

San José State University

Course and Contact Information

Instructor:	Fahmida Fakhruddin, Ph.D.
Office Location:	DMH 214
Telephone:	Email is preferred
Email:	fahmida.fakhruddin@sjsu.edu (Remember to write “Econ 104-1 or something similar, together with the topic of the email)
Office Hours:	After class and zoom meeting by appointment
Class Days/Time:	Tuesdays & Thursdays/ 12 pm - 1:15 pm
Classroom:	DMH 227
Prerequisites:	ECON 1A, ECON 1B, and MATH 30 or MATH 30X or MATH 71 or MATH 71X

Course Description

Applications of linear algebra and differential calculus to economic analysis. Topics include market equilibrium, properties of production functions, multipliers, optimization methods, comparative statics analysis. The main purpose of this class is to provide fundamental mathematical logic and tools for formal economic analysis. Thus, we will learn single and multiple variable calculus, calculation of derivatives, constrained and unconstrained optimization, matrix algebra, and linear programming.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students should be able to do the followings:

1. define and explain indifference curve, isoquant, cost minimization, profit maximization, equilibrium conditions in output and input markets, and the national income model.
2. identify and apply functions of one or more variables, simple differentiation, partial and total differentiation, and matrix algebra.
3. solve simple real-world optimization problems both mathematically and graphically.

Course Format

This course adopts a completely synchronous delivery format with designated day/time meeting pattern. Reliable internet connectivity and a computer or laptop with **webcam** and **microphone** are required for the course.

It is expected that you will attend classes each week, participate in discussions in class, work on homework and practice problem set questions and take midterms and final exam.

If you feel you are lost or experience any difficulty in this course, please do not hesitate to come to me for help. Please remember that I am just an email away. I am always happy to clarify difficult concepts, resolve any lingering confusion, or otherwise assist you in making this course fun and productive...

Midterm and Final

The course consists of three midterms and one final exam. I will drop the lowest midterm grade. Midterm and final exam will cover material presented in class and will be similar to the homework questions. The final exam will be comprehensive. All exams will be closed book and closed note.

Classroom Protocol

1. Please come to class prepared and on time.
2. Turn your cell phone off during class sessions.
3. Cheating will not be tolerated. Copying another student's work or using an external source of information for which you were not explicitly given permission during an exam will result in disciplinary action. This

3. Let's negotiate

Academic Integrity

Students must abide by the San José State University [Academic Integrity Policy](#). There is zero tolerance for cheating, plagiarism, or any other violation of academic integrity. Students who are suspected of academic integrity violations will be referred to the Student Conduct and Ethical Development office and depending on the severity of the conduct, will receive a zero on the assignment or a grade of F in the course. Grade Forgiveness does not apply to courses for which the original grade was the result of a finding of academic dishonesty.

Accommodations for Learning Disabilities

Students with learning disabilities are encouraged to request accommodations for the course. Please contact the [Accessible Education Center](#) to schedule an appointment with an AEC coordinator to determine eligibility and register.

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Week	Date	Topics, Readings, Assignments, Deadlines
3	Sep 03	Differentiation, Chapter 6