EASTERN MEDITERRANEAN UNIVERSITY
Faculty of Arts and Sciences
Department of Mathematics

Course code:	**MATH104**	Course name:	**Mathematics for Business and Economics II**			
Course level:	Undergraduate	Akademic year:	2018 – 2019	Semester:	Spring	
Course credit:	**(3,0,1) 3**		Duration of the course:		One semester	
Prerequisities:	Math103	Corequisities:	-----	ECTS Value:	6	
Web link:	-----		e – mail		Office no.	Tel no.
Instructors:	(1.) Asst. Prof. Dr. Nidai ŞEMİ (2.) Asst. Prof. Dr. Nidai ŞEMİ (3.) Dr. Fatma Bayramoğlu Rızaner		nidai.semi@emu.edu.tr nidai.semi@emu.edu.tr fatma.bayramoglu@emu.edu.tr		AS 258 AS 258 AS 118	12 38 12 38 22 81
Teaching Assistants:	(1.) Res. Asst. Laith Alzboon (2.) Res. Asst. Arzu Ahmadova (3.) Res. Asst. Laith Alzboon		laithali984@gmail.com arzu.ahmadova@emu.edu.tr laithali984@gmail.com		AS 249 AS 249 AS 249	15 31 15 31 15 31
Text Book:	Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences. Ernest F. Haeussler, Jr., Richard S. Paul. Prentice Hall.					
Other References:	Applied Mathematics for Business, Economics and the Social Sciences. Fourth Edition, Frank S. Budnick, McGraw Hill.					
Catalogue description:	Functions. Types of functions. Domain and range. Limits. 0/0 indeterminate limits. Continuity. Graphs. Derivatives. Higher order derivatives. Optimization and Applications; Elasticity of demand. Revenue, cost, profit applications. Cost – benefit analysis. Functions of several variables. Partial derivatives. Applications. Lagrange multiplier. Integrals. Definite integrals. Areas, applications.					
Aim and Objectives	This course is designed to review and improve basic mathematical concepts The main objective of the course is to provide the mathematical background needed for the solution of business and economics problems. Subjects are supported by some selected real life application problems.					
General Learning Outcomes:	On successful completion of this course, all students will have developed; • their skills in mathematics, • how to construct a mathematical model for solving a problem, • how to handle business and economic problems mathematically.					
Teaching methods:	Lectures, tutorials and assignments.					
Relations with the other courses:	The course requires basic concepts and theories from Math103. İt is also essential for the students to follow the courses Statistics (STAT201) and Quantitative Analysis (MGMT322).					
Attendance:	Attendance to the lectures is compulsory. Any student whose attendance is less than 60% will get NG grade.					

Method of Assesment	✓ Quiz 1 : 05% ✓ Midterm Exam 1 : 25% ✓ Quiz 2 : 05% ✓ Midterm Exam 2: 25% ✓ Quiz 3 : 05% ✓ Participation : 05% ✓ Final Exam : 35% ✓ *Note: Best 2 quizzes will be accepted. No make – up will be given for quizzes*.	
Method of assessment:	**A** : 85 – 100; **A–** : 80 – 84; Excellent performance **B+** : 75 – 79; **B** : 70 – 74 ; **B–** : 66 – 69; Performance over expectations **C+** : 63 – 65; **C** : 59 – 62; Satisfactory performance **C–** : 56 – 58; **D+** : 53 – 55; **D** : 50 – 52; Conditional satisfactory performance **D–** : 35 – 49; **F** : 00 – 34; Unsatisfactory performance **NG :** May be given the students having poor attendance and / or missing 2 exams Important note: *The grading intervals given above may be changed depending on the class average and distribution*.	
Course content:	Week 1.	**Chapter 1: Functions** Functions; domain, range. Type of functions; Polynomial functions; constant functions, linear functions, quadratic functions and their graphs.
	Week 2.	Higher Order Polynomials. Rational functions, square root functions, exponential functions, logarithmic functions, compound functions.
	Week 3.	**Chapter 2: Limits and Continuity** Limits of functions; 0/0 indeterminate form limits
	Week 4.	Left and right limits. Continuity. Graphs
	Week 5.	**Chaper 3: Differentiation** The derivative; first derivative, second derivative, n^{th} derivative. Rules of differentiation; Power rule, Product rule
	Week 6.	Quotient rule, Inverse function rule, Chain rule. Geometric mean of the derivative. The slope, equation of tangent line
	Week 7.	**Chapter 4: Optimization and Applications** Critical points. First derivative test. Increasing and decreasing intervals, relative maximum and relative minimum. Second derivative test. Inflection points and concavity
	Week 8. & 9.	**First Midterm Examinations Period**
	Week 10.	Applications: Revenue, cost, average cost and profit applications. Marginal approach to profit maximization. Elasticity of demand
	Week 11.	**Chapter 5: Functions of Several Variables** Functions of several variables. Partial derivatives, higher order partial derivatives. Maxima and minima for functions of two variables

	Week 12.	Applications of partial derivatives.
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	Week 13.	**Chaper 6: Integral Calculus** Integration. Rules on integration. Definite integral.
	Week 14.	Integral Applications.
	Week 15. & 16.	**Final Examinations Period**
Course timetable:	**<u>Group 1</u>:** Tuesday 14:30 – 16:20 CL A12 Thursday 08:30 – 09:20 CL A13 Thursday 09:30 – 10:20 CL A13 (*Tutorial*) **<u>Group 2</u>:** Monday 14:30 – 16:20 CL A11 Wednesday 08:30 – 09:20 AS G15 (*Tutorial*) Wednesday 09:30 – 10:20 AS G15 **<u>Group 3</u>:** Tuesday 14:30 – 15:20 ASA Tuesday 15:30 – 16:20 ASA (*Tutorial*) Thursday 08:30 – 10:20 CL 215	
Important dates:	o Commerce of classes: 18.02.2019 o Last day for add and drop: 04.03.2019 o Midterm Examinations Period: 11.04.2019 – 22.04.2019 o National Holiday (*National Sovereignty and Children's Day*): 23.04.2019 o Official Holiday (Workers' and Spring Day): 01.05.2019 o Last day for course withdrawal: 10.05.2019 o Last day for leave of absence: 10.05.2019 o Spring Festival: 15.05.2019 – 18.05.2019 o National Holiday (*Atatürk Commemoriation, Youth and Sports Day*): 19.05.2019 o Second Midterm Exam: (*to be announced*) o Last day of lecturing: 31.05.2019 o Ramadan Bairam Eve: 03.06.2019 o Religious Holiday (*Ramadan Bairam*): 04.06.2019 – 06.06.2019 o Final examinations period: 10.06.2019 – 22.06.2019 o Make up examinations period: (*after final exams period*) o Online Application to Resit Exams: 28.06.2019 – 30.06.2019 o Resit examinations period: 03.07.2019 – 09.07.2019	

Important notes:	✓ Use of mobile phones in the class is prohibited. ✓ Best 2 quizzes will be accepted. No make – up will be given for quizzes. ✓ Students missing an examination should provide a valid excuse within three days following the examination they missed. ✓ All make – up examinations will be given at the end of the semester after final examination period at the same time and same duration. (*No extra time for each make – up*) ✓ Attendance is compulsory. Any student whose attendance is less than 60% or misses at least two examinations without providing valid excuse will be given 'NG' grade. ✓ Any student whose grade is NG can not apply to resit examination. ✓ The weight of the resit examination equals the total weight of the two midterm and final exams. ✓ Students can check their first midterm exam papers till second midterm exam date, and second midterm exam papers till final exam date.
Academic Honesty:	Copying from others or providing answers or information (written or oral) to others is cheating. Copying from another student's paper or from another text without written acknowledgement is plagiarism. According to University's bylaws *cheating and plagiarism* are serious offences resulting in a failure from exam or project and disciplinary action (which includes an official warning and / or suspension from the university for up to one semester).