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Basic Course Information

Semester:	Spring 2022	Instructor Name:	Mardjan Shokoufi
Course Title & #:	<i>MATH 170 Introductory calculus with applications</i>	Email:	mardjan.shokoufi@imperial.edu
CRN #:	20412	Webpage	None
Classroom:	None	Office #:	2762
Class Dates:	Feb 14-June 8, 2022	Office Hours:	M & W 9:15-10 am in office 2762 T & R 12-12:45 pm and 3:10-3:40 pm through zoom See Canvas for zoom meeting ID..
Class Days:	TR	Office Phone #:	(760)355-6401 NOTE: for Spring I will be physically in my office on M and W only and will have access to my office phone on those days.
Class Times:	1-3:05	Emergency Contact:	Division secretary: Ms. Silvia Murray silvia.murray@imperial.edu
Units:	4	Class Format:	Real time online via zoom

Course Description

This course presents a study of the techniques of calculus with emphasis placed on the application of these concepts to business and management related problems. Students take this course to prepare for courses for which calculus is recommended and/or required, as well as to study the ideas and concepts of advanced mathematics as applied to a modern computerized society. Topics covered include pre-calculus concepts, applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions, differential equations, and functions of several variables. (UC credit limited. See a Counselor.) (CSU/UC)

Course Prerequisite(s) and/or Corequisite(s)

MATH 150 with a grade of "C" or better.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Demonstrate problem solving strategies by identifying an appropriate method to solve a given problem, correctly set up the problem, perform the appropriate analysis and computation, and share their interpretation of the conclusion or the outcome, using correct grammar or in an oral presentation. This outcome will be assessed through selected exercises on exams throughout the semester. (ILO1, ILO2)

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Find the derivatives of polynomial, rational, exponential, and logarithmic functions.
2. Find the derivatives of functions involving constants, sums, differences, products, quotients, and the chain rule.
3. Sketch the graph of functions using horizontal and vertical asymptotes, intercepts, and first and second derivatives to determine intervals where the function is increasing and decreasing, maximum and minimum values, intervals of concavity and points of inflection.
4. Analyze the marginal cost, profit and revenue when given the appropriate function.
5. Determine maxima and minima in optimization problems using the derivative.
6. Use derivatives to find rates of change and tangent lines.
7. Use calculus to analyze revenue, cost, and profit.
8. Find definite and indefinite integrals by using the general integral formulas, integration by substitution, and other integration techniques.
9. Use integration in business and economics applications.
10. Analyze functions of several variables.

Textbooks & Other Resources or Links

You **need to purchase** access to mymathlab.

Mymathlab course ID: shokoufi56394

No need to purchase physical textbook as it is imbedded in the mymathlab.

Textbook: **Lial, Greenwell, Ritchey, 2022. *Calculus with Applications, Brief Version*, Pearson. ISBN: 978-0-13-585236-1**

We will be using **MyMathLab** component that has e-book, so **no need** to buy the actual book.

MyMathLab need to be purchased. Use information posted on canvas on how to register and to purchase access.

We will be using Mymathlab component for assignments, and some tests.

Follow the steps in “How to Register on Mymathlab” document posted on canvas shell for this course.

Note: you get 7 days of free access, so my expectation is you will **be on Mymathlab from day 1 of the class.**

Your **success** in the class depends on you being ready from day one to study and keep up with the assignments.

Course Requirements and Instructional Methods

Material needed: computer, Mymathlab course, scanner, or camera to upload your work, paper, pen, pencil, highlighter, stapler, scientific or graphing calculator (you may download a free calculator app from various sites)

This course is designed to have you learn facts while gaining an appreciation of the power of Mathematics and getting ready for your future courses in this field. My responsibility is to do my best to be an effective guide, while you are responsible to make a commitment to learning and keeping up with the daily work.

Remember mathematics is learned through active participation.

On daily basis you will have to take notes based on lecture, read your e-book emphasizing on the formulas and examples, and work on your assignment on mymathlab and discussion on canvas.

On daily basis you need to:

- Use provided lectures and book to study the day’s topics and take notes.
- Work on the assignments.
- Know the pre-requisite topics learned in previous courses such as finding common denominator and such or ask me or tutors for help.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a 16-week semester. WASC has adopted a similar requirement.

For this class that means approximately 8-12 hours of studying, working on assignments and reviewing for the tests per week as this is a 16-week class.

Course Grading Based on Course Objectives

12 Classwork/Homework sets* @ 10 points each	100 (See the attached calendar for dates)
3 Tests @100 points each	300 (See the attached calendar for dates)
Final @ 200 points	200 (See the attached calendar for date)
TOTAL	600

*Each set would consist of 75 to 150 exercises, depending on the material. 2 HW will count as extra credit.

Grading Scale: The standard grading scale will be used: 90%=A, 80%= B, 70%-C, 60%=D, less than 60% will result in the grade of F.

- 540-600 points = A
- 480-539 points = B
- 420-479 points = C
- 360-419 points = D
- 0-359 points = F

Extra Credit: 2 HW sets will be considered extra credit if all 12 sets have been turned in.

Course Policies

Class Rules:

1. Late assignment is **not** accepted.
2. **No** make-up test will be given.

3. Have paper, notebook, pen, pencil, and highlighter, your fully charged computer ready for each class.
4. It is the student's responsibility to drop or officially withdraw from the class.
(See IVC class schedule for dates).
5. It is **your responsibility** to take notes and be aware of deadlines and due dates.
6. Daily work on assignments is expected of all students.

Other Course Information

- **Academic honesty** in the advancement of knowledge requires that all students and instructors **respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property**. There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.
 - **Plagiarism** is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to cite a source correctly, you must ask for help.
 - **Cheating** is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question. Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to IVC General Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following:
 - plagiarism
 - copying or attempting to copy from others during an examination or on an assignment.
 - communicating test information with another person during an examination
 - allowing others to do an assignment or portion of an assignment.
 - using a commercial term paper service.
- **Attendance:** A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See IVC General Catalog for details.
- Regular attendance in all classes is expected of all students. **A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped.** For online courses, students who fail to complete required activities for **two consecutive weeks** may be considered to have excessive absences and may be dropped.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

WEEK	DAY	SCHEDULE
1	T 2/15	Intro, review, 1.1, 1.2
	R 2/17	1.3, 2.1, 2.2
2	T 2/22	2.3, 2.4
	R 2/24	HW 1, 2.5-2.6
3	T 3/1	3.1 - 3.2
	R 3/3	HW 2, 3.2 - 3.3
4	T 3/8	3.4
	R 3/10	HW 3, 3.5
5	T 3/15	4.1 - 4.2
	R 3/17	T 1, HW 4
6	T 3/22	4.3 - 4.4
	R 3/24	4.4 - 4.5
7	T 3/29	4.5
	R 3/31	HW 5, 5.1- 5.2
8	T 4/5	5.3
	R 4/7	HW 6, 5.4
9	T 4/12	6.1
	R 4/14	T 2, HW 7
10	T 4/26	6.2
	R 4/28	6.3 – 6.4
11	T 5/3	6.5- 6.6
	R 5/5	HW 8, 7.1
12	T 5/10	7.2 - 7.3
	R 5/12	HW 9, 7.4
13	T 5/17	7.5- 7.6
	R 5/19	8.1
14	T 5/24	8.2 - 8.3
	R 5/26	T 3, HW 10
15	T 5/31	8.4, 9.1
	R 6/2	HW 11, 9.2-9.3
16	T 6/7	FINAL
	R 6/9	FINAL, HW 12

Deadline to drop with W

Tentative, subject to change without prior notice

Zoom meeting etiquettes: *Since we will be meeting online for class, some office hours, and appointments then make sure you have a space free of distraction during our meeting times, have your computer charged or charging, have your notebook, pen, pencils, and calculator handy.*

1) Be RESPECTFUL

- a. Your written, verbal, and non-verbal communications should be respectful and focused on the learning topics of the class.

2) Find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)

- a. People walking around and pets barking can be a distraction.

3) EAT AT A DIFFERENT TIME.

- a. Crunching food or chugging drinks is distracting for others.
- b. Synchronous zoom times are set in advance so reserve meals for outside class meetings.

4) ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU

- a. It is hard to see you in dim lighting so find a location with light.
- b. If your back is to a bright window, you will be what is called “backlit” and not only is it hard on the eyes (glare), but you look like a silhouette.

5) POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING

- a. If you are using the camera, show your face; it helps others see your non-verbal cues.
- b. You may be at home but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others.

6) Be READY TO LEARN AND PAY ATTENTION

- a. Catch up on other emails or other work later.
- b. If you are Zooming, silence your phone and put it away.
- c. If you are in a room with a TV – turn it off.

7) USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS

- a. Pets barking, children crying, sneezing, coughing, etc. can happen unexpectedly. It’s best if you conference in a private space, but if you can’t find a quiet place, when noises arise **MUTE** your laptop.

8) REMEMBER TO UNMUTE WHEN SPEAKING

- a. Follow your instructor’s directions about using the “**raise hand**” icon or chat function to be recognized and to speak, but make sure you have unmuted your device.
- b. Do not speak when someone else is speaking.

9) REMAIN FOCUSED AND PARTICIPATE IN THE MEETING

- a. Especially when the camera is on YOU, we can all see your actions. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.
- b. Do not use the Zoom meeting to meet with your peers or put on a “show” for them.

10) PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING

Emergencies happen. If you need to leave the room or get up and move about, stop your video.