MATH 2450-020: EXAM 3 INFO/LOGISTICS/ADVICE

- **INFO:**

WHEN:	Wednesday (11/05) at 1:00pm in PETRE 121 (our usual room)	DURATION:	50 mins
PROBLEM COUNT:	Appropriate for a 50-min exam	BONUS COUNT:	Several

  - TOPICS CANDIDATE FOR THE EXAM: ("SST" = "Smith, Strauss & Toda" 6^{th}-ed (i.e. the textbook))
    - SST 12.1: Double Integrals: Rectangular Regions, Iterated Integrals
    - SST 12.2: Double Integrals: Non-rectangular Regions, Area, Volume, Reversing the Order of Integration
    - SST 12.3: Double Integrals: Polar Coordinates, Area, Volume
    - SST 12.4: Double Integrals: Surface Area
    - SST 12.5: Triple Integrals: Rectangular Coordinates, Iterated Integrals, Volume
    - SST 12.7: Triple Integrals: Cylindrical & Spherical Coordinates
    - REMARK: **Expect some problems to ask you to sketch the region of integration.**
    - REMARK: **For SST 12.7, sketching the solid may be helpful, but it's not required (and not graded).**
    - REMARK: **All except 1 or 2 problems only want the integral(s) to be setup, not computed.**
    - REMARK: **Some problems may mandate which coordinate system to use in setting up and/or computing a multiple integral.**
    - REMARK: Topics in blue are covered in SST 12.1, but in lecture were lumped into section 12.2.
    - REMARK: **No formulas will be provided, so either memorize them or learn how to derive them.**
  - TOPICS CANDIDATE FOR BONUS QUESTIONS:
    - SST 12.8: Double Integrals: Change of Coordinates in $\mathbb{R}^2$, Jacobians in $\mathbb{R}^2$ or $\mathbb{R}^3$
    - ??????
    - REMARK: **Expect the bonus questions to be collectively worth no more than 20 points.**
  - TOPICS NOT COVERED AT ALL:
    - Any Proofs discussed in the textbook or during lecture
    - Functions of Four or More Variables
    - Riemann Sum Definitions of Multiple Integration
    - Quadruple Integrals, Quintuple Integrals, Sextuple Integrals, Septuple Integrals, ...
    - Surfaces of the form $y = g(x, z)$ or $x = h(y, z)$
    - SST 12.1: Fubini's Theorem, Fubini-Tonelli Theorem
    - SST 12.4: Parametric Surfaces (i.e. $\mathbf{R}(u, v) = \langle x(u, v), y(u, v), z(u, v)\rangle$)
    - SST 12.5: Fubini's Theorem, Reversing the Order of Integration of an **iterated Triple Integral**
    - SST 12.6: Mass, Moments, Centroids, and Probability Distributions (entire section)
    - SST 12.8: Triple Integrals: Change of Coordinates in $\mathbb{R}^3$

- **LOGISTICS:**
  - All you need to bring are pencil(s), eraser(s) & **your Raidercard**.
  - Clear your desk of everything except pencil(s) and eraser(s).
  - **Backpacks are to be placed at the front of the classroom**. **Hats are to be put away**.
  - Books, notes, notecards, calculators NOT PERMITTED. No talking or cheating!
  - Mobile devices (phones, tablets, PC's, music, ...) & headphones are to be shut off and put away.
  - **Complete work in the space provided for each problem/part**. **No extra blank paper will be provided!**
  - Tissues will be furnished – for allergies, not for sobbing.
  - **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**.
  - Review past homework, and perhaps even work some similar problems in the textbook.
  - Review relevant examples in the textbook, the lecture slides, and the lecture outlines.
  - Use flashcards to aid in memorization of hard formulas.
  - Study for the exam together in groups.
  - If you need more review, show up to the last-minute help session Tuesday (11/04) 7pm - 11pm in PETRE 121.
  - SHOW APPROPRIATE WORK! Attempt bonus questions.