

How Vector Calculus is Different and How to Overcome Those Differences and Succeed

- Conceptually
 - Clear up Misconceptions
 - Vector Calc vs. Previous Math Classes
 - Actually READ the book and redo problems from notes
 - Nothing like Calculus II----think Calculus I
 - Thinking “geometrically” rather than computationally
 - Who can draw? ---get used to drawing pictures
- Homework
 - Death of Webassign
 - No Practice Another Version or “Watch it”
 - No immediate feedback
 - Real homework takes TIME--- don’t procrastinate
 - “Problem number 40”
 - ‘Describe’, ‘explore’, etc ---- problems are more abstract now
 - You have:
 - Your textbook, Dr. Zweck’s Office Hours, Study Groups
- Studying
 - The “Are they cheating ” and “Why are they studying together?” group
 - Treat problems like debate team topics
 - Be Dr. Zweck for a day
- Tests
 - Treat the first exam like the final
 - “the dreaded ant with wind speed monitor problem”
 - Pay attention to details and CONCEPTS
 - No looking at the test answers first, take the old tests like exams
 - Key to success: Draw Pictures
- Resources
 - Khan Academy
 - MIT Online Courses
 - Mac People: Grapher and Online Graphing Calculators
 - Review Conic Sections!
 - Linear Algebra---- gives a great explanation of vectors and coordinate transforms
- You will learn about
 - Ants
 - Australia
 - Food
 - Don’t be in class hungry, every surface looks like food
 - How to raise your hand when you could be wrong
 - Dr. Zweck isn’t going to talk at you for 2 hours
 - How to be a better student than you currently are