

FINANCIAL MATHEMATICS

1	Course Title:	FINANCIAL MATHEMATICS	
2	Course Code:	MAT4109	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. BASRİ ÇELİK	
15	Course Lecturers:	Yok	
16	Contact information of the Course Coordinator:	Prof. Dr. Basri ÇELİK	
17	Website:		
18	Objective of the Course:	To introduce the mathematical information in financial techniques and principles, to teach its usage and application through various problems.	
19	Contribution of the Course to Professional Development:	Basic concepts will be given to those who want to work in banking and financial institutions.	
20	Learning Outcomes:		
		1	Students gain essential knowledge and skills to pursue further study in business, management, finance and related business fields.
		2	Students learn the basics about interest, basic and general annuities, and Depreciation and payables accounts.
		3	Students practice on real life problems related to finance.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Measurement of Interest: Savings and Amount Functions, Effective Interest Rate, Simple and Compound Interest.		
2	Present value, Effective discount rate, Nominal interest and discount rates.		
3	Instant simple and compound interest rate, Variable interest.		

4	Applications related to interest: Basic problem, Equality of present value of two cash flows, Unknown payment time.	
5	Faiz ile ilgili uygulamalar: Bilinmeyen faiz oranı, Zaman periyotlarının belirlenmesi.	
6	Applications related to interest: Sample Applications.	
7	Basic Annuities: End-of-period annuities, Beginning annuities	
8	Fundamental Annuities: Value of an annuity at any date, Annuities with an infinite number of paid offs, Number of unknown periods	
9	Fundamental Annuities: Unknown interest rate, Variable interest rate annuities, Applications related to fundamental annuities.	
10	General Annuities: Payments made at different frequencies than the conversion period, Variable annuities	
11	General Annuities: Annuities with varying payouts in the form of an arithmetic series	
12	General Annuities: Annuities with varying payouts in the form of a geometric series	
13	Determination of depreciation payments and debt payment fund balance.	
14	Depreciation payments, Unpaid debt amount.	

Activites			Number	Duration (hour)	Total Work Load (hour)
23	Theoretical Assessment		14	3.00	42.00
Practicals/Labs			0	0.00	0.00
Self study and preperation			14	9.00	126.00
Midterm Exam			1	40.00	
Homeworks			0	0.00	0.00
Projects			0	0.00	0.00
Home Work-project			0	0.00	0.00
Field Studies			0	0.00	0.00
Midterm exams			1	6.00	6.00
Total			2	100.00	
Others			0	0.00	0.00
Final Exam			1	6.00	6.00
Total Work Load					186.00
Total work load/ 30 hr					6.00
Total			100.00		
ECTS Credit of the Course					6.00
Measurement and Evaluation Techniques Used in the Course			Relative Evaluation System is applied.		
24	ECTS / WORK LOAD TABLE				

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	4	0	5	0	0	0	0	4	0	0	0	0	0	0	0
ÖK2	0	4	0	5	0	0	0	0	4	0	0	0	0	0	0	0
ÖK3	0	4	0	5	0	0	0	0	4	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications					
Contrib ution Level:	1 very low	2 low	3 Medium	4 High	5 Very High