Syllabus

Math 111 Spring '17

Text: Calculus for the Managerial, Life, and Social Sciences by S. T. Tan (10th edition)

Instructor: Jed Herman Office: SCI D 287

Office Hours: MT 12:00 – 12:50, WR 2:00-2:50

or by appointment (or whenever I'm in... just stop by!)

Class times & room: Section 1 11:00 – 11:50 MTWR in SCI A225

Section 5 3:00 – 3:50 MTWR in SCI A210

(x4188)

Course Objectives

• To learn how to effectively communicate mathematical ideas to others

• To learn differential and integral calculus and how to apply it to problem solving

• To learn how to work in groups effectively

• To learn how to effectively read mathematical and scientific writing

Calculators:

A graphing calculator is suggested for this course. If you are going to purchase a calculator for this course, a good one might be from the **TI-8x** series (TI-83, TI-84, etc.). All calculators are slightly different. Be sure that you have a manual!

Workload:

This course has a heavy workload. In general, I will expect an average of about 2 to 3 hours of outside work <u>for every hour spent in the classroom!</u> This includes time spent on daily quizzes (see later) and reading the section, and it also includes time spent on homework assignments. Please realize that this is an average – some weeks will take more time, some less – and some students will need more time (or less time) in general.

Attendance:

You are expected to regularly attend class – in fact, class attendance and participation is a part of your grade! When circumstances arise to prevent you from coming to class, you should let your instructor know (email is a great way to do so). Missing exams and/or paper deadlines will only be allowed in the most dire of circumstances and WILL require ACCEPTABLE DOCUMENTATION as to the reason for the absence.

Student Rights and Responsibilities

You have certain rights and responsibilities. For more information, see the following link: http://www.uwsp.edu/admin/stuaffairs/rights/rightsCommBillRights.pdf

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Grading

Grading will be based on an overall percentage score, using the following scale:

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90%+ A- or better 80%-89.9% B-, B or B+
70%-79.9% C-, C or C+ 60%-69.9% D-, D or D+
<60% F
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I reserve the right to adjust the final percentage +/- up to about 2%, based on my assessment of your effort and/or participation in the class and course in general.

To get your overall score, you will be graded on the following:

Homework (Weekly and Daily)	1/7
Daily Worksheets and Presentations	1/7
5 Exams	1/7 each
Final	<u>1/7</u>
	100%

Hopefully you are good enough at addition to notice this does not add correctly. That is because I will drop your lowest exam score. That could be your final, if it is lower than your other exams.

- How does this help me? It allows you to skip the final and concentrate on your other final projects, which can be a big relief to some. Or, if you bomb one test, it allows you to sort of erase that grade.
- Can I use it to replace class presentations or homework? No. Those components test something different than an exam.

Exams

There will be five exams and a final, marked on the schedule, below. Note that the actual dates of the exams may vary slightly. Remember: you can drop one exam – or the final!

Daily Work

I believe students learn more from doing problems and talking about them than from watching an instructor write on the board. Most class periods will be devoted to inclass worksheets. Days will have the following format:

- 5 minutes readying the daily homework (see later)
- 5 to 10 minute short lecture/overview of the material by instructor
- 20 to 30 minutes of group work by student groups
- 5 to 15 minutes of presentation of solutions/discussion of solutions

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Worksheets, continued

It is worth discussing this teaching model a little. It is a little like what is called the "flipped classroom" (if you have heard of that). I *will* explain the day's material, but in order for this teaching method to work, <u>you will have to read the material **before** each class period</u>.

To encourage you to read ahead, you will need to turn in a homework problem at the start of class each day. You will have a few minutes to discuss answers with your group members if you wish – but not enough time to do the problem from scratch.

Students *can* have emergencies and/or illnesses which prevent them from coming to class on occasion. To this end, the lowest TWO days' scores will be dropped (remember, there are two worksheets each day). You can also get half credit for a missed worksheet by turning it fully completed within two days of returning to class (but not later than the next exam day).

- Can I make up missed daily worksheets? For partial credit only. An important part of the worksheets is the presentation of ideas, which you will have missed.
- *Do I have to work in a group?* The short answer is yes. It is not enough to know things you need to be able to communicate them.
- Will we have assigned groups? No. You will find people to work with, 2 to 3 per group. It could be the same group each time or different ones. If there are problems with group formation, your professor will help smooth them out.
- I hate working in groups! The other people are too fast/too slow! Groups benefit fast workers because they get to explain their ideas to other people talking about what you know makes you understand it better. Groups benefit slower workers because they benefit from the ideas and explanations of others methods they may not have understood as well before the explanation.
- If we are just working on worksheets, why can't we skip class and turn it in the next day? The discussion and presentation of ideas is a critical part of this method of learning, and you can't do it without being in class to present.
- Why don't you just teach us instead? We paid good money for this class! I am teaching you with this method just not in the traditional way. You will actually learn the material better this way than you would in lecture course you will have to work harder in class and think more and ask more questions. Instead of being spoon-fed little bits to memorize, you will have to learn how to learn.
- I wanted a math class I could take and not think about! Sorry, can't help you there.

Worksheets, continued

- What if I get sick for an extended period? If you have a situation which takes you away from school for an extended period, we can revisit the presentation grades. But there is also a real issue with learning the material.
- I already know this material. I just want to take my exams and skip the dumb worksheets and homework! Sorry. Can't help you there. If you already know all this course can offer, you probably shouldn't be here. If you know some topics, consider the class time to be a chance to reinforce and get a better grade.

Homework

As part of the "learn by doing" model, you will have a lot of homework in this class. Weekly homework will typically be do on Tuesdays each week, based on the previous week's material. Daily homework, on the other hand, will be due each day – at the start of the period – on the material to be studied that day. Typically, it is one (fairly straightforward) problem, chosen to represent the basic ideas of the section.

D2L boards are set up for each problem set, for students to post questions and/or answers to questions about the homework. Posting can also earn you extra credit (see the section on D2L).

- If you haven't taught it to us yet, how can we be expected to know it? You will have to READ THE BOOK.
- It doesn't seem fair you are supposed to TEACH US! The course goal is to get you to learn, regardless of method. This method requires more work for the student, but it works much better than the standard way.
- *I don't understand the book!* You should read several days in advance, so you can come to my office or the Math Help Room if you have trouble.
- *I don't think I can do it!* A lot of students feel uncomfortable or overwhelmed at first when they encounter this method. Almost all of them *do* get the hang of it, though and you will too.

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D2L Storage and Homework Boards

D2L will serve as a storage space for worksheets and homework assignment pages. That way, you can easily get access to them if you miss them. There will also be discussion boards available for you to post comments or questions.

The boards will be monitored after the fact. That is, you will post directly to the board, and I will monitor (semi-weekly). Postings are never anonymous and <u>must not</u> contain inappropriate (foul, rude, hostile) language. Violation of this rule may constitute academic misconduct (see below).

There will be a discussion board each week for homework questions. You will get *extra credit* if you post <u>a question</u> from the homework or <u>an answer</u> to another person's question (it does not matter if the question is required or suggested). To earn the extra credit, your post must meet the following criteria:

- 1) you ask a question about how to do part of the homework/quiz assignment for the week, or you answer such a question or correct someone else's wrong answer, and
- 2) the posting contains new content (so a posting which says "I agree" is not worth extra credit!)

You can earn up to ONE extra credit point per WEEK by posting in this way.

The instructor will check all boards at least once every 24 hours (except maybe on the weekends). Unanswered questions and incorrect answers will be answered/fixed after 48 hours or so if no one has already done so.

Academic Misconduct Policy

I expect you to complete the coursework for this course. Failure to complete an assignment will result in zero points awarded for that assignment. Late assignments may lose points, at the discretion of the instructor. Also see the following link: http://www.uwsp.edu/admin/stuaffairs/rights/rights/Chap14.pdf

Disabilities

Information concerning accommodations made as per Section 504 of the Rehabilitation Act or the Americans with Disabilities Act can be found at http://www.uwsp.edu/admin/stuaffairs/rights/rightsADAPolicyInfo.pdf

In particular, to request any accommodations of this type, relevant to this class, you should discuss the matter with the Disability Services Office. Information and contact information may be found at http://www.uwsp.edu/special/disability/

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Schedule (subject to modification):

Week	Dates	Sections Covered	Notes & Due Dates
1	Jan 23 to 26	1.1 to 1.4, 2.1	
2	Jan 30 to Feb 2	2.2 to 2.4	
3	Feb 6 to 9	2.4 to 2.6	
4	Feb 13 to 16	3.1, 3.2	Exam Tuesday
5	Feb 20 to 23	3.2 to 3.4	
6	Feb 27 to Mar 2	3.5, 3.6	Exam Thursday
7	Mar 6 to 9	4.1 to 4.3	
8	Mar 13 to 16	4.3 to 4.5	
	Mar 20 to 24	SPRING BREAK	
9	Mar 27 to 30	5.1, 5.2	Exam Tuesday
10	Apr 3 to 6	5.2, 5.4, 5.5	Last Day to Withdraw Friday
11	Apr 10 to 13	5.5, 5.6	
12	Apr 17 to 20	6.1, 6.2	Exam Monday
13	Apr 24 to 27	6.2 to 6.5	
14	May 1 to 4	6.6, 7.1	Exam Thursday
15	May 8 to 11	None	Course Review
Cumulative Final Tuesday, Dec 20 at 2:45 pm to 4:45 pm			2:45 pm to 4:45 pm