



Mathematics for Economists (ECON 205/ ECON 230)

Spring 2021/2022

Instructor:	Ebrahim Alebrahim	Time:	11:00-11:50AM
Email:	ebrahim.alebrahim@ku.edu.kw	Place:	D3 1005
Website:	www.ealebrahim.com		
Office Hours:	10:00-10:45 or by appointment	Office No.:	1074

Course Pages:

https://moodle.ku.edu.kw, and MS Teams.

Office Hours: 10:00-10:45

References:

The primary textbook for the course is

• Vassilis C. Mavron, and Timothy N Philips, Elements of Mathematics for Economics and Finance, Springer, 2000. Accessible as an electronic book from the university library website: http://kuniv.vdiscovery.org/ (login with your ID then click on the ebook link) (Will be referenced as EM in the syllabus)

Additional recommended references:

• Mik Wisniewski, Mathematics for Economics an Integrated Approach, Palgrave Macmillan, Third Edition, 2013 (Will be referenced as MIK in the syllabus)

Course description:

This course covers the basic mathematical tools required for the study of economic intermediate theory courses, econometric and upper-division electives in economics. Topics include economic applications of functions, derivatives and integrals, optimization with two or more independent variables, constrained optimization, matrix algebra, and difference and differential equations.





Course learning outcomes:

- CLO 1. Model economic questions as mathematical problems.
- CLO 2. Apply their prior knowledge of calculus and matrix algebra to economic applications.
- CLO 3. Mathematically express economic concepts and successfully interpret relevant variables and parameters in economic models.
- CLO 4. Acquire foundations of major techniques used to solve constrained optimization problems in economics.
- CLO 5. Acquire foundations of major difference and differential equations techniques used in economic theory.



Types of Emphasis:

- (I)ntroduce: Students will be introduced to the skill and their grasp of it assessed in the course.
- (A)pply: The course will not cover the skill. Students should have a high-level grasp of the skill and are required to apply it in the course.
- (R)einforce: Students should have an introductory-level grasp of the skill and the course will improve their mastery to a higher level.

Prerequisites:

- For students admitted prior to 2021/2022: ECON 111, and taking ISOM 110 is highly recommended.
- For students admitted from 2021/2022 onward: ECON 140, and ISOM 110.

Grading Policy:

- Assignments(5%)





Important Dates:

- Midterm 12/05/2022 11:00-11:50AM Location: D3 1005
- Final Exam Check the portal.

Course Policies:

- Attendance and Participation: Every student in this course must abide by the Kuwait University Policy on Attendance (published in the Student Guide, Chapter 3, Section 13). A copy of the student guide can be accessed online on: http://www.ku.edu.kw/cs/groups/ku/documents/ku_content/ kuw055940.pdf
- Cheating and Plagiarism: Every student in this course must abide by the Kuwait University Policy on Cheating and Plagiarism (published in the Student Guide, Chapter 3, Section 2).

Academic Honesty:

Fairness, trust, and honesty should be the basis between each student and their colleagues as well as the instructor. Plagiarism and cheating are strictly prohibited.

University rules:

Students are required to read and be aware of the university rules as stated in: http://www.ku.edu.kw/cs/groups/ku/documents/ku_content/kuw055940.pdf

Grade Distribution:

А	A-	B+	В	B-	C+	С	C-	D+	D	F
95-100	90-94	87-89	84-86	80-83	77-79	73-76	70-72	65-69	60-64	Below 60





Tentative Course Outline:

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	10		• Solution and stability of first order differential equations (EM13.2-13.3)	





CBA Competency Goals

1. **Analytical Competency**: A CBA graduate will be able to use analytical skills to solve business problems and make a well-supported business decision.

Student Learning Objectives:

- 1.1 Use appropriate analytical techniques to solve a given business problem.
- 1.2 Critically evaluate multiple solutions to a business problem.
- 1.3 Make well-supported business decisions.
- 2. **Communication Competency**: A CBA graduate will be able to communicate effectively in a wide variety of business settings.

Student Learning Objectives:

- 2.1 Deliver clear, concise, and audience-centered presentations.
- 2.2 Write clear, concise, and audience-centered business documents.
- 3. Information Technology Competency: A CBA graduate will be able to utilize Information Technology for the completion of business tasks.

Student Learning Objectives:

- 3.1 Use data-processing tools to analyze or solve business problems.
- 4. **Ethical Competency**: A CBA graduate will be able to recognize ethical issues present in business environment, analyze the tradeoffs between different ethical perspectives, and make a well-supported ethical decision.

Student Learning Objectives:

- 4.1 Identify the ethical dimensions of a business decision.
- 4.2 Recognize and analyze the tradeoffs created by application of competing ethical perspectives.
- 4.3 Formulate and defend a well-supported recommendation for the resolution of an ethical issue.
- 5. General Business Knowledge: A CBA graduate will be able to demonstrate a basic understanding of the main business disciplines' concepts and theories.

Student Learning Objectives:

5.1 Acquire a fundamental understanding of knowledge from the main business disciplines (e.g. finance, accounting, marketing, and management information systems, among others).