

MATH – 108 - 004: Introductory Calculus with Business Applications, Spring 2022

COURSE INFORMATION:

Instructor: Jingya Yan

Lectures: MW 5:55 pm – 7:10 pm, Exploratory Hall L004

E-mail: jyan20@gmu.edu

Office Hours: MW 3:40 pm—5:10 pm or online by appointment

Office: Exploratory Hall 4405

COURSE DESCRIPTION:

Understanding functions, limits, derivative and integral with their applications of differentiation and integration in the real world.

PREREQUISITES:

Math Placement Algebra I 13

COURSE MATERIALS:

Barnett, Ziegler, Byleen, Stocker, Applied Calculus for Business, Economics, Life Sciences, and Social Sciences, 14th edition. ISBN: 9780321925718

An access code for MyMathLab is required for this course. You can either purchase the access code only to access the ebook and MyMathLab **or** purchase the new book with access code. *If you buy a used book, make you have an access code.*

To register: Click the link MyMathLab in Blackboard – Course Content and follow the instructions. (Course ID: yan76091)

Please use your official GMU registration name and your GMU email address to register your MML account.

TENTATIVE SCHEDULE (SUBJECT TO CHANGE):

Jan 24 (week 1): Course Introduction, Functions and Graphs (1.1, 1.3)

Jan 31 (week 2): Linear and Quadratic Functions, Polynomial and Rational Functions (1.4, 1.5)

Feb 7 (week 3): Exponential and Logarithmic Functions (1.5, 1.6)

Feb 14 (week 4): Limits (2.1, 2.2)

Feb 21 (week 5): Review (Feb 21), **Midterm I (Feb 23)**

Feb 28 (week 6): Continuity, Rate of Change and the Derivatives (2.3, 2.4, 2.5)

Mar 7 (week 7): Derivatives and Applications (2.5, 2.7)

Mar 14: Spring Break

Mar 21 (week 8): Exponential and Log Derivatives, Product/Quotient Rules (3.1, 3.2, 3.3)

Mar 28 (week 9): Chain Rule, Implicit Differentiation (3.4, 3.5)

April 4 (week 10): Review (Apr 4), **Midterm II (Apr 6)**

April 11 (week 11): Elasticity of Demand, Derivatives and Graphs (3.7, 4.1, 4.2)

April 18 (week 12): Derivatives and Graphs (4.4)

April 25 (week 13): Optimization, Absolute Max/Min (4.5, 4.6)

May 2 (week 14): Review

Final Exam is scheduled on Monday, May 16, 4:30pm – 7:15 pm.

GRADING:

Two Midterms: 20% each

MyMathLab Homework: 20%

MyMathLab Quizzes: 20%

Final Exam: 20%

Grade Breakdowns:

A	B	C	D	F
$\geq 90\%$	80% - 89%	70% - 79%	60% - 69%	$< 60\%$

You will find homework and quizzes on MyMathLab. Late homework and quizzes are accepted with 20% penalty within one week after the original deadline; after one week you will get zero. Usually there will be homework and quizzes every week. You will have infinite number of attempts for your homework and **5 attempts** for quizzes. The lowest homework score and lowest quiz score will be dropped.

There are two midterm exams and one comprehensive final exam. All exams will be taken in class. No make-up exams will be schedule unless you have a documented excused absence. You are allowed to use a simple scientific calculator such as TI 30X IIs. Advanced Scientific Calculators (e.g., TI 36X Pro), Graphing Calculators (e.g., TI-83, TI-84, TI-89, TI-92, TI-Nspire) are **not allowed**. Calculators with differentiation/integration function are also **not allowed**.

DISABILITY SERVICES:

<https://ds.gmu.edu/>

MATH TUTORING CENTER:

<https://science.gmu.edu/academics/departments-units/mathematical-sciences/math-tutoring/tutoring-center-hours-and>

HONOR CODE:

Please see the Office for Academic Integrity (<https://oai.gmu.edu/>) for a full description of the code and the honor committee process, and the Honor Code Policies of the Department of Computer Science (<https://cs.gmu.edu/resources/honor-code/>) regarding the course project. GMU is an Honor Code university. The principle of academic integrity is taken seriously and violations are treated gravely. If you rely on someone else's work in an aspect of the course project, you should give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.