
Course: ECN 470 (SLN: 48026) and MAT 394 (SLN: 87977)

Term Period: January 16 - May 1
Classroom: BA 358
Time: TTh, 1:40 - 2:55 pm
Office: BAC 679 (Phone number: 965 - 6574)
Office Hours: TTh, 11:00 am - 12:00 pm
Email: miniahn@asu.edu

Course description:

Economics 470 is designed for (1) undergraduates planning on going to graduate school in economics or finance, (2) graduate students in economics who need to improve their mathematical skills, and (3) non-economics graduate students who intend to graduate courses in economics. This course will introduce the students to the application of mathematical techniques and modeling to economic theory.

Textbook:

Required: Turkington, *Mathematical Tools for Economics*, Blackwell Publishing, 2007.

Optional: Klein, *Mathematical Methods for Economics*, 2nd Edition, Addison Wesley, 2002.

Teaching Assistant

Mr. Mariano Runco.

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Office hours: MW 9:30 – 11:00am

Course Outline:

The schedule listed below is an estimate. Adjustments, if necessary, may happen during the term.

1. Matrix Algebra and Linear Economic Models:
Chap. 1 – 3 (Turkington); Chap. 4 – 5.2 (Klein).
2. Further Topics in Matrix Algebra:
Chap. 4 (Turkington); Chap. 5.3 (Klein).
3. Calculus:
Chap. 5 (Turkington); Chap. 2-3, Chap. 6-8 (Klein).

4. Unconstrained Optimization:
Chap. 6.1-6.2 (Turkington); Chap. 9 – 10 (Klein).
5. Constrained Optimization:
Chap. 6.3-6.5 (Turkington); Chap. 11 (Klein).
6. Comparative Static Analysis in Optimization Problems:
Chap. 7 (Turkington); Chap. 9 – 11 (Klein)
7. Integration:
Chap. 8 (Turkington); Chap. 12 (Klein).
8. Continuous-Time Differential Equations: (May not be covered.
Chap. 9 (Turkington); Chap. 13 (Klein).

Schedule for Examinations

First Mid-term Exam: February 15 (Thursday), during the regular class time.

Second Mid-term Exam: March 29 (Thursday), during the regular class time.

Final Exam: May 3 (Thursday), 12:20 - 2:10pm.

Grade:

- (1) Three regular assignments:

The best two of the three assignments count 10% of your final grade. But you need to complete all three assignments. A maximum grade of D will be awarded to those students who choose NOT to complete all three homework assignments. The low weight assigned to homework does not mean that it is unimportant. The assignments are intended to encourage group discussions. **To complete each assignment, you can make a group that consists of up to three members.** Each group turns in only one copy of answer sheets.

- (2) Three Examinations:

The two mid-term exams count 25 and 30% of your final grade, respectively. The final exam will count 35% of your final grade. The final exam is comprehensive one. An exercise problem set will be provided prior to each exam. Make-up exams will not be given to you except under the most extraordinary circumstances. Also, make-up exams will be granted only with prior notice.

Readings:

The lecture will not cover all topics in the textbooks. At the same time, some topics in the lecture will not be covered in the book. Therefore, I urge you to participate in the class. You are responsible for all topics covered in class. My lecture notes, as well as other class materials, will be available on the Blackboards of ECN 425 and MAT 394. Your class attendance could be a crucial consideration when your performance is near borderlines.

Some Class Etiquettes:

Don't leave the classroom during regular class hours without prior notice.

Don't discuss unimportant stuffs with classmates during regular class hours.