

MWF 11:00am to 12:15pm in BIC 3449

- Instructor: Michael McCabe
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- Course Description: Students will be introduced to basic concepts of differential and integral calculus. This course is intended for students planning to major in business, or the behavioral, social, or biological sciences.
- Repeatable for credit: No
- Pre-Enrollment Criteria:
- Prerequisite: MATH 1431 Precalculus I with a grade of "C" or better, or equivalent or a qualifying score on the mathematics placement test.

COURSE OBJECTIVE

Upon successful completion of the course the student should be able to do the following:

- (1) Solve exponential, polynomial, rational, and logarithmic equations
- (2) Analyze functions
- (3) Graph functions
- (4) Construct mathematical models
- (5) Apply limit theorems and algebraic techniques to evaluate limits
- (6) Differentiate functions and equations
- (7) Analyze properties of functions using derivatives
- (8) Solve application problems using derivatives
- (9) Determine extrema of functions of several variables
- (10) Determine antiderivatives using the rules of integration
- (11) Solve application problems using the fundamental theorem of calculus

COURSE TOPIC OUTLINE

- (1) Functions
 - (a) Power and exponential functions
 - (b) Polynomial functions
 - (c) Rational functions and asymptotes
 - (d) Natural logarithms Graphing
- (2) Differential calculus
 - (a) Limits and continuity
 - (b) Derivative process
 - (c) Derivative rules for products and quotients
 - (d) The chain rule
 - (e) Higher order derivatives
 - (f) Maxima and minima of functions of one variable
 - (g) Functions of more than one variable
 - (h) Maxima and minima for functions of more than one variable
 - (i) Maxima and minima using
 - (j) Lagrange multipliers Applications from business, biology, and other areas
- (3) Integral calculus
 - (a) Anti-derivatives including substitution and parts
 - (b) Area and the definite integral
 - (c) Fundamental theorem of calculus
 - (d) Improper integrals
 - (e) Numerical integration (optional)
 - (f) Applications

REQUIRED MATERIAL

- WebAssign Access Code

COURSE SCHEDULE

- Homework will be completed on WebAssign (WA). There will be three homework assignments due for most weeks.
- Quizzes will be done on Blackboard and there will be at least one every week (that's the goal).
- Exams will be done on designated Fridays in class for one hour. It is ok to leave after completing the exam.
- Below is the tentative schedule:

Week	Mon	Tue	Wed	Thur	Fri	Weekend
1	1.3, 1.4		2.1, 2.2, 2.3		5.1, 5.2, 5.3	
2	2.4		2.5		2.6	
3	No Class		Review		Exam 1	
4	3.1		3.2		3.3	
5	3.4		3.5		3.6	
6	3.7		Review		Exam 2	
7	5.4		5.5, 5.6		4.1	
8	4.2		4.3		4.4	
9	4.5		Review		Exam 3	
10	6.1		6.2		6.3	
11	6.4		6.5		6.6	
12	6.7		Review		Exam 4	
13	7.1		7.4		8.1	
14	8.2		8.3		8.5	
15	Catch-up		No Class	No Class	No Class	
16	Catch-up		Review		Review	

- **The final exam will be over everything and will take place on Wednesday, December 11th, 2019 from 11:00am to 12:50pm (2 hours).**

METHOD OF EVALUATION

- 4 Exams (100 points each)
 - Make-ups allowed if notified prior to time of examination.
- About 12 Quizzes (10 points each)
 - Keep top 10 Quizzes
 - Every week there will be at least one quiz done on Blackboard.
 - No make-ups / No extensions
- About 41 Homeworks (~3 points each) [Subject to change depending what gets covered]
 - Keep (about) top 35 Homeworks
 - Due about 3 days after the material is covered.
 - No make-ups / No extensions.
 - Will be done on WebAssign.
 - * WebAssign will be accessed through Blackboard, **there will be no class key.**
 - * If you need to contact customer service please let them know that the course is connected through Blackboard.
 - * If you already have a WebAssign/Cengage (Cengage Unlimited) account please email me and I will try to help you with the process (if you have trouble).
 - * If you are new to the class or if you have access troubles, please contact me. (I must manually update the roster in WA for every new student.)
- Final Exam (100 points)
 - Cumulative
- A: 85% - 100%
- B: 75% - 85%
- C: 65% - 75%
- D: 55% - 65%
- F: <55%

ACADEMIC HONESTY

As members of the College of DuPage community, we share a commitment to the highest standards of learning and ethical behavior. The College and its faculty strive to build meaningful and productive relationships with our students. The expectation of honesty and effort is the foundation of that relationship. Academic dishonesty damages the learning partnership built between student and faculty and is considered a serious breach of the principles of learning and growth. Violations of the Code of Academic Conduct will be dealt with appropriately and may become part of a student's educational record. Please don't risk it!

For further information about the expectations, please review the Code of Academic Conduct found at the following website: https://www.cod.edu/student_life/dean_of_students/pdf/code_of_academic_conduct.pdf.

ACADEMIC CALENDAR

- Monday, August 19 - Classes Begin
- Monday, September 2 - Legal Holiday (Labor Day) (No Classes)
- Tuesday, October 15 In-Service Day/Professional Day (No Classes)
- **Sunday, November 10 Last Day to Withdraw - 16-Week**
- Wednesday, November 27 College Open (No Classes)
- Thursday-Sunday, Nov. 28 to Dec. 1 Thanksgiving Recess (No Classes)
- Saturday-Friday, December 7-13 Final Evaluations/Culminating Activities
- Friday, December 13 End

WITHDRAWAL POLICY

Withdrawal from a Class. The final day for a student to withdraw from any course will be equal to 75% of the time for the respective academic session (see the Registration Calendar http://www.cod.edu/registration/pdf/reg_calendar.pdf) through myACCESS <https://myaccess.cod.edu> or in person at the Registration office, Student Services Center (SSC), Room 2221.

Administrative Withdrawal. After the deadline, students will be required to appeal for late withdrawal and provide appropriate documentation to the Student Registration Services Office for all requests. Students who are granted approval to withdraw by petition will not be eligible for refunds of tuition or fees and will receive a 'W' grade on their transcript. Appeals must be submitted prior to the designated final exam period for 16-week classes and before the last class meeting for all other session classes.