

MATH 1220, Section 4, Spring 2010

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Office hours: Right after lecture or by appointment.

Course website: <http://www.math.utah.edu/~docampo/math1220>

Course Description

This is the second course of the Calculus sequence. In this course, we will continue the study of functions in one variable, focusing on transcendental functions, integration techniques, elementary differential equations, infinite sequences and series, conics, and polar coordinates. We will cover chapters 6 to 10 in the following text:

- *Calculus*, 9th edition, by Varberg, Purcell and Rigdon.

To enroll for this course, you must have at least a C grade in Calculus 1 (Math 1210).

Here is a brief overview of the material that we will cover. A more complete day-by-day syllabus can be found at <http://math.utah.edu/~docampo/math1220/fullsyllabus.html>.

| Week | Sections | Brief description | Exam dates |
|------|-----------------|---|-------------------|
| 1 | 6.1 - 6.3 | Natural logs and exponentials | 2/5 Midterm 1 |
| 2 | 6.4, 6.5, 6.8 | General exp and inverse trig | |
| 3 | 6.9, 6.6, 15.1 | Hyperbolic funcs and differential eqns | |
| 4 | 6.9 and review | Euler's method | |
| 5 | 7.1 - 7.3 | Basic integration, integration by parts | 3/5 Midterm 2 |
| 6 | 7.4 - 7.5 | Rationalizing and partial fractions | |
| 7 | 7.6, 8.1 - 8.3 | L'Hôpital's, improper integrals | |
| 8 | 8.4 and review | Improper integrals | |
| 9 | 9.1 - 9.3 | Infinte sequences and series | 4/9 Midterm 3 |
| 10 | 9.4 - 9.6 | Convergence tests | |
| 11 | Spring Break | | |
| 12 | 9.6 - 9.9 | Power, Taylor, and Maclaurin series | |
| 13 | 9.9 and review | Taylor approximation theorem | |
| 14 | 10.1 - 10.4 | Conics and parametrized curves | 5/5 Final, 1-3 PM |
| 15 | 10.5 - 10.7 | Polar coordinates | |
| 16 | Review | | |
| 17 | Final exam week | | |

Grading

The grade distribution for this course will be as follows:

| | | |
|---------------------|-----|---|
| WebWork Assignments | 20% | More details below. |
| Three Midterms | 50% | Lowest midterm grade 10%, other two 20% each. Dates: 2/5, 3/5 and 4/9, during lecture. |
| Final Exam | 30% | Comprehensive. Wednesday, 5/5, 1-3 PM. |

The following scale is a guideline for assignment of letter grades. The final grading scale will be no stricter.

| | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | E |
| 100-93 | 92-90 | 89-87 | 86-83 | 82-80 | 79-77 | 76-73 | 72-70 | 69-67 | 66-63 | 62-60 | 59-0 |

Your grades will be posted on Blackboard/WebCT, which can be accessed through the university website (<http://webct.utah.edu>). To log in, use your uNID and password. I will update the grades on a regular basis. You are responsible for checking the accuracy of your grades. If you find any mistakes, let me know right away so I can correct them.

WebWork Assignments

For this class, you will have weekly assignments to be done on the web using a facility called WebWork.

WebWork is a web-based homework system designed especially for mathematics. Its purpose is to give instant feedback as to the correctness of your answers. If your answer is not correct, you may redo the problem as many times as needed until the closing date of the assignment.

Every week, I will assign 5 to 15 problems through WebWork. The assignment will be available on Monday, and its closing date will be the Tuesday of the following week at 11:59PM. Note that, since WebWork is a computer program, it will not be possible to submit any answers past the closing time under any circumstances.

Each problem will be worth 1 to 3 points. WebWork will keep track of your scores and you will have access to the statistics. Your total on WebWork assignments will count as 20% of your final grade.

There will be a training assignment for you to adapt to the WebWork interface. There will be no closing date for this assignment and it will not affect your grade.

The WebWork interface makes it convenient for you to email questions regarding specific problems in the assignment. There will be an assistant in charge of answering these emails. The assistant has a limited time for this particular class and may not be able to answer your question right away. You are ultimately responsible for your own assignment, independently on whether the assistant was able to help you on time. In order to prevent an overflow of emails, I am enforcing the following policy: any email sent after 6PM on the closing date of the assignment will be ignored.

Here are some useful links about WebWork:

- WebWork for this class: <http://webwork2.math.utah.edu/webwork2/math1220spring2010-4>
- WebWork at the Math Department: <http://www.math.utah.edu/online/ww/classes.html>
- WebWork summary for students: <http://www.math.utah.edu/online/ww/help/>
- WebWork wiki: <http://webwork.maa.org/wiki>

Exams

There will be three midterms and a comprehensive final.

| | Date | Time | Place | Material covered |
|-----------|------|--------------|---------|-------------------------|
| Midterm 1 | 2/5 | 12:55-1:45pm | AEB 350 | Chapter 6 + 15.1 |
| Midterm 2 | 3/5 | 12:55-1:45pm | AEB 350 | Chapters 7 + 8 |
| Midterm 3 | 4/9 | 12:55-1:45pm | AEB 350 | Chapter 9 |
| Final | 5/5 | 1pm to 3pm | AEB 350 | Chapters 6 to 10 + 15.1 |

You are expected to be present for all exams. There will be no retakes under any circumstances. Makeup exams will be given only in case of a verifiable emergency. In such situations, it is your responsibility to communicate with me as soon as possible, preferably *before* the exam occurs. Talking to me late may be sufficient reason to deny the request for a makeup.

Tutoring

The Math Department Tutoring Center has tutors available if you want to drop in for help. They meet in room 155 of the T. Benny Rushing Center, adjacent to JWB and LCB. Check their website (<http://www.math.utah.edu/ugrad/tutoring.html>) for hours.

The ASUU Tutoring Center, SSB 330, also offers inexpensive private tutoring. A list of tutors is available at the Math Department office, JWB 233.

Policies

Quantity of work

As with any 4 credit hour math course, you should expect to spend at least 12 hours per week studying and doing homework, in addition to the 4 hours of lecture. I recommend reading the material to be covered in lecture before coming to class. Any concerns about the class pace, material, and homework, as well as any problems preventing you from performing up to your expectations should be promptly discussed with me.

Quality of work

Anything that you submit should be neat, legible, and clearly written. Solutions to problems should always include sufficient justification. You must show enough of your work so that a reasonable person with average knowledge of the material could logically follow and be convinced by your argument.

Calculators

You are welcome to use a calculator as you see fit. I encourage you to learn to use it in an effective manner. However, your calculator will not be able to pass this class for you. I may or may not allow calculators on exams.

Email & internet

You will need to have internet access and a valid email address registered with Campus Information System. I will regularly send emails to the class and update the course website and your grades and expect you to be responsible for receiving and monitoring that information.

Classroom etiquette

I demand respectful behavior in my classroom to me and to fellow students. Refrain from talking in class and in general avoid behavior that distracts others. Come to class on time and if you have to be late, try to be as discreet as possible. No disrespectful behavior will be tolerated under any circumstance.

Academic honesty

As an University of Utah student, you are bound to the standards of academic honesty put forth by the University Code: <http://www.regulations.utah.edu/academics/6-400.html>.