ÇANKAYA UNIVERSITY
Çankaya Vocational Training School
Course Definition Form

Part I. Basic Course Information

Department Name *Use capital letters only*	BANKING AND INUSURANCE	Dept. Numeric Code	4 5
Course Code (Dept. Code+Course No)	B A I 2 1 8	Number of weekly lecture hours: 2	Number of weekly lab/ tutorial hours: 2 — Number of Credit Hours: 3
Course Web Site *Use capital letters only*	BAI218.CANKAYA.EDU.TR	ECTS Credit	0 3

Course Name
This information will appear in the printed catalogs and on the web online catalog.

English Name *maximum 40 characters*
- Computer Applications in Finance

Abbreviated English Name *maximum 15 characters*
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Turkish Name *maximum 40 characters*
- Finansal Bilgisayar Uygulamaları

Abbreviated Turkish Name *maximum 15 characters*
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Prerequisites (if any) *Give course codes and check all that are applicable.*	1st	2nd	3rd	4th
	☐ Consent of the Instructor ☐ Senior Standing	☐ Give others, if any.		
Co-requisites (if any)	1st	2nd	3rd	4th

Course Type
Check all that are applicable

☐ Must course for Dept. ☐ Must course for other dept(s) ☒ Elective course for Dept. ☐ Elective course for other dept(s)

Part II. Detailed Course Information

Justification for the proposal *Maximum 80 words*
The aim of this course is to increase the capability of students to analyze finance in computer applications, especially Matlab and Bloomberg Applications.

Course Description *Provide a brief overview of what is covered during the semester. This information will appear in the printed catalogs and on the web online catalog. Maximum 60 words.*
The course is designed to equip the students with Mat Lab for finance applications. Basic functions of Matlab, random numbers, loops, graphs, data generation, analysing financial charts and determination of trends, modelling breaks and volatility, derivative pricing will be introduced.

Course Objectives *Explain the aims of the course. Maximum 100 words.*
Students will understand how finance is applied to computers and gain a deep knowledge of Mat Lab and Bloomberg.

Learning Outcomes *Explain the learning outcomes of the course. Maximum 10 items.*
Random number generation, loop designing, data generation, trend analysis, break and volatility models, derivative pricing.

Course Outline
List the topics covered within each week.

Week	Topic(s)
1	Introduction to Matlab
2	Linear Algebra for Matlab
3	Command Window, Editor and Function Screens
4	Simple Matlab Operations
5	Statistical Tools
6	Distributions
7	Random Number Generation
8	Data Generation and Graph Plotting
9	Modeling Breaks in Financial Data
10	Break Analysis with Poisson Distribution
11	Bond Pricing
12	Forwards/Futures
13	Options
14	Black Scholes Formula

Textbook(s)
List the textbook(s), if any, and other related main course materials.

Author(s)	Title	Publisher	Publication Year	ISBN
David Houcque	Introduction to Matlab for Engineering Students	Nothwestern University	2005	Free e-book

Reference Books
List the reference books as supplementary materials, if any.

Author(s)	Title	Publisher	Publication Year	ISBN
David Cherney, Tom Denton and Andrew Waldron	Linear Algebra	UC Davis	2013	Free e-book

Teaching Policy
Explain how you will organize the course (lectures, laboratories, tutorials, studio work, seminars, etc.)

There will be one mid-term examination and one final.

Laboratory
Give the number of laboratory/studio hours required per week, if any, to do supervised laboratory, and list the names of the laboratories in which these sessions will be conducted.

All courses will be conducted in computer lab and Bloomberg lab..

Computer Usage
Briefly describe the computer usage and the hardware/software requirements in the course.

Courses will be followed by computers.

Grading Policy
List the assessment tools and their percentages that may give an idea about their relative importance to the end-of-semester grade.

Assessment Tool	Quantity	Percentage	Assessment Tool	Quantity	Percentage	Assessment Tool	Quantity	Percentage
Midterm	1	%40						
Final Exam	1	%50						
Attendance	1	%10						

ECTS Workload
List all the activities considered under the ECTS.

Activity	Quantity	Duration (hours)	Total Workload (hours)
Attending Lectures (*weekly basis*)	14	3	42
Attending Labs/Recitations (*weekly basis*)			
Preparation beforehand and finalizing of notes (*weekly basis*)	14	1	14
Collection and selection of relevant material (*once*)	1	4	4
Self study of relevant material (*weekly basis*)	14	1	14
Homework assignments			
Preparation for Quizzes			
Preparation for Midterm Exams (*including the duration of the exams*)	1	5	5
Preparation of Term Paper/Case Study Report (*including oral presentation*)			
Preparation of Term Project/Field Study Report (*including oral presentation*)			
Preparation for Final Exam (*including the duration of the exam*)	1	8	8
		TOTAL WORKLOAD	87
		TOTAL WORKLOAD / 25	25
		ECTS Credit	**3**

Program Qualifications vs. Course's Learning Outcomes

Consider the below program qualifications determined in terms of learning outcomes of all the courses in the curriculum and capabilities. Look at the learning outcomes of this course given above. Relate these two using the Likert Scale by marking with X in one of the five choices at the right..

No	Program Qualifications (Specific to each program)	Contribution				
		0	**1**	**2**	**3**	**4**
BAI-1	Be able to monitor and analyze the dynamics of banking and financial markets.				**x**	
BAI-2	Be able to utilize the basic knowledge that obtained with an interdisciplinary approach to business, economics, etc. in creating expertise in the fields of Banking and Insurance in accordance with the requirements of the globalized business environment.			**x**		
BAI-3	Be able to identify and analyze the validity of theories related to the banking and insurance and their relationships with current conditions.				**x**	
BAI-4	Have a good knowledge of the regulations and legislation underpinning the financial markets and institutions.		**x**			
BAI-5	Be able to use quantitative techniques and methods that are predominantly used in banking and insurance.				**x**	
BAI-6	Be able to use the theoretical and practical knowledge obtained in his/her field in analyzing and evaluating data.					**x**
BAI-7	Be able to construct, analyze and interpret financial and economic models			**x**		
BAI-8	Be able to understand and evaluate the problems in baking and insurance and to discuss and express his/her opinions clearly.		**x**			
BAI-9	Gain self-evaluation skills to identify exactly his/her self-learning and self-improvement needs, being at the same time equipped with the capacity to follow advanced courses and degree studies.					**x**
BAI-10	To maintain scientific, social, and ethical standards when collecting, interpreting, and disseminating financial information, and in application of financial ideas.				**x**	
BAI-11	Be able to know the mechanism how the banking sector works in the global economy.			**x**		
BAI-12	Be able to have the practical implications of the insurance policy in financial sector.		**x**			

Contribution Scale to a Qualification: **0**-None, **1**-Little, **2**-Medium, **3**-Considerable, **4**-Largest