

# MATH 2450-020: EXAM 1 INFO/LOGISTICS/ADVICE

## • INFO:

WHEN/WHERE:	Friday (09/19) 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” (i.e. the textbook))
  - \* SST 9.1-9.2: Vectors: Algebra, Norms, Parallel Vectors
  - \* SST 9.3-9.4: Vectors: Dot Product, Orthogonality, Cross Product, Scalar Triple Product, Areas/Volumes
  - \* SST 9.5: Parametric Curves, Lines in Space
  - \* SST 9.6: Planes in Space
  - \* SST 9.7: Quadric Surfaces
  - \* SST 10.1: Vector Functions: Algebra, Limits, Curves of Intersection
  - \* SST 10.2: Vector Functions: Calculus & Kinematics
  - \* REMARK: **Exam Questions come from 9.5-10.2, but solutions may require concepts from 9.1-9.4**
  - \* REMARK: **Any integrals to compute will be CalcI-level (i.e. no IBP, partial fractions, etc...)**
  - \* REMARK: **No formulas will be provided, so either memorize them or learn how to derive them.**
- TOPICS CANDIDATE FOR BONUS QUESTIONS: (MAX BONUS POINTS = 20 pts)
  - \* SST 10.4: **Arc Length**, Unit Tangent Vector, Unit Normal Vector, Curvature
  - \* ??????
- TOPICS NOT COVERED AT ALL:
  - \* Sketching or Graphing of any sort
  - \* Any Proofs discussed in the textbook or during lecture
  - \* SST 9.3: Direction Cosines, Direction Angles, Projections, Work
  - \* SST 9.4: Lagrange’s Identity, “cab-bac” Formula, Torque
  - \* SST 10.1: Vector Functions: Continuity
  - \* SST 10.2: (Piecewise) Smoothness of Curves
  - \* SST 10.3: Ballistics & Planetary Motion (entire section)
  - \* SST 10.4: Unit Binormal Vector & Torsion
  - \* SST 10.5: Tangential & Normal Components of Acceleration (entire section)

## • LOGISTICS:

- All you need to bring are pencil(s), eraser(s) & your Raidercard.
- **Clear your desk of everything except pencil(s), eraser(s) & your Raidercard.**
- **Backpacks are to be placed at the front or sides 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 (hopefully...)
- **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 outlines. Study for the exam together in groups.
- Use flashcards to aid in memorization of hard formulas/definitions/theorems.
- If you need more review, show up to the last-minute help session Thursday evening (09/18). [See Course Calendar]
- **SHOW APPROPRIATE WORK!** Correct solutions without appropriate work earn no points! Attempt bonus ?’s.