Course information for

Calculus 2 (Math 1360)

WELCOME

This syllabus contains some essential information about Math 1360 section ****.
Class meets **** at **** in ****.
The content of Calculus 2 emphasizes the theory of integration, techniques for the evaluation of integrals, applications of integration, and infinite sequences and series.
The TEXT is the 2nd edition of Essential Calculus: Early Transcendentals by James Stewart.
The PREREQUISITE is UCCS course Math 1350 or its equivalent. The prerequisite material will be used frequently.
WEB USE This website contains basic administrative information for the course. Additional material includes homework assignments, homework solutions, and test solutions at the bottom of this web page.
There is a NEWS section for announcements, including current homework.
If you don't have access to the website for any reason, speak to me and we will find another way to communicate.

CONTACT THE PROFESSOR

PROFESSOR: ****
OFFICE: ****
PHONE: 255-****
EMAIL: ****@uccs.edu
OFFICE HOURS: Official hours for this class are **** at ****.

If you are making a special trip to campus to see me I suggest calling ahead.

NEWS:

General Administrative Information

LEGAL FINE PRINT:
The administration of the course described below is subject to change as deemed necessary by the instructor.

Drop dates:
Please review the Campus Calendar in the university's schedule of courses.
Students who drop a course may be eligible for partial refunds if the drop is completed before a certain date.
THE LAST DAY TO WITHDRAW IS October 28, 2016.
Except for really exceptional circumstances, students enrolled after October 28 will not be permitted to drop or otherwise change their enrollment status.

Educational supplements:
The Mathematics Learning Center (MLC) is located in Engr 233. Free tutoring services are provided throughout the day.

Peer Assisted Study Sessions (PASS) are regularly scheduled group study sessions led by a more advanced student who mastered the course material.
The PASS leader attends a section of the class, so should be well aware of what is happening in the classroom.
The PASS leader for this course is ****. The sessions meet on **** at **** in ***, and on **** at in ****.

Disability Services:
Students with disabilities may be entitled to support, including extra time for examinations, from Disability Services in Main Hall 104, phone 255-3354.
Students who may fall into this group should talk to Disability Services as soon as possible.
The Disability Certification Letter to the professor is to be submitted within the first two weeks of classes.

COURSE DESCRIPTION:

Grading

In this course I expect 3 midterm examinations and a comprehensive final.
In addition there will be graded homework, assigned roughly once per week.
Late homework will be accepted for one week after the due date, but will receive a grade penalty.
Homework will not be accepted if it is more than one week late.
The lowest two homework scores will be discarded.
I expect to provide solutions for the homework. These will be available on this web page. I can also provide a paper copy if someone needs it.

Expected weights for grading purposes:
Homework 10 %
Each midterm 20 %
Comprehensive final 30 %
At the discretion of the professor, these relative weights may be adjusted to the advantage of the student.

COLLABORATION
Students are encouraged to discuss homework problems with their classmates or with the professor to share ideas, or detect and correct errors.
However, the written material handed in by the student is expected to be the work of that student.
Copying homework solutions from another student or source is a serious violation of the university's cheating policy.

HOMEWORK

TESTS

GOALS AND OBJECTIVES FOR THIS COURSE

GOALS

1. Recall and recognize the definition of the integral; explain its roots in geometric area problems.
Utilize the Fundamental Theorem of Calculus, and exploit the inverse relationship between integration and differentiation.
2. Solve integration problems using the main techniques of integration.
Appreciate the relevant applications of technology, including computer algebra systems and numerical

methods.
3. Use integration to solve geometric problems including computation of areas, volumes, and curve lengths.
4. Define, test, and apply numerical infinite sequences and series.
Approximate and represent functions by polynomials, Taylor polynomials, and Taylor series.
5. Apply calculus techniques to multivariate problems by considering parametric curves and polar coordinates.

OBJECTIVES

Upon successful completion of this course you will have achieved the following specific learning objectives:

Objectives for goal 1

1.a Define the definite and indefinite integral.
1.b State the Fundamental Theorem of Calculus.
1.c Use the chain rule for derivatives and the Fundamental Theorem of Calculus to evaluate integrals using substitutions.

Objectives for goal 2

2.a Use integration by parts to evaluate integrals.
2.b Use trigonometric substitutions to evaluate integrals.
2.c Expand rational functions using partial fractions.
2.d Use partial fractions to evaluate integrals.
2.e Use computer algebra systems and numerical methods for the evaluation of integrals.

Objectives for goal 3

3.a Compute areas lying between curves.
3.b Compute volumes using the shell method.
3.c Compute lengths of curves.
3.d Compute areas of surfaces of revolution.
3.e Solve applied problems in physics and engineering.

Objectives for goal 4

4.a Define infinite sequences.
4.b Distinguish convergent and divergent sequences.
4.c Define convergent infinite series.
4.d Apply convergence tests for numerical series.
4.e Approximate functions by Taylor polynomials.
4.f Represent functions as power series.
4.g Apply Taylor polynomials to solve mathematics problems.

Objectives for goal 5

5.a Represent plane curves in parametric form.
5.b Compute tangents and lengths of parametric curves.
5.c Represent curves in polar coordinates.
5.d Compute areas with the assistance of polar coordinates.

TENTATIVE SCHEDULE

This schedule is a rough planning guide. It is subject to change at the discretion of the professor.
Week 1: Chapter 5

Week 2:
Week 3: Chapter 6
Week 4:
Week 5:
Week 6: Test 1
Week 7: Chapter 7
Week 8:
Week 9:
Week 10: Test 2, Chapter 8
Week 11:
Week 12:
Week 13: Chapter 9
Week 14: Test 3
Week 15: