

Math 172
CALCULUS AND ANALYTIC GEOMETRY II
Spring 2020
4 CREDITS SECTION 004C 7:15 p.m. - 9:15 p.m. MW ROOM 2848

INSTRUCTOR: Dr. Alex Lavrentiev
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OFFICE HOURS: M, W 6:15 pm - 7:15 pm (when not at a meeting)
and by appointment.

TEXT: Calculus (Early Transcendentals) by James Stewart, 8th Edition
Sections 7.1-7.8, 8.1, 10.1-10.4, 11.1-11.10

COURSE DESCRIPTION:

This is the second course in the calculus sequence. The topics covered include techniques of integration, sequences, series, differential equations, parametric equations, and polar coordinates.

LEARNING OUTCOMES:

Upon successful completion of the course, students should be able to

- Communicate problem solutions, interpretations, and ideas and techniques of this course in clear and well-organized written form, including the proper use of notation.
- Evaluate indefinite, definite and improper integrals using various techniques of integration.
- Set up and solve mathematical models involving ordinary differential equations.
- Understand the definitions of sequences, series and alternating series.
- Compute limits of sequences.
- Test series for convergence using integral and comparison tests.
- Determine absolute convergence using ratio and root tests.
- Understand the definition of power series and find the radius and interval of their convergence.
- Represent functions as power series including Taylor and Maclaurin's series.
- Understand the calculus of polar and parametric curves.

OBJECTIVES AND EXPECTATIONS:

- Our objective in this course is more than just getting you to reproduce what was told to you in the classroom. We try to aim for greater command of the material, especially the ability to apply what you have learned to new situations.
- Most of learning takes place outside the classroom. Math is not a spectator sport. You have to study, practice, and do it to reach a level of competence and confidence.
- You are expected to read the textbook and handouts for comprehension. The worked out examples of problems and the detailed account of the material should be used to supplement those you see in the lecture. The textbook is not a novel, so the reading should be done slowly and carefully. Use pencil and paper to work through the material and to fill in omitted steps. Try to read the appropriate section(s) of the book *before* the material is presented in the lecture.

CALCULATORS:

You are required to have a TI-92 plus, TI-89, Voyage 200 or similar graphing calculator. We will not spend much time in class on instruction about your calculator, but I will try to help you out of class if necessary. You are allowed to use a graphing calculator during the exams and the in-class quizzes.

COURSE WORK: These are the types of course activities planned for the semester

Homework: Homework will be assigned for each covered section of the text. Homework will be assigned and graded via **WebAssign**.

How to register for WebAssign:

- Go to webassign.net/login.html
- Click on “**Enroll with Class Key**” at the top right corner and enter the class key listed below. If you already have a WebAssign account, you will have to provide your account information; otherwise you will need to create a new account. WebAssign gives free access for the first two weeks, but then you will need an access code. A WebAssign access code should be included with your textbook; it can also be purchased online

The Class Key for your course is: uwc 7440 2590

In-class Quizzes: There will be 15-minute in-class quizzes weekly except during the exam weeks. Each quiz will usually consist of several problems based on the material covered in the previous classes. I will drop your lowest in-class quiz score when I compute your final grade.

Semester Tests:

These tests will be based on your displayed understanding of concepts and ability to set up and solve problems. There will be four **two-hour** tests during the semester given on the following dates.

Exam 1: Feb. 24 Exam 2: Mar 18 Exam 3: Apr. 20 Exam 4: May 11

Make-up Exams and quizzes: You should bear in mind that you are expected to attend classes regularly and make-up exams and quizzes will **NOT** be given unless you have a valid reason for the absence. Missing a test or a quiz will result in a **0** unless arrangements have been made in advance or a verifiable emergency develops just prior to class time, in which case you should contact me as soon as physically possible. In general, approved make up tests and quizzes **must** be taken **prior** to the next class meeting. (The best way to contact me is via E-mail.)

GRADING :	Semester Exams	100 points each
	Quizzes	10 points each
	Homework	100 points total

Total score	Course Grade	These are rough cut-offs. Border line cases and +/- will be determined on an individual basis taking into account test consistency, attendance, class participation etc.
90 - 100	A	
80 - 89	B	
65 - 79	C	
50 - 64	D	
0 - 49	F	

Attendance:

I don't take attendance but you are responsible for all quizzes and exams, whether or not you are in class when they are announced. It is your responsibility to be aware of all assignments and anything else done in class that you need to know about.

Academic Misconduct: “All suspected incidents of academic misconduct shall be handled using the UW System rules, Chapter 14. (from UWS 14.03)’ The definition of ‘academic misconduct’ can be found in UWS 14.03. UWS 14 is available to all students in the library; additionally, all students received a copy of this policy during their orientation.”

Students Rights: Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990:
<https://uwosh.edu/financialaid/consumer-information/>