

**TURKISH-GERMAN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
INTERNATIONAL FINANCE**

COURSE SYLLABUS FORM

| Course Information | | | | |
|--------------------|----------------------|---------------|------------|------|
| Course Unit Title | Applied Econometrics | | | |
| Course Unit Code | Semester | Regular Cycle | T+A+L Hour | ECTS |
| IF010 | 1 | 2 | 2+0+0 | 6 |

| | | | | |
|--------------------------|---|--|----------|---|
| Course Language | English | | | |
| Course Level | Undergraduate | | Graduate | X |
| Department / Program | International Finance | | | |
| Types of Education | Classroom lecture | | | |
| Course Type | Compulsory | | Elective | X |
| Objectives of the Course | This course is on applied econometrics in master level and to a great extent focus on a general look on the econometric analysis. Students will get the skills and their intuitions to apply econometric methods. Main objective of the course is to give students the skill and confidence to undertake rigorous empirical analysis. | | | |
| Course Content | Examples of Statistics and Econometrics, History of Science, Statistics, and Econometrics, Philosophy of Science, Doing By Hand Approach, Interdisciplinary Real Data Examples, Geometry and Visualization of Problems, Interactive Programming, Using Stata, Learning How to Building A Research Paper | | | |
| Prerequisite | - | | | |
| Course Coordinator | Dr. S. Emre Çekin | | | |
| Name of Lecturers | Prof. Alpaslan Akay | | | |
| Course Assistants | Egemen Kayabaşı | | | |
| Work Placement(s) | - | | | |

| Recommended or Required Reading | |
|---------------------------------|---|
| Text Book(s) / Lecture Notes | Specific reading materials and instructions split by each lecture |
| Other Sources | Academic articles, lecture slides |

Material Sharing

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| | |
|--------------------|-------------|
| Documents | - |
| Assignments | Lab Reports |
| Exams | - |

Course Category

| | |
|---------------------------------------|-----|
| Mathematics and Basic Sciences | 40% |
| Engineering | % |
| Engineering Design | % |
| Social Sciences | 60% |
| Educational Sciences | % |
| Science | % |
| Health Sciences | % |
| Field Knowledge | % |

Assessment Criteria

| Semester Works | Quantity | Percentage % |
|--------------------------|-----------------|---------------------|
| Midterm Exam | | % |
| Quiz | | % |
| Assignment | | % |
| Attendance | | % |
| Application | | % |
| Project | 5 | 100% |
| Final examination | | % |
| Total | 5 | 100% |

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| ECTS / Table for Student Working Load | | | |
|--|-----------------|------------------------|-------------------------------|
| Activities | Quantity | Duration (Hour) | Total Work Load (Hour) |
| Course Duration | 14 | 2 | 28 |
| Self-Study Hours | 34 | 3 | 102 |
| Assignment | | | |
| Presentation / Seminar Preparation | | | |
| Midterm exams | | | |
| Application | | | |
| Laboratory | | | |
| Project | 5 | 10 | 50 |
| Final examination | | | |
| Total Work Load(Hour) | 180 | | |
| Total Work Load(Hour)/ 30 (h) | 180/30=6 | | |
| ECTS Credit of the Course | 6 | | |

| Learning Outcomes of the Course | |
|--|--|
| No. | Learning Outcomes |
| 1 | Students will get the skills and their intuitions to apply econometric methods. |
| 2 | Students will be knowledgeable in application and implementation of core econometric concepts necessary for writing applied or theoretical papers and master theses. |
| 3 | Students will learn the skill and confidence to undertake rigorous empirical analysis. |

| Course Content | | | |
|-----------------------|---|--------------------|------------------|
| Week | Topic | Preparation | Documents |
| 1 | Prologue and Introduction and Toolboxes | | |
| 2 | Regression I - Basics | | |

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|----|--|--|--|
| 3 | Regression II - Statistical Properties of OLS | | |
| 4 | Regression III: Inference and Prediction | | |
| 5 | OLS Estimation, Statistical Properties, Inference and Prediction | | |
| 6 | Regression IV: Model Specification and Heteroscedasticity | | |
| 7 | Failure of Assumptions | | |
| 8 | Estimation Frameworks: Non-Linear Least Squares and Maximum Likelihood Estimator | | |
| 9 | Introduction to Discrete Choice Models | | |
| 10 | Estimation Frameworks and Discrete Choice Models | | |
| 11 | Panel Data Models I - Linear Models | | |
| 12 | Review and Lab Assignments | | |
| 13 | Review and Lab Assignments | | |
| 14 | Review and Lab Assignments | | |

Matrix of Course Learning Outcomes versus Program Outcomes

| | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 |
|------------|----|----|----|----|----|----|----|----|----|-----|
| ALL | 5 | 5 | 1 | 2 | 3 | 3 | 4 | 3 | 3 | 3 |
| 1 | 5 | 5 | 1 | 2 | 3 | 3 | 4 | 3 | 3 | 3 |
| 2 | 5 | 5 | 1 | 2 | 3 | 3 | 4 | 3 | 3 | 3 |
| 3 | 5 | 5 | 1 | 2 | 3 | 3 | 4 | 3 | 3 | 3 |

Contribution Level: 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High

Prepared by: Egemen Kayabaşı

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