Instructor Information

Tasia Raymer
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Office: 587 Malott Hall
Office Hours: Monday 2-3pm & Friday 10-11am

TA Information

David Belanger
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Office: 105 Malott Hall
Office Hours: Monday 9-10am & Wednesday 2:30-3:30pm

Textbook

Text: Thomas’ Calculus, 12th Ed., by Weir & Hass. (The single variable version is all you really need if you are not planning to take 1920.) There is a copy of the text on reserve at the Math Library.

Chapters to be discussed:
Chapter 5 - The Definite Integral
Chapter 6 - Applications of Integrals
Chapter 7 - Calculus of Transcendental Functions
Chapter 8 - Techniques for Evaluating Integrals
Chapter 10 - Infinite Sequences and Series

Course Description and Objectives

In a first course of calculus one studies derivatives and learns the derivative of a function is both the slope of the line tangent to that function and the instantaneous rate of change of the function. The first part of the math 1910 concerns integrals of functions. We will first consider a geometric interpretation of integrals and then their relationship to derivatives. As with taking derivatives, finding the value of an integral is not always easy; we will learn techniques for integrating different types of functions and delve into some applications. Applications range from finding the volume of an irregularly shaped solid to solving differential equations. The latter has countless applications in all sciences and engineering, from modeling the motion of a spring to population dynamics. In the second part of this course we will learn how to represent functions in series form and extend the ideas we have learned thus far in calculus to functions in this form. Approximating functions with series will also be discussed, which essentially allows one to work with polynomials rather than more complicated trigonometric and transcendental functions.
While exploring the specific content mentioned above, students will strengthen several transferable skills.

- As in any mathematics course, students will sharpen their critical thinking and problem solving abilities.
- In this class you will learn to clearly justify your methods by thoroughly writing up the steps and logic used to solve homework problems.
- You will improve your ability to verbally articulate yourself to a group during in-class activities.
- You will learn to efficiently work in groups. During class discussions you will be encouraged to ask your peers for clarification, as well as answer questions posed by your peers, thus taking advantage of the diversity of knowledge in the group.

**Classroom Etiquette**

- Classroom participation is an important part of the learning process. We will strive to create an atmosphere in which all students are comfortable asking and answering questions. Thus, students will behave in a respectful manner toward the instructor and their peers.
- Students are required to switch off their cell phones and any other electronic devices that may cause a disturbance.
- Text messaging and laptop use for anything other than note taking are not permitted.

**Student Expectations**

- Students are responsible for reading the sections of the text book corresponding to each lecture. Exams will cover material from lectures, as well as all content from the book whether or not it is stressed in lecture.
- Students are to cooperate and participate when we do individual, pair or group work in class.
- It is the students’ responsibility to check for new announcements posted on Blackboard or sent via email daily.
- It is the students’ responsibility to seek help if he/she is have a difficult time understanding the material and/or how to apply concepts to solve problems.
  - If you are more comfortable asking questions in a more one-on-one/small group environment, don’t hesitate to stop by during office hours. If there is something you prefer to discuss privately, feel free set up a meeting.
  - Setting up a work group with fellow students is also recommended.
TA Sections

Recitation Section (Tuesdays)
Homework quizzes will take place at the beginning of section (see below) and an informal discussion will follow. If there is a topic the instructor or TA would like to emphasize or review it will be discussed first; the remaining time will be spent on concepts or problems suggested by students.

Workshops (Thursdays)
Workshop worksheets will be posted at the beginning of the week and should be read in advanced. During the workshops students will work together in small groups and turn in their solutions at the end of the section; workshops may not be completed at home. Each workshop is worth 5 points and participation will be taken into account. Your lowest workshop score will be dropped.

Homework & Quizzes
The best way to learn is by doing. It is of the utmost importance that students work through problems at home. Homework problems will be posted on Blackboard each week and will usually be due on Tuesdays. (The due date may vary during prelim weeks.) Homework is to be submitted at the start of class the day it is due. Homework will be graded on completeness and effort- an honest attempt and proper write-up for each problem are require to receive full points. Write-up guidelines are posted on Blackboard. Your lowest homework score will be dropped.

There will be a brief quiz in section, consisting of one or two problems, on days homework is due. The quiz problems will be extremely similar to homework problems and quizzes are meant to help you evaluate your understanding of the material covered in the past week. Each quiz will be worth 5 points and your lowest score will be dropped.
* Late homework will not be accepted and there will be no make-up or rescheduling of quizzes. Use of calculators will not permitted during quizzes.

Exams

Prelim Exams
There will be three exams during the semester. The exams will be held in 203 Phillips Hall from 7:30pm to 9pm on Feb. 21, March 29 and April 24. Details about exam content will be given as the date approaches.
*There will be no make-ups or rescheduling of prelim exams. Use of calculators is not permitted.

Final Exam
The final exam will be on Thursday, May 17 from 2pm-4:30pm.
*There will be no make-up or rescheduling of the final exam. Use of calculators is not permitted.
Assessment

100 points  homework
45 points  quizzes
45 points  workshops
100 points  for each prelim exam
250 points  final exam

740 points  total

Add/Drop Information

The last day to add is Feb. 10 and the last day to drop is March 9. All add/drop inquires should be directed toward Heather Peterson (hko1@cornell.edu).

Additional Resources

In addition to attending instructor and TA office hours, there are many ways for students to seek help outside of class:

- Mathematics Support Center http://www.math.cornell.edu/twiki/bin/view/MSC/
- Academics Excellence Workshops
  http://www.engineering.cornell.edu/academics/undergraduate/curriculum/courses/workshops/index.cfm
- Peer Tutoring
  http://www.engineering.cornell.edu/academics/undergraduate/assistance/tutor/index.cfm
- Student Disabilities Services http://sds.cornell.edu/