# Math 126 End of Week 3 Newsletter

**UPCOMING SCHEDULE**:
Friday:          Section 13.1 and 13.2 (Intro to 3D curves)
Monday:          Section 13.2 and 13.3 (3D curve facts: tangent vectors, arc length, curvature, TNB-Frame)
Tuesday:         Homework Q & A (and a discussion/handout on exam 1 studying)
Wednesday:       Section 13.3 and 13.4 (More 3D curve measurement tools)
Thursday:        Homework Q & A and Review for Exam 1
*Next* Friday:   Section 13.4 (Velocity and Acceleration)

*Exam 1 is Tuesday, Oct 23rd: It includes 12.1-12.6, 13.1-13.4*
There will be four pages of questions.  You will have **50 minutes**.  Time will be a factor, so make sure you time yourself as you are practicing old exams.  Many students have trouble adjusting to the time on the first exam (so consider yourself warned!).

**WS 3 sol'ns**: https://sites.math.washington.edu/~aloveles/Math126Fall2018/ws3Solns.pdf
Hopefully that introduced you to a few 3D curve facts.  We will talk about this more on Friday.

**HOMEWORK**:              Closing Tuesday: 13.1              Closing Thursday: 13.2, 13.3
Please work ahead on these assignments!!! Don't wait until next week, start all these section this weekend.  Most the 13.3 and 13.4 problems in homework don't really require lecture; you are computing arc length, curvature, **T**, **N**, acceleration which you can do now using the formulas from the book and posting in my review sheets.  Then in lecture you can focus on the concepts as I discuss them and you will have already practiced the computation.

**NEW POSTINGS:** Course website: https://sites.math.washington.edu/~aloveles/Math126Fall2018/index.html
1. *13.1 Summary*:         https://sites.math.washington.edu/~aloveles/Math126Fall2018/m12613-1review.pdf
2. *13.2 Summary*:         https://sites.math.washington.edu/~aloveles/Math126Fall2018/m12613-2review.pdf
3. *13.3 Summary*:         https://sites.math.washington.edu/~aloveles/Math126Fall2018/m12613-3review.pdf
4. *13.4 Summary*:         https://sites.math.washington.edu/~aloveles/Math126Fall2018/m12613-4review.pdf
5. *Exam 1 Fact Sheet*:    https://sites.math.washington.edu/~aloveles/Math126Fall2018/m126Exam1FactSheet.pdf
6. *Exam 1 Review*:        https://sites.math.washington.edu/~aloveles/Math126Fall2018/m126Exam1Review.pdf

**OLD EXAMS**:
          Math Dept. Archive:       https://sites.math.washington.edu/~m126/midterms/midterm1.php
          My Exam Archive:          https://sites.math.washington.edu/~aloveles/Math126Fall2018/examarchive.html
*For practice with 12.6 (intro to surfaces) material you might try*:
Problem 2 from:           https://sites.math.washington.edu/~aloveles/Math126Spring2018/w16m126e1.pdf
Problem 1(b) from:        https://sites.math.washington.edu/~aloveles/Math126Spring2018/w15m126e1.pdf
Problem 2 from:           http://www.math.washington.edu/~m126/midterms/midterm1/m126spr11lovelessExI.pdf
*For practice with 13.1 and 13.2 try*:
Problem 5 from:           https://sites.math.washington.edu/~aloveles/Math126Spring2018/w16m126e1.pdf
Problem 4 from:           https://sites.math.washington.edu/~aloveles/Math126Spring2018/sp14m126e1.pdf
Problem 4 from:           http://www.math.washington.edu/~m126/midterms/midterm1/mid1_win09_perkins.pdf
Problem 3 from:           http://www.math.washington.edu/~aloveles/Math126Spring2013/Taggartf09e1.pdf
*For practice with 13.3 and 13.4 try*:
Problem 4 from:           https://sites.math.washington.edu/~aloveles/Math126Spring2018/w15m126e1.pdf
Problem 1 from:           https://sites.math.washington.edu/~aloveles/Math126Spring2018/w16m126e2.pdf
Problem 1ab from:         https://sites.math.washington.edu/~aloveles/Math126Spring2018/w15m126e2.pdf
Problem 1a from:          https://sites.math.washington.edu/~aloveles/Math126Spring2018/f13m126e2v1.pdf

You should look at more old exams than just these, but this hopefully gives you some targeted practice.
## See the next page for important studying advice.

**ADVICE:**
HERE IS MY EXAM STUDYING STRATEGY WHEN I WAS A STUDENT: I always like to share how I studied when I was in graduate school.  I was an okay student as an undergraduate, but I was an excellent student in graduate school.  Here was my studying strategy that seemed to work so well for me in grad school:

*Step 0*: Make sure you know the homework!  I often take at least one exam problem directly from the homework.  And ALL the exam problems will test the exact same concepts that you used in the homework (you won't need any tools that you didn't use in homework).  So keep asking yourself as you do the homework, "Could I do this on an exam?"

1.  **At least 1 week before an exam**, spend an intense night of studying.
    Try to trick yourself into thinking the exam is the next day.  Work through several old exams. This studying should consist of 2 elements:
    A.  *Problem recognition*: Flip through lots and lots and lots of exams quickly and see if you can figure out how to quickly start each problem.  Try to look through 5 exams in 15 minutes and make notes of things that confuse you to come back to later.
    B.  *Working out the details*: Carefully work through a few exams in details to practice finishing problems and to practice being careful with your work.

2.  After this intense studying session, talk to me or your TA or someone in the MSC to clear up any confusion you have.  (Or, like I did, just keep thinking about it on your own, reading and trying examples until you figure it out yourself).  Since you did your intense studying a week before the exam, that gives you lots of chances to ask questions and it will make the review sessions more valuable to you.

3.  **Then at least 2 days before the exam**, put in another night of intense studying.  Then when the instructor reviews in class, all the concepts will be fresh in your mind and you will be able to ask good questions.

More days of studying is better.  I often started two-three weeks in advance, this is the condensed version.  But, if you only could devote two nights to studying, then this is an efficient and effective use of your time and it gives your mind more time to process the information and if you only have enough time for one day of studying, then make that one day at least a week in advance!!!   I think this will help a lot.  You have to put in the time and effort to really get to know these concepts well.  If you find something helpful in these newsletters, please share it with your classmates.

*Note on grades and realistic expectations*: I can't guarantee that doing the above will give you a grade above 3.5.  Remember as I said the first day that grades above 3.5 are hard to attain. Maybe you'll make a few calculation mistakes and one or two conceptual mistakes and you end up with a 3.0 after the first exam.  Understand that this is a likely outcome and don't make unreasonable expectations for your first college math exam (do your best and shoot for a perfect exam, but have realistic expectations).  I can say that using a thoughtful and thorough studying method as I mention above makes if very likely that you will get a grade above 2.5 (I think if you thoroughly follow my advice then you can almost guarantee yourself a grade above 2.5).

Hope some of this helps.

- Dr. Andy Loveless