AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		The Basics of Financial Mathematics						
Course Code		UTIF101		Couse Level		First Cycle (Bachelor's Degree)		
ECTS Credit	4	Workload	101 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		This is an introductory course in Financial Mathematics. The course recovers the mathematical methods for financial problems and models.						
Course Content		The first half of the course begins with an introduction to basic financial mathematics covering the computation of simple interest and discount rates, deriving the compound interest, and applications of different rates of interest in determining the present and future values of different types of annuities for different time periods. The second part of the course mainly concerns the classical quantitative finance i.e. derivatives, specifically the option pricing . The probability and stochastic theory, optimization models, the Black-Scholes Option Model, partial differential equations and numerical methods are covered.						
Work Placement		N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation)					
Name of Lecturer(s)		Lec. Bülent YILDIZ						

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Finans Matematiği, Meral Sucu , Funda Kul, Nobel Yayın Dağıtım Finans Matematiği Çalışma Kitabı
2	Sadi Uzunoğlu, Literatür Yayıncılık Temel Finans Matematiği ve Değerleme Yöntemleri

Week	Weekly Detailed Course Contents	
1	Theoretical	The concept of simple interest and discount.
2	Theoretical	The concept of compound interest .
3	Theoretical	The concept of incom.
4	Theoretical	The concept of incom.
5	Theoretical	The concept of incomes.
6	Theoretical	The concept of incomes
7	Theoretical	Interest calculation methods
8	Theoretical	Midterm exam
9	Theoretical	Financial derivatives and some terminologies.
10	Theoretical	Comparing options with respect to style, maturity and strike
11	Theoretical	Problem solving for compound interest
12	Theoretical	Current accounts
13	Theoretical	Concept of discount, types, concepts used in discount calculations
14	Theoretical	Annuities
15	Theoretical	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Midterm Examination	1	15	1	16
Final Examination	1	14	1	15
			Total Workload (Hours)	101
			[Total Workload (Hours) / 25*] = **ECTS**	4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	
2	
3	
4	
5	

Programme Outcomes *(International Trade and Finance)*

1	To become individuals having high intellectual capacity, improved social skills, positive thinking, the ability to adapt to different environments and institutions
2	To have technical equipment, flexible thinking and action ability and multiple language skills to be capable of working in international platforms
3	To be able to utilize the basic knowledge they obtained with an interdisciplinary approach to business, economics, etc. in creating expertise in the fields of International Trade and Finance in accordance with the requirements of the globalized business world
4	To develop suggested solutions and recommendations by informing the people and institutions predicting regional, national and international problems in the fields of international trade and finance with a proactive approach
5	To possess the ability of analytical thinking and the ability to synthesize with quantitative proficiency as required in the program
6	To have the characteristics to inquire and investigate the knowledge and skills acquired during the education process in relation to the requirements of existing market conditions
7	To identify and analyze the validity of theories related to the international trade and finance and their relationships regarding current conditions
8	To possess the knowledge of a second foreign language to the extent of their individual abilities, besides the competency in the English language to be able to communicate effectively
9	To have the qualifications of managing and being managed to solve existing and potential problems encountered in practice
10	To be able to organize activities that will contribute to the personal and professional development of the employees in the department where he/she holds an executive position

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	3	2	1	5	3
P2	3	2	2	3	2
P3	3	2	3	5	2
P4	3	3	4	5	3
P5	3	3	4	5	3
P6	5	3	3	5	4
P7	3	2	3	5	3
P8	3	2	3	4	4
P9	3	3	2	4	5
P10	2	5	3	5	5