



# Stony Brook University

## College of Business

**Course:** MAT 122 Overview of Calculus

**Semester:** Spring 2021

**Instructor:** Jae Y. Lee, Ph.D.

**Instructor Contact Information:**

- *Office:* Omyong Hall, Room B-506
- *Phone:* (132) 626-1960
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- *Office Hours:* Mondays & Wednesdays 9~10 am & 2~3 pm or by Appointment
- *TA Information :*
  - Name : Jacobs Somnic
  - Email : jacobs.somnic@stonybrook.edu
  - Office : C-605
  - Office hours : TBD

**Meeting Time:** Mondays & Wednesdays 10:30 - 11:50

**Recitation Class :** Monday 12:30 ~ 13:23 (by TA via online)

**Location :** Online

**Course Description:**

The goal of this course is to ensure that you learn the basics of calculus that you will use in Business. This means that we will need to accomplish several things:

- Ensure that you have fluency with functions and graphs.
- Ensure that you are comfortable and conversant with the underlying concepts of Differential and Integral Calculus.
- Be able to apply the above to problems in the business world. Fluency in understanding the language of Calculus is essential for success in Business.

The text is Calculus and it's Applications (11th edition), by Bittinger, Ellenbogen, and Surgent.

**Course Prerequisites:**

In order to take MAT122, you must have either

- Passed MAP103 with a grade of C or better, or

- Received a score of level 3 or better on the math placement exam.

### **Homework**

-Most weeks you will have paper homework problems that you must hand in at recitation.

***Homework is due at the beginning of your recitation class.***

-Homework assignments will be posted on the Assignments page in Blackboard or Classting app in your smart phone. You must access the assignments via these links in order for your grade to be recorded in the Blackboard grade book.

-If you are having difficulty understanding a topic, we suggest that you meet with your TA, or go to your professor's office hours.

### **Exams**

-There will be two non-cumulative (mid-term exams 1 & 2) or one cumulative exam (final exam)

-Exam time would in the syllabus and will vary according to the final exam schedule.

**We do not give makeup exams but instead replace an exam missed for a valid reason by a grade computed on the balance of the work in the course.**

### **Grading System:**

-The table below shows the grading allocation for the course.

-You will need a 90% course average to receive a final grade of A(A- or A), 80% for a B(from B- to B+), and 70% for a C(from C- to C+), etc...

-I will also use plus and minus final letter grades. I do not "curve" grades, meaning that potentially everyone in the class can earn an A.

Midterm 1	Midterm 2	Final Exam	Assignment	Attendance & Participation
20%	20%	30%	10%	20%

### **Blackboard or Classting app.**

Please check Blackboard or Classting app. frequently. Assignments, announcements, grades, etc. will be posted on either one (sometimes on both). When items are posted, you will receive an email informing you of the fact. At that point, you will be presumed to know what has been posted. We suggest that you check Blackboard or Classting app. before you email your TA or professor.

**Class Schedule: MAT-122, Spring 2021 (Online Lecture till ?)**

Class	Date	Chapter	Topic
1	2/22	R.1	Graphs and Equations
2	2/24	R.2	Functions and Graphs
	<b>3/1</b>	<b>No Class</b>	<b>Independence Movement Day</b>
3	3/3	R.3	Domain and Range
4	3/8	R.4	Slope and Linear functions
5	3/10	R.5	Nonlinear Functions and Models
6	3/15	R.6	Mathematical Models and Curve Fitting
7	3/17	1.1 & 1.2	Limits
8	3/22	1.3 & 1.4	Average rates of change
9	3/24	1.5 & 1.6	Derivative Rules
<b>10</b>	<b>3/29</b>	<b>R.1~1.6</b>	<b>Midterm Exam 1</b>
11	3/31	1.7	The Chain Rule
12	4/5	1.8	Higher-Order Derivative
13	4/7	2.1 & 2.2	The First & Second derivatives
14	4/12	2.5 & 2.7	Maximum-Minimum Problems, Elasticity of Demand
15	4/14	3.1	Exponential Functions
16	4/19	3.2	Logarithmic Functions
17	4/21	3.3 ~ 3.4	Applications-1 (Growth & Decay Models)
18	4/26	3.5 ~ 3.6	Applications-2 (Annuities & Amortization)
<b>19</b>	<b>4/28</b>	<b>1.7 ~ 3.6</b>	<b>Midterm Exam 2</b>
20	5/3	4.1	Anti-differentiation
	<b>5/5</b>	<b>No Class</b>	<b>Children's Day</b>
21	<b>5/6(Th)</b>	4.2	Anti-derivatives as Areas ( <b>Adjustment day</b> )
22	5/10	4.3	Area and Definite Integrals
23	5/12	4.4	Properties of Definite Integrals
24	5/17	4.5	Substitution Techniques
	<b>5/19</b>	<b>No Class</b>	<b>Buddha's Birthday</b>
25	5/24	5.1	Consumer Surplus & Producer Surplus
26	5/26	5.2	Integrating Growth and Decay Models
27	5/31	5.4	Probability
28	6/2	R.1~5.4	Total Review
	<b>6/14(?)</b>	<b>Comprehensive</b>	<b>Final Exam (12:30~15:00)</b>