

TMATH 126

Summer Term 2012

MW 9:30-12:00 PM JOY 211

Lecturer: Ruth Vanderpool

Office Hours: Monday 12:00-12:30PM

Wednesday 12:00-12:30PM

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<http://faculty.washington.edu/rvanderp/>

Course Description & Student Learning Objectives:

This is the third quarter in the calculus sequence. We will spend three weeks on Taylor polynomials and Taylor series, two weeks on vector geometry in three dimensions, and four weeks on multivariable differential calculus (double integrals in Cartesian coordinates).

By the end of the course students should be able to:

1. clearly define sequences and series to both scientific and non-scientific audiences
2. construct a Taylor approximation and use it to solve real world problems
3. describe vectors, lines, & simple surfaces mathematically in three-dimensional space
4. compute and interpret the meaning of the dot and cross product
5. apply multivariable calculus techniques to find tangent planes, linear approximations, local extrema, and volumes bounded by multivariable functions.

The course supports the following department Student Learning Objectives:

1. (Env. Sci.) Cultivate skills critical to interpreting scientific concepts for public understanding, including familiarity with the scientific method, information literacy, statistical data analysis, hypothesis formulation, and conceptual modeling, research project design and working collaboratively.
2. (Env. Sci.) Participate in engaged inquiry as a means of connection classroom learning to real-world environmental problem solving and establishing the skills needed for life-long learning.
3. (Env. Sci) Develop advanced scientific skills necessary to achieve an understanding of and solutions to environmental problems including physical and biological measurement techniques, statistical data analysis, hypothesis formulation and conceptual modeling, research project design and working collaboratively.
4. (PPE) Students will strengthen their analytic skills
5. (PPE) Students will develop their ability to write with style and precision.
6. (PPE) Students will become more competent with quantitative analysis.
7. (PPE) Student will develop their ethical and logical reasoning.

Useful Items:

- Text: Details, including some pricing data, is posted on the class website. Either: *Calculus: Early Transcendentals* 7th ed. by James Stewart. (978-0-538-49790-9) or UW Custom print vol 2 (978-0-538-73807-1).
- Calculators: You are welcome to use any kind of calculator on your homework, exams, and quizzes. However, devices able to access the internet and phones may *not* be used on quizzes and exams in this class.

Important Dates:

7/9	Exam I	6/22	Last day alter your schedule with no fees
7/30	Exam II	6/29	Last day to add a class
8/15	Final (9:30-12:00pm)	8/5	Last day to change grading option

Grades: The following weights will be used to calculate your percentage in the course. The function f takes your percentage in the course and returns your grade on a 4. scale.

WeBWork assignments	15%	$f(x) = \begin{cases} 4.0 & \text{if } 90 < x \\ .1x - 5 & \text{if } 57 \leq x \leq 90 \\ 0 & \text{if } x < 57 \end{cases}$
Written Homework	20%	
Quizzes	10%	
2 Midterms	30%	
Final	25%	

Quizzes:

A quiz is given every week at the instructor's discretion. Generally you will be given 25 to 30 minutes at the end of class on Mondays for each quiz. The quiz will be over the written homework turned in the Friday before hand. You may use a 3 × 5" double-sided notecard with anything that you like written or typed on it for each quiz.

No make up quizzes, unless previously arranged, will be given, but I will drop the lowest scoring quiz so that you have some flexibility.

Outside Resources:

Come visit me if you have questions! If you are unable to attend my posted office hours but would like to meet, please let me know. I am willing to try and work with your schedule. Also remember that you are not alone in this class and your peers are a valuable (and often underutilized) resource.

The Teaching & Learning Center can offer a number of additional instructional services. Additionally math tutors are available regularly Monday through Thursday from 10am-6pm. Complete information, hours, and updates are available at <http://www.tacoma.washington.edu/tlc/>.

Homework Policy:

Two homework assignments will be posted every week on WebAssign. One assignment will be due at 8pm on *Tuesday* and the second will be due at 8pm *Friday*. Each assignment will be announced in class and posted on the calendar (found on the class website <http://faculty.washington.edu/rvanderp/>). *Both assignments are due on days that the class does not meet.* Each time we meet ten minutes will be set aside to answer homework questions from the online system. To make the best use of this period I advise you to copy down the questions you have and bring them to class. Note that sometimes WebAssign randomizes the numbers so that individuals may have slightly different problems. Thus, when answering questions I may not be considering your specific problem, however the techniques I use will usually still apply.

To access WebAssign follow the steps below:

1. Browse to WebAssign through the course website or manually type in the address: <http://webassign.net/login.html>
2. Click on “I have a Class Key” button.
3. Enter “uwt 5286 4307” and hit Submit.
4. If you already have a WebAssign account, type in your login information, if not, create an account and log in. Note that your institution should be “uwt”.
5. If you cannot log into WebAssign, email me as soon as possible. You will not be granted extensions if you cite accessibility issues in the few hours before an assignment is due.

When you first log in you will see a notice about a grace period and payment options. You can register with an Access Code card (available in the enhanced WebAssign textbook) or you can buy an Access Code online with a credit card. After the grace period you will again see the notice and you will not be able to to continue without entering an Access Code.

I suggest you post any homework questions on the WebAssign forum labeled “WebHW Questions & Help”. This discussion board gives you a place to discuss any homework problems that were not addressed in class and, if answering a question correctly, will earn you extra credit on your homework scores.

Hand written assignments will also be assigned and collected on *Fridays*. An additional fifteen minutes of class on Wednesday will be reserved to address questions from the hand-written assignments. *If completed early, you may turn these in to the Homework folder on Wednesday at the end of class, otherwise slide your stapled assignment under my office door in GWP 430 by 8pm on Friday.*

If you miss class it is your responsibility to find out what material and homework you are responsible for. Your homework is expected to be written up neatly, clearly, and completely. Partial credit is given on individual problems, but you will have no opportunities to rewrite, edit, or correct your homework for additional points, so I suggest that you turn in a revised copy of your homework (as opposed to the first draft) that has your final answer and it's supporting work well organized and easy to read.

Late homework will not be accepted, but I will drop the lowest homework so that you have some flexibility.

Notes:

- I do *not* check my email after 4pm. Any questions sent to my email after 4pm may not receive a response until the next morning. The University's e-mail policy is posted at: http://www.tacoma.washington.edu/policies_procedures/E-mail_Policy.pdf
- The University of Washington Tacoma is committed to making physical facilities and instructional programs accessible to students with disabilities. Disability Support Services (DSS) functions as the focal point for coordination of services for students with disabilities. In compliance with Title II of the Americans with Disabilities Act, any enrolled student at UW Tacoma who has an appropriately documented physical, emotional, or mental disability that "substantially limits one or more major life activities [including walking, seeing, hearing, speaking, breathing, learning, and working]," is eligible for services from DSS. If you are wondering if you may be eligible for accommodations on our campus, please contact the DSS reception desk at 692-4522.
- The Counseling Center offers short-term, problem-focused counseling to UW Tacoma students who may feel overwhelmed by the responsibilities of college, work, family, and relationships. Counselors are available to help students cope with stresses and personal issues that may interfere with their ability to perform in school. The service is provided confidentially and without additional charge to currently enrolled undergraduate and graduate students. To schedule an appointment, please call 692-4522 or stop by the Student Counseling Center (SCC), located in MAT 253.
- Safety Escorts are available Monday - Thursday 5:00pm - 10:30pm. They can be reached either through the duty officer or by dialing #300 from a campus phone. Additional safety information and emergency procedures is available at <http://www.tacoma.washington.edu/security>.
- While I have attempted to make this syllabus as complete as possible, adjustments will be made throughout the course. Announcements will be made during class and it is the responsibility of the student to keep updated if class is missed.