEM COUNT:	Appropriate for a 50-min exam	BONUS COUNT:	At least one

– TOPICS CANDIDATE FOR THE EXAM:

- * LARSON 3.1: Determinants of Sparse Matrices via Cofactor Expansions, Determinants of Triangular Matrices
- * LARSON 3.2: Determinants of Dense Matrices via Elementary Row/Column Operations
- * LARSON 3.3: Properties of Determinants
- * LARSON 4.1: Vector Addition, Scalar Mult. (expect no explicit ?'s, but later Ch4 sections use this material)
- * LARSON 4.4: Linear Combinations, Spanning Sets, Linear Independence [Vector Spaces: \mathbb{R}^n, P_n ($1 \leq n \leq 5$)]
- * LARSON 4.5: Bases, Standard Bases, Dimension [Vector Spaces: \mathbb{R}^n, P_n ($1 \leq n \leq 5$)]
- * LARSON 4.6: Row Space, Column Space, Rank, Null Space, Nullity, Homogeneous/Particular Solutions
- * LARSON 4.7: Coordinate Vectors, Transition Matrices [Vector Spaces: \mathbb{R}^n ($1 \leq n \leq 5$)]
- * **Expect more of EXAM 2 to cover Chapter 4 since it has far more material than Chapter 3.**

– TOPICS CANDIDATE FOR BONUS QUESTIONS: (Maximum Bonus Points Possible = 15)

- * LARSON 4.2: Vector Spaces: Definition, Showing that a Set is not a Vector Space
- * LARSON 4.3: Subspaces: Definition, Showing that a Set is or is not a Subspace (of a Vector Space)

– TOPICS NOT COVERED AT ALL:

- * **Proofs of any kind, Graphs of any kind**
- * LARSON 3.1 - 3.3: Determinants of matrices whose entries involve **functions** (such as Jacobians & Wronskians)
- * LARSON 3.4: Applications of Determinants: Adjoins, Cramer's Rule, Geometric Applications (entire section)
- * LARSON 4.2: Vectors Spaces: Showing that a Set is a Vector Space
- * LARSON 4.4 - 4.7: **Vector spaces** $P, \mathbb{R}^{m \times n}, C[a, b], C^1[a, b], C^2[a, b], C^k[a, b]$
- * **PART III of the 4.6 Slides: Equivalent Conditions for Square & Non-Square Matrices**
- * LARSON 4.8: Applications of Vector Spaces (entire section)
- * **Any applications mentioned in other sections.**

• LOGISTICS:

- All you need to bring are pencil(s), eraser(s) & your Raidercard.
- Clear your desk of everything except pencil(s) and eraser(s).
- **Books, notes, notecards, calculators NOT PERMITTED.**
- Mobile devices (phones, tablets, PC's, music, ...) are to be shut off and put away.
- Tissues will be furnished – for allergies, not for sobbing.
- No talking or cheating!
- **When you turn in your exam, be prepared to show me your Raidercard if I don't recognize you.**
- **If you ask to use the restroom during the exam, either hold it or turn in your exam for grading.**

• ADVICE:

- **Use the restroom before the exam, if needed. Do not be late to the exam.**
- Review the slides, past homework, and perhaps even work some similar problems in the textbook.
- Use flashcards to aid in memorization of hard formulas. Study for the exam together in groups.
- Show up to the review sessions on Monday (10/19) and Wednesday (10/21).
- **If you need more review, show up to the last-minute help session Thursday evening (10/22).**
- **SHOW APPROPRIATE WORK! Attempt bonus question(s).**