

Instructor: Lijun Peng
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Office Hour: 5pm-6pm on Monday, Tuesday and Thursday or by appointment.

Course Overview:

In this course, we will continue our study of the fundamentals of the calculus of functions of one variable. The main mathematical techniques and topics that we will learn for these functions are definite integrals, indefinite integrals, the Fundamental Theorem of the Calculus, techniques of integration, applications of integrals to finding volumes, arc lengths, infinite sequences, Taylor series and power series.

Prerequisites: CAS MA 121 or CAS MA 123

Lectures:

We will meet for lectures in room B55 of PSY on Monday, Tuesday and Thursday from 6pm to 8:30pm. Please note that on Friday July 8th, there will be a special make-up lecture from 6pm to 8:30pm to make up for the holiday on July 4th.

Textbook:

The textbook for our course is *Calculus: Concepts and Contexts, fourth edition*, written by James Stewart and published by Thomson, Brooks Cole, ISBN-13: 978-0-495-55742-5; ISBN-10: 0-495-55742-0. In earlier editions the problems are different, so you will definitely need continuous access to a copy of the fourth edition. We will cover Chapters 5, 6 and 8 from this textbook.

Homework:

Homework will be assigned daily and collected weekly on Mondays. This homework is your primary means of learning the material. A respectable subset of the problems assigned will be graded for credit. You should, however, solve homework problems as the topics arise in class. No late homework will be accepted.

Exams:

There will be two exams in this course: A in-class midterm and the in-class final. The exact date of the midterm will be determined as the semester progresses. The final exam will be held at the University-scheduled time, which is August 11th during the normal class time. This exam will be cumulative and should run approximately 2 hours. The use of calculators, textbooks, or notebooks will not be permitted during the exam. No make-up exams will be offered with the exception of serious personal illness or family emergency. In any case, you will be required to obtain a letter from the Office of the Dean stating the reason.

Tentative Course Schedule:

Date	Topic	Reading
7/5	Introduction; Brief Review	Ch. 3, 5.2, 5.3
7/7	The Fundamental Theorem of Calculus; The Substitution Rule	5.4, 5.5
7/8	Integration by Parts	5.6
7/11	Additional Method of Integration	5.7
7/12	Additional Method of Integration	5.7
7/14	Integration Tables ; Improper Integral;	5.8, 5.10
7/18	Application: Areas & Arc Length	6.1, 6.4
7/19	Review for Midterm	
7/21	Midterm	
7/25	Application: Volumes & Cylindrical Shell	6.2, 6.3
7/26	Sequences; Series	8.1, 8.2
7/28	Convergence Testing II	8.3, 8.4
8/1	Power Series	8.5
8/2	Power Series	8.6
8/4	Taylor & Maclaurin Series	8.7
8/8	Applications	8.7, 8.8
8/9	Review for Final	
8/11	Final Exam	

Important Dates:

July 5	Classes Begin
July 8	Monday Schedule
July 11	Last Day to Add/Drop
July 28	Last Day to Withdraw
Aug 11	Final Exam

Grading Policy:

Your grade will be determined by the following process:

- Attendance 10%
- Homework 30%
- Midterm Exam 20%
- Final Exam 40%

Academic Conduct:

It is the student's responsibility to read and understand the provisions of the CAS Academic Conduct Code. You are to rely only on your own ideas and knowledge in solving the problems on exams. In the event of cheating, you will be referred to the University Academic Standards Committee for disciplinary action.