



ÇANKAYA UNIVERSITY

Faculty of Economics and Administrative Sciences

Course Definition Form

Part I. Basic Course Information

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|------------------------|---------------------------|--|-----|
| Department Name | BANKING AND FINANCE | Dept. Numeric Code | 3 5 |
| Course Code | B A F 3 0 9 | Number of Weekly Lecture Hours | 3 |
| | | Number of Weekly Lab/Tutorial Hours | 0 |
| | | Number of Credit Hours | 3 |
| Course Web Site | http:// bf.cankaya.edu.tr | ECTS Credit | 0 6 |

Course Name and Other Course Information

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

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|--------------------------------|--------------------------|
| English Name | Financial Econometrics I |
| Turkish Name | Finansal Ekonometri I |
| Mode of Delivery | Face to face |
| Language of Instruction | English |

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 will introduce undergraduate students to the main theoretical frameworks employed in research financial econometrics and discuss the empirical evidence on these theories. We will review the Maximum Likelihood Estimation, Univariate Time Series and Applications to Finance, Modelling Volatility – Conditional Heteroscedastic Models, Modelling Volatility and Correlations – Multivariate GARCH Models, Vector Autoregressive Models, Limited Dependent Variable Models.

| | | | | |
|---|---|--|---|-----------------|
| Prerequisites (if any) <i>Give course codes and check all that are applicable.</i> | 1 st | 2 nd | 3 rd | 4 th |
| | <input type="checkbox"/> Consent of the Instructor | <input type="checkbox"/> Senior Standing | <input type="checkbox"/> Give others, if any. | |
| Co-requisites (if any) | 1 st | 2 nd | 3 rd | 4 th |
| | | | | |
| Course Type <i>Check all that are applicable</i> | <input checked="" type="checkbox"/> Must course for dept. <input type="checkbox"/> Must course for other dept.(s) <input type="checkbox"/> Elective course for dept. <input checked="" type="checkbox"/> Elective course for other dept.(s) | | | |

Part II. Detailed Course Information

Course Objectives

Maximum 100 words.

First of all our course seeks to bridge the gap between the typical financial econometrics courses and the more advanced courses which are given at the graduate level. Therefore, we enhanced the theoretical background of the students by giving them newly established theoretical models in the field of financial econometrics. Secondly, the level of abstraction and analytical sophistication of these models are very extensive that creates problems for student to understand intuition behind these theories. By using simple version of these models we prepare students for more advance settings of financial econometrics models. Finally, these models are not included in most of the undergraduate programs by introducing the simple version of these models; we are filling the gap of our students in this field.

Learning Outcomes

Explain the learning outcomes of the course. Maximum 10 items.

Familiarize the students with concepts; Maximum Likelihood Estimation, Univariate Time Series and Applications to Finance, Modelling Volatility – Conditional Heteroscedastic Models, Modelling Volatility and Correlations – Multivariate GARCH Models, Vector Autoregressive Models, Limited Dependent Variable Models.

| Textbook(s) <i>List the textbook(s), if any, and other related main course material.</i> | | | | |
|--|--|----------------------------|------------------|---------------------------|
| Author(s) | Title | Publisher | Publication Year | ISBN |
| Chris Brooks | Introductory Econometrics for Finance. | Cambridge University Press | 2008 | ISBN-13: 9780521694681 |

| Reference Books <i>List, if any, other reference books to be used as supplementary material.</i> | | | | |
|--|-------|-----------|------------------|------|
| Author(s) | Title | Publisher | Publication Year | ISBN |
| | | | | |

| Teaching Policy <i>Explain how you will organize the course (lectures, laboratories, tutorials, studio work, seminars, etc.)</i> |
|--|
| There will be one mid-term examination and two or three quizzes which are counted as class participation. In addition to these responsibilities, the students who are taking this class are responsible from homework. |

| Laboratory/Studio Work <i>Give the number of laboratory/studio hours required per week, if any, to do supervised laboratory/studio work and list the names of the laboratories/studios in which these sessions will be conducted.</i> |
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| |

| Computer Usage <i>Briefly describe the computer usage and the hardware/software requirements for the course.</i> |
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| Course Outline <i>List the weekly topics to be covered.</i> | |
|---|---|
| Week | Topic(s) |
| 1 | Statistical Properties of Financial Returns |
| 2 | Matrix Algebra, Regression and Applications in Finance |
| 3 | Matrix Algebra, Regression and Applications in Finance |
| 4 | Maximum Likelihood Estimation |
| 5 | Maximum Likelihood Estimation |
| 6 | Univariate Time Series and Applications to Finance |
| 7 | Midterm Week |
| 8 | Modelling Volatility – Conditional Heteroscedastic Models |
| 9 | Modelling Volatility – Conditional Heteroscedastic Models |
| 10 | Modelling Volatility and Correlations – Multivariate GARCH Models |
| 11 | Modelling Volatility and Correlations – Multivariate GARCH Models |
| 12 | Vector Autoregressive Models |
| 13 | Vector Autoregressive Models |
| 14 | Limited Dependent Variable Models |

| Grading Policy | | | | | | | | |
|--|----------|------------|-----------------|----------|------------|-----------------|----------|------------|
| <i>List the assessment tools and their percentages that may give an idea about their relative importance to the end-of-semester grade.</i> | | | | | | | | |
| Assessment Tool | Quantity | Percentage | Assessment Tool | Quantity | Percentage | Assessment Tool | Quantity | Percentage |
| Quiz | 3 | %10 | | | | | | |
| Homework | 2 | %10 | | | | | | |
| Midterm | 1 | %35 | | | | | | |
| Final Exam | 1 | %45 | | | | | | |

| ECTS Workload | | | |
|---|----------|------------------|------------------------|
| <i>List all the activities considered under the ECTS.</i> | | | |
| Activity | Quantity | Duration (hours) | Total Workload (hours) |
| Attending Lectures (<i>weekly basis</i>) | 14 | 3 | 42 |
| Attending Labs/Recitations (<i>weekly basis</i>) | 14 | - | - |
| Preparation beforehand and finalizing of notes (<i>weekly basis</i>) | 14 | 1 | 14 |
| Collection and selection of relevant material (<i>once</i>) | 1 | 3 | 3 |
| Self study of relevant material (<i>weekly basis</i>) | 14 | 2 | 28 |
| Homework assignments | 2 | 6 | 12 |
| Preparation for Quizzes | 3 | 2 | 6 |
| Preparation for Midterm Exams (<i>including the duration of the exams</i>) | 1 | 14 | 14 |
| Preparation of Term Paper/Case Study Report (<i>including oral presentation</i>) | 1 | 5 | 5 |
| Preparation of Term Project/Field Study Report (<i>including oral presentation</i>) | 1 | 6 | 6 |
| Preparation for Final Exam (<i>including the duration of the exam</i>) | 1 | 20 | 20 |
| TOTAL WORKLOAD / 25 | | | 150/25=6 |
| ECTS Credit | | | 30 |

| Program Qualifications vs. Learning Outcomes <i>Consider the program qualifications given below as determined in terms of learning outcomes and acquisition of capabilities for all the courses in the curriculum. 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.</i> | | | | | | |
|--|---|--------------|---|---|---|---|
| No | Program Qualifications | Contribution | | | | |
| | | 0 | 1 | 2 | 3 | 4 |
| BAF-1 | Be able to monitor and analyze the dynamics of banking and financial markets. | | | | X | |
| BAF-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 Finance in accordance with the requirements of the globalized business environment. | | X | | | |
| BAF-3 | Be able to identify and analyze the validity of theories related to the banking and finance and their relationships regarding current conditions. | | | X | | |
| BAF-4 | Have a good knowledge of the regulations and legislation underpinning the financial markets and institutions. | | | X | | |
| BAF-5 | Have the ability to efficiently perform all responsibilities of managerial finance within a corporation. | | | | | X |
| BAF-6 | Be able to use quantitative techniques and methods that are predominantly used in banking and finance. | | | | X | |
| BAF-7 | Be able to use the theoretical and practical knowledge obtained in his/her field in analyzing and evaluating data. | | | | X | |
| BAF-8 | Be able to construct, analyze and interpret financial and economic models | | | | X | |
| BAF-9 | Be able to understand and evaluate the problems in banking and finance and to discuss and express his/her opinions clearly. | | | X | | |
| BAF-10 | 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 | | |
| BAF-11 | To maintain scientific, social, and ethical standards when collecting, interpreting, and disseminating financial information, and in application of financial ideas. | | | | X | |

Scale for contribution to a qualification: **0**-none, **1**-little, **2**-moderate, **3**-considerable, **4**-highest