**Course – ECTS Credits**

Click the course name in the following table to learn goal, learning outcomes, content, assessment, workload and ECTS credits etc. about any of courses.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **1. Semester** | | | | | | |
| Code | The Course Name | | ECTS | T+P+L | C/E | Language |
| **FALL SEMESTER** | | | | | | |
| 121411113 | [INTRODUCTION TO ECONOMICS I](#Int_to_Economics_I) | | 4 | 3+0+0 | C | Turkish |
| 121411114 | [DESCRIPTIVE STATISTICS](#DESCRIPTIVESTATISTICS) | | 5 | 4+0+0 | C | Turkish |
| 121411130 | [INTRODUCTION TO ANALYSIS I](#INTRODUCTION_TO_ANALYSIS_I) | | 5 | 4+0+0 | C | Turkish |
| 121411131 | [INTRODUCTION TO COMPUTER PROGRAMMING](#INTRODUCTION_TO_COMPUTER_PROGRAMMING) | | 4 | 2+0+0 | C | Turkish |
| 121411132 | [INTRODUCTION TO BUSINESS I](#INTRODUCTIONTBUSINESSI) | | 2 | 2+0+0 | C | Turkish |
| 121411151 | [LINEAR ALGEBRA](#LINEARALGEBRA) | | 4 | 3+0+0 | C | Turkish |
| 121411195 | [TURKISH LANGUAGE I](#TURKISH_LANGUAGEI) | | 2 | 2+0+0 | C | Turkish |
| 121411196 | [ENGLISH I](#ENGLISH_I) | | 3 | 3+0+0 | C | English |
|  | **SOCIAL ELECTIVE I** | | 1 |  | E |  |
| **121011002** | [**PHYSICAL EDUCATION I**](#PHYSICAL_EDUCATION_I) | | 1 | 1+0+0 | E | Turkish |
| **121011003** | [**TRADITIONAL TURKISH ORNA.I**](#TRADITIONAL_TURKISH_ORNAMENTATION_I) | | 1 | 1+0+0 | E | Turkish |
| **121011004** | [**GARDEN DESIGNING, TREATING AND GREENHOUSE CULTURE I**](#GARDEN_DESIGNING_TREATING_and_GREEEN_I) | | 1 | 1+0+0 | E | Turkish |
| **121011001** | **CULTURAL ACTIVITIES I** | | 1 | 0+1+0 | E | Turkish |
| **121011005** | [**CALLIGRAPHY I**](#CALLIGRAPHY_I) | | 1 | 1+0+0 | E | Turkish |
| **121011006** | [**FIRST AID I**](#FIRST_AID_I) | | 1 | 1+0+0 | E | Turkish |
| The Sum of Fall Semester: | | | 30 |  |  |  |
| Code | | The Course Name | ECTS | T+P+L | C/E | Language |
| **SPRING SEMESTER** | | | | | | |
| 121412119 | [INTRODUCTION TO ECONOMICS II](#INTRODUCTION_TO_ECONOMICS_II) | | 4 | 3+0+0 | C | Turkish |
| 121412195 | [INTRODUCTORY STATISTICS](#INTRODUCTORYSTATISTICS) | | 5 | 4+0+0 | C | Turkish |
| 121412117 | [INTRODUCTION TO ANALYSIS II](#INTRODUCTION_TO_ANALYSIS_II) | | 5 | 4+0+0 | C | Turkish |
| 121412196 | [COMPUTER PROGRAMMING](#COMPUTERPROGRAMMING) | | 5 | 2+2+0 | C | Turkish |
| 121412118 | [INTRODUCTION TO BUSINESS II](#INTRODUCTIONTOBUSINESSII) | | 2 | 2+0+0 | C | Turkish |
| 121412197 | [GENERAL STATISTICS](#GENERAL_STATISTICS) | | 3 | 2+0+0 | C | Turkish |
| 121412185 | [TURKISH LANGUAGE II](#TURKISHLANGUAGEII) | | 2 | 2+0+0 | C | Turkish |
| 121412186 | [ENGLISH II](#ENGLISH_II) | | 3 | 3+0+0 | C | English |
|  | **SOCIAL ELECTIVE II** | | 1 |  | E |  |
| **121012002** | [**PHYSICAL EDUCATION II**](#PHYSICAL_EDUCATION_II) | | 1 | 1+0+0 | E | Turkish |
| **121012003** | [**TRADITIONAL TURKISH ORNA. II**](#TRADITIONAL_TURKISH_ORNAMENTATION_II) | | 1 | 1+0+0 | E | Turkish |
| **121012004** | [**GARDEN DESIGNING, TREATING AND GREENHOUSE CULTURE II**](#GARDEN_DESIGNING_TREATING_and_GREEEN_II) | | 1 | 1+0+0 | E | Turkish |
| **121012001** | **CULTURAL ACTIVITIES II** | | 1 | 0+1+0 | E | Turkish |
| **121012005** | [**CALLIGRAPHY II**](#CALLIGRAPHY_II) | | 1 | 1+0+0 | E | Turkish |
| **121012006** | [**FIRST AID II**](#FIRST_AID_II) | | 1 | 1+0+0 | E | Turkish |
| The Sum of Spring Semester:: | | | 30 |  |  |  |
| Year’s Total : | | | 60 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **2. Semester** | | | | | | |
| Code | The Course Name | | ECTS | T+P+L | C/E | Language |
| **Fall Semester** | | | | | | |
| 121413300 | [PROBABILITY I](#PROBABILITY_I) | | 6 | 4+0+0 | C | Turkish |
| 121413253 | [SAMPLING I](#SAMPLING_I) | | 3 | 2+0+0 | C | Turkish |
| 121413258 | [PROGRAMMING LANGUAGES I](#PROGRAMMINGLANGUAGESI) | | 5 | 2+2+0 | C | Turkish |
| 121413214 | [SURVEY DESIGN](#SURVEYDESIGN) | | 5 | 3+0+0 | C | Turkish |
| 121413215 | [NUMERICAL ANALYSIS](#NUMERICALANALYSIS) | | 4 | 2+0+0 | C | Turkish |
| 121413257 | [ANALYSIS](#ANALYSIS) | | 5 | 3+0+0 | C | Turkish |
| 121413298 | [HISTORY OF TURKISH REVOLUTION AND PRINCIPLES OF MUSTAFA KEMAL ATATÜRK I](#AİİT_I) | | 2 | 2+0+0 | C | Turkish |
| The Sum of Fall Semester: | | | 30 |  |  |  |
| Code | | The Course Name | ECTS | T+P+L | C/E | Language |
| Spring Semester | | | | | | |
| 121414223 | [PROBABILITY II](#PROBABILITYII) | | 6 | 4+0+0 | C | Turkish |
| 121414254 | [SAMPLING II](#SAMPLINGII) | | 3 | 2+0+0 | C | Turkish |
| 121414256 | [PROGRAMMING LANGUAGES II](#PROGRAMMING_LANGUAGES_II) | | 5 | 2+2+0 | C | Turkish |
| 121414299 | [TECHNICAL ENGLISH I](#TECHNICAL_ENGLISH_I) | | 3 | 2+0+0 | C | Turkish |
| 121414230 | [TIME SERIES ANALYSIS](#TIMESERIESANALYSIS) | | 5 | 3+0+0 | C | Turkish |
| 121414300 | [DECISION THEORY](#DECISIONTHEORY) | | 6 | 4+0+0 | C | Turkish |
| 121414298 | [HISTORY OF TURKISH REVOLUTION AND PRINCIPLES OF MUSTAFA KEMAL ATATÜRK II](#AİİT_II) | | 2 | 2+0+0 | C | Turkish |
| The Sum of Spring Semester:: | | | 30 |  |  |  |
| Year’s Total: | | | 60 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 3. Semester | | | | | | |
| Code | The Course Name | | ECTS | T+P+L | C/E | Language |
| Fall Semester | | | | | | |
| 121415305 | [MATHEMATICAL STATISTICS I](#MATHEMATICASTATISTICSI) | | 6 | 4+0+0 | C | Turkish |
| 121415315 | [OPERATIONS RESEARCH I](#OPERATIONSRESEARCHI) | | 7 | 4+0+0 | C | Turkish |
| 121415310 | [REGRESSION ANALYSIS](#REGRESSIONANALYSIS) | | 5 | 3+0+0 | C | Turkish |
| 121415351 | [SCIENTIFIC RESEARCH METHODS](#SCIENTIFIC_RESEARCH_METHODS) | | 4 | 3+0+0 | C | Turkish |
| 121415400 | [TECHNICAL ENGLISH II](#TECHNICAL_ENGLISH_II) | | 3 | 2+0+0 | C | Turkish |
|  | **Elective Groups I** | | 5 |  | E |  |
| 121415404 | [PARAMETER ESTIMATION](#PARAMETER_ESTIMATION) | | 5 | 3+0+0 | E | Turkish |
| 121415402 | [STATISTICAL SOFTWARES](#STATISTICAL_SOFTWARES) | | 5 | 3+0+0 | E | Turkish |
| 121415403 | [CAUSALITY ANALYSIS IN TIME SERIES](#CAUSALITY_ANALYSIS_IN_TIME_SERIES) | | 5 | 3+0+0 | E | Turkish |
| The Sum of Fall Semester: | | | 30 |  |  |  |
| Code | | The Course Name | ECTS | T+P+L | C/E | Language |
| Spring Semester | | | | | | |
| 121416341 | [MATHEMATICAL STATISTICS II](#MATHEMATICALSTATISTICSII) | | 6 | 4+0+0 | C | Turkish |
| 121416320 | [OPERATIONS RESEARCH II](#OPERATIONSRESEARCHII) | | 7 | 4+0+0 | C | Turkish |
| 121416343 | [ECONOMETRICS](#ECONOMETRICS) | | 7 | 4+0+0 | C | Turkish |
| 121416339 | [QUALITY CONTROL](#QUALITY_CONTROL) | | 5 | 3+0+0 | C | Turkish |
|  | **Elective Groups II** | | 5 |  | E |  |
| 121416348 | [HYPOTESIS TESTING](#HYPOTHESISTESTING) | | 5 | 3+0+0 | E | Turkish |
| 121416344 | [DEMOGRAPHIC TECHNIQUES](#DEMOGRAPHIC_TECHNIQUES) | | 5 | 3+0+0 | E | Turkish |
| 121416345 | [STOCHASTIC PROCESSES](#STOCHASTICPROCESSES) | | 5 | 3+0+0 | E | Turkish |
| 121416346 | [DATA ANALYSIS](#DATA_ANALYSIS) | | 5 | 3+0+0 | E | Turkish |
| The Sum of Spring Semester: | | | 30 |  |  |  |
| Year’s Total: | | | 60 |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 4. Semester | | | | | |
| Code | The Course Name | ECTS | T+P+L | C/E | Language |
| Fall Semester | | | | | |
| 121417432 | [DESIGN OF EXPERIMENTS I](#EXPERIMENTALDESIGI) | 4 | 3+0+0 | C | Turkish |
| 121417442 | [MULTIVARIATE STATISTICS](#MULTIVARIATESTATİSTICS) | 6 | 4+0+0 | C | Turkish |
|  | **Elective Groups III** | 5 | 3+0+0 | E |  |
|  | **Statistical S&D I** | 5 | 2+2+0 | E |  |
| 121417403 | [SIMULATION](#SIMULATION) | 5 | 3+0+0 | E | Turkish |
| 121417423 | [QUALITY MANAGEMENT](#QUALITMANAGEMENT) | 5 | 3+0+0 | E | Turkish |
| 121417510 | [STATISTICAL TECHNIQUES FOR MARKETING RESEARCHES I](#STATISTICATECHNIQUESFOMARKETINGRES) | 5 | 3+0+0 | E | Turkish |
| 121417508 | [MONEY AND CAPITAL MARKET](#MONEY_AND_CAPITAL_MARKET) | 5 | 3+0+0 | E | Turkish |
| 121417511 | [STATISTICAL COMPUTING I](#STATISTICAL_COMPUTING_I) | 5 | 3+0+0 | E | Turkish |
| 121417502 | [ECONOMETRICS II](#ECONOMETRICS_II) | 5 | 3+0+0 | E | Turkish |
| 121417515 | [RISK ANALYSIS AND INSURANCE](#RISK_ANALYSIS_AND_INSURANCE) | 5 | 3+0+0 | E | Turkish |
| 121417506 | ROBUST STATISTICS | 5 | 3+0+0 | E | English |
| 121417507 | [SIMULATION](#SIMULATION) | 5 | 3+0+0 | E | English |
| 121417531 | [APPLIED STATISTICS USING R I](#Applied_Statistics_Using_R_I) | 5 | 3+0+0 | E | Turkish |
| 121417532 | [ENTREPRENEURSHIP](#ENTREPRENEURSHIP) | 5 | 4+0+0 | E | Turkish |
| 121417516 | [STATISTICAL QUALITY CONTROL AND TOTAL QUALITY MANAGEMENT I](#STATISTICALQUALITYCONTROLANDTOTAQU) | 5 | 2+2+0 | E | Turkish |
| 121417517 | [MANAGERIAL DECISION MAKING I](#MANAGERIAL_DECISION_MAKING_I) | 5 | 2+2+0 | E | Turkish |
| 121417518 | [REPEATED MEASURES EXPERIMENTS I](#REPEATEDMEASUREEXPERIMENTI) | 5 | 2+2+0 | E | Turkish |
| 121417519 | [ECONOMETRICS THEORY I](#ECONOMETRICS_THEORY_I) | 5 | 2+2+0 | E | Turkish |
| 121417520 | [APPLICATIONS OF STATISTICS I](#APPLICATIONS_OF_STATISTICS_I) | 5 | 2+2+0 | E | Turkish |
| 121417521 | [STATISTICAL PACKAGE PROGRAMS I](#STATISTICAL_PACKAGE_PROGRAMS_I) | 5 | 2+2+0 | E | Turkish |
| 121417522 | [METHODS FOR ANALYZING STATISTICAL DATA I](#METHODS_FOR_ANALYZING_STATISTICAL_DATA_I) | 5 | 2+2+0 | E | Turkish |
| 121417523 | [COMPUTING STATISTICAL DATA ANALYSIS I](#COMPUTING_STATISTICAL_DATA_ANALYSIS_I) | 5 | 2+2+0 | E | Turkish |
| 121417524 | [MULTIVARIATE REPEATED MEASURES DESIGNS I](#multi121417524) | 5 | 2+2+0 | E | Turkish |
| 121417525 | [RELIABILITY ANALYSIS I](#RELIABILITY_ANALYSIS_I) | 5 | 2+2+0 | E | Turkish |
| 121417526 | [QUALITATIVE DEPENDENT VARIABLE MODELS I](#QUALITATIVE_DEPENDENT_VARIABLE_MODELS_I) | 5 | 2+2+0 | E | Turkish |
| 121417527 | [ADVANCED DEMOGRAPHIC TECHNIQUES I](#ADVANCED_DEMOGRAPHIC_TECHNIQUES_I) | 5 | 2+2+0 | E | Turkish |
| 121417528 | [MAIN ECONOMIC INDICATORS I](#MAIN_ECONOMIC_INDICATORS_I) | 5 | 2+2+0 | E | Turkish |
| 121417529 | [FORECASTING TECHNIQUES I](#for121417529) | 5 | 2+2+0 | E | Turkish |
| 121417530 | [STATISTICAL ANALYSIS WITH SOFTWARES I](#STATISTICAL_ANALYSIS_WITH_SOFTWARES_I) | 5 | 2+2+0 | E | Turkish |
| The Sum of Fall Semester: | | 30 |  |  |  |
| Code | The Course Name | ECTS | T+P+L | C/E | Language |
| SPRING SEMESTER | | | | | |
| 121418478 | [DESIGN OF EXPERIMENTS II](#exp121418478) | 4 | 3+0+0 | C | Turkish |
| 121418443 | [NONPARAMETRIC STATISTICS](#non121418443) | 6 | 4+0+0 | C | Turkish |
|  | **Elective Groups IV** | **5** | 3+0+0 | E |  |
|  | **Statistical S&D II** | **5** | 2+2+0 | E |  |
| 121418444 | [CATEGORICAL DATA ANALYSIS](#cao121418444) | 5 | 3+0+0 | E | Turkish |
| 121418445 | [SERVICE SYSTEMS](#serv121418445) | 5 | 3+0+0 | E | Turkish |
| 121418477 | [FINANCIAL ECONOMICS](#FINANCIAL_ECONOMICS) | 5 | 3+0+0 | E | Turkish |
| 121418479 | [STATISTICAL TECHNIQUES FOR MARKETING RESEARCHES II](#sta121418479) | 5 | 3+0+0 | E | Turkish |
| 121418481 | [STATISTICAL COMPUTING II](#STATISTICAL_COMPUTING_II) | 5 | 3+0+0 | E | Turkish |
| 121418485 | [INSURANCE STATISTICS AND ACTUARY](#INSURANCE_STATISTICS_AND_ACTUARY) | 5 | 3+0+0 | E | Turkish |
| 121418501 | [APPLIED STATISTICS USING R II](#app121418501) | 5 | 3+0+0 | E | Turkish |
| 121418486 | [STATISTICAL QUALITY CONTROL AND TOTAL QUALITY MANAGEMENT II](#statis121418486) | **5** | 2+2+0 | E | Turkish |
| 121418487 | [MANAGERIAL DECISION MAKING II](#mana121418487) | **5** | 2+2+0 | E | Turkish |
| 121418488 | [REPEATED MEASURES EXPERIMENTS II](#REPEATEDMEASUREEXPERIMENTSII) | **5** | 2+2+0 | E | Turkish |
| 121418489 | [ECONOMETRICS THEORY II](#ekonom121418465) | **5** | 2+2+0 | E | Turkish |
| 121418490 | [APPLICATIONS OF STATISTICS II](#app121418466) | **5** | 2+2+0 | E | Turkish |
| 121418491 | [STATISTICAL PACKAGE PROGRAMS II](#STATISTICAL_PACKAGE_PROGRAMS_II) | **5** | 2+2+0 | E | Turkish |
| 121418492 | [METHODS FOR ANALYZING STATISTICAL DATA ANALYSIS II](#METHODS_FOR_ANALYZING_STAT_DATA_II) | **5** | 2+2+0 | E | Turkish |
| 121418493 | [COMPUTING STATISTICAL DATA ANALYSIS II](#COMPUTING_STATISTICAL_DATA_ANALYSIS_II) | **5** | 2+2+0 | E | Turkish |
| 121418494 | [MULTIVARIATE REPEATED MEASURES DESIGNS II](#multi121418494) | **5** | 2+2+0 | E | Turkish |
| 121418495 | [RELIABILITY ANALYSIS II](#reabil121418495) | **5** | 2+2+0 | E | Turkish |
| 121418496 | [QUALITATIVE DEPENDENT VARIABLE MODELS II](#QUALITATIVE_DEPENDENT_VARIABLE_MODELS_II) | **5** | 2+2+0 | E | Turkish |
| 121418497 | [ADVANCED DEMOGRAPHIC TECHNIQUES II](#advan121418497) | **5** | 2+2+0 | E | Turkish |
| 121418498 | [MAIN ECONOMIC INDICATORS II](#MAIN_ECONOMIC_INDICATORS_II) | **5** | 2+2+0 | E | Turkish |
| 121418499 | [FORECASTING TECHNIQUES II](#for121418499) | **5** | 2+2+0 | E | Turkish |
| 121418500 | [STATISTICAL ANALYSIS WITH SOFTWARES II](#software121418500) | **5** | 2+2+0 | E | Turkish |
| The Sum of Spring Semester: | | 30 |  |  |  |
| Year’s Total: | | 60 |  |  |  |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411113 | **COURSE NAME** | INTRODUCTION TO ECONOMICS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 3 | 0 | | 0 | | 3 | | 4 | COMPULSORY (X ) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Economic problems and method of economics price theory, the demand-supply and the market balance, flexibility and balance in the applications market, the benefits, the balance of producers and consumers, the production function and law of diminishing returns, cost and revenue analysis, the full balance of the competitive market, firms , imperfectly competitive markets, monopoly and oligopoly, factor markets, labor and wages, and rent of land, capital and interest, enterprise and profit, income distribution, environmental economics | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Having knowledge about the science of economics, learning the basic tools used in the analysis of micro-economic events. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Microeconomic analysis and interpretation of events to gain theoretical knowledge and skills. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Microeconomic issues discussed and debated in daily life, be able to analyze and comment | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Kemal YILDIRIM et al. Introduction to Economics,Nisan Bookstore Publicationsi,2017, Eskişehir. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Kemal YILDIRIM et al. Introduction to Micro-Economics, Nisan Bookstore, 2017, Eskişehir. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Free Market Economy, Basic Concepts, Supply and Demand Balance |
| 2 | Elasticity of Supply and Demand |
| 3 | Consumer Theory and the Balance |
| 4 | Theory and Balance of Producer |
| 5 | Cost |
| 6 | Revenue Analysis (MIDTERM EXAM) |
| 7 | Perfect Competition and Short-Run Equilibrium (MIDTERM EXAM) |
| 8 | Perfect Competition and Long-Run Equilibrium |
| 9 | Monopoly Markets and Short-Long-Run Equilibrium |
| 10 | Monopolistic Competition and the Short-Long-Run Equilibrium |
| 11 | Oligopoly Markets and Short-Long-Run Equilibrium |
| 12 | Factor Markets and Equilibrium |
| 13 | Income Distribution and Policy |
| 14 | Environmental Economics |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**Instructor(s):** Assist. Prof. Dr. Mehmet ŞENGÜR

**Signature: Date:**

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411114 | **COURSE NAME** | DESCRIPTIVE STATISTICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | | **LANGUAGE** |
| 1 | 4 | 0 | | 0 | | 4 | | 5 | COMPULSORY (X) ELECTIVE ( ) | | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
| X | | |  | | | |  | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | Written | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | Written | | 60 | | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Basic concepts in statistics, measures of central tendency, measures of variability and Skewness and Kurtosis, Some discrete and continuous probability distributions. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Teaching the basic concepts and techniques of statistics to students | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Teaching the basic concepts of statistics in techniques to be used in the advanced classes, | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | By the end of the course students should be able to:   1. Understand importance of statistics in real life 2. Define the basic concepts of statistics 3. Calculate central tendency and variability measures for a dataset 4. Identify the shape of distribution by calculating the measures of skewness and kurtosis 5. Find desired area under normal distribution curve | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Çömlekçi, N., (2005), Temel İstatistik İlke ve Teknikleri, Bilim Teknik Yayınevi, Eskişehir. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. 1.  Serper, Ö., (1986), Uygulamalı İstatistik 1, İstanbul. 2. 2.  Serper, Ö., (1986), Uygulamalı İstatistik 2, İstanbul. 3. 3. Akdeniz, F., (2002), Olasılık ve İstatistik, Baki Kitapevi, Adana 4. 4. Erbaş, S. O., (2007), Olasılık ve İstatistik, Gazi Kitapevi, Ankara | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculator | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Definition and functions of statistics |
| 2 | Basic concepts in statistics: unit, population and variable |
| 3 | Definition and types of variables, measuring variables |
| 4 | Collecting of data and kinds of collecting; Nominal scales: Proportions, Ratios and percentages |
| 5 | Frequency distributions, classification of frequency distributions according to number of variables; Graphic presentations of frequency distributions |
| 6 | Measures of central tendency: Arithmetic mean, weighted average / (MIDTERM EXAM) |
| 7 | Measures of central tendency: Geometric mean, harmonic mean and quadratic mean/ (MIDTERM EXAM) |
| 8 | Measures of central tendency: Median; Deciles, Quartiles and Percentiles; Mode |
| 9 | Measures of variability: The standard deviation, the coefficient of variability |
| 10 | Measures of Skewness and Kurtosis |
| 11 | Some discrete probability distributions: Bernoulli distribution and binomial distribution |
| 12 | Poisson distribution; Some continuous probability distribution: Normal distribution |
| 13 | Standard normal distribution and finding desired area under normal distribution curve |
| 14 | Normal approach to binomial and poisson distributions |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**Assoc.Prof.Dr. Hatice Şamkar

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411130-121431101 | **COURSE NAME** | INTRODUCTION TO ANALYSIS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 4 | 0 | | 0 | | 4 | | 5 | COMPULSORY (X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | | X | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | No Prerequisites | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Numbers, Concept of function, linear function and equations for lines, algebrical functions, exponential, logarithmic and trigonometric functions, sequences and series, limit in functions, continuity and derivate, applications of derivate, curve plotting, parametric equations of curves, polar coordinates, power series, hyperbolic functions. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Understanding of functions and derivate concepts. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The students must to do all of the functions and derivate operations. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Course documents | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Related documents | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Related documents | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculater and related documents | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Numbers and Concept of function, |
| 2 | Linear function and equations for lines |
| 3 | Algebrical functions, |
| 4 | Exponential and logarithmic functions |
| 5 | Trigonometric functions, |
| 6 | Sequences and series (MIDTERM EXAM) |
| 7 | Limit in functions (MIDTERM EXAM) |
| 8 | Limit in functions |
| 9 | Continuity and derivate |
| 10 | Continuity and derivate |
| 11 | Applications of derivate |
| 12 | Applications of derivate |
| 13 | Curve plotting and parametric equations of curves, Polar coordinates |
| 14 | Power series, Hhyperbolic functions |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411131 | **COURSE NAME** | INTRODUCTION TO COMPUTER PROGRAMMING |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | | | | | **COURSE OF** | | | | | | | | | | | | | | |
| **Theory** | **Practice** | | | | **Labratory** | | | | **Credit** | | | | **ECTS** | | **TYPE** | | | | | | | **LANGUAGE** | |
| 1 | 2 | 0 | | | | 0 | | | | 2 | | | | 4 | | COMPULSORY (X ) ELECTIVE ( ) | | | | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | | | | **Computer** | | | | | | | | | **Social Sciences** | | | | |
|  | | |  | | | | | | | | X | | | | | | | | |  | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | | **Evaluation Type** | | | | | | | | | | **Quantity** | | **%** | | | | | |
| 1st Mid-Term | | | | | | | | | | 1 | | 40 | | | | | |
| 2nd Mid-Term | | | | | | | | | |  | |  | | | | | |
| Quiz | | | | | | | | | |  | |  | | | | | |
| Homework | | | | | | | | | |  | |  | | | | | |
| Project | | | | | | | | | |  | |  | | | | | |
| Report | | | | | | | | | |  | |  | | | | | |
| Others (………) | | | | | | | | | |  | |  | | | | | |
| **FINAL EXAM** | | | | | | |  | | | | | | | | | | 1 | | 60 | | | | | |
| **PREREQUISITE(S)** | | | | | | | None | | | | | | | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | | The main aim of the course is to introduce basic information Technologies and systems and their use in education. | | | | | | | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | | Information systems and  introduction computers; data presentation; basic parts of a computer: Cpu, peripherals, memory; microcomputers and operating systems: Console, Windows; computer programs; impacts of  computers on society; computer security | | | | | | | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | | | learning based on information technologies | | | | | | | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | | 1. Learn information technologies. 2. Understand the role of computers information technologies. 3. Learn the computer components. 4. Understand the working principle of computer hardware 5. Learn how to use operating system.system. 6. Use Windows operating 7. Understand working principles of applications. 8. Use Microsoft Excel application. 9. Understand the working principles of web pages. | | | | | | | | | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | | | Lecturing, Application | | | | | | | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | | Hasan Ç. (Bal. 2010), Bilgisayar ve İnternet  İleri Düzey Excel, Ömer Bağcı | | | | | | | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | | Excel 2007 , Zeydin Pala , <http://aliatalay.net/giris.htm> | | | | | | | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | | Computer , internet,datashow | | | | | | | | | | | | | | | | | |
|  |  |  | |  |  | | |  |  | | |  |  | |  | | |  | | |  |  | |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The introduction and the basic features of the Windows operating system |
| 2 | Desktop, file folder structures, introduction of system files |
| 3 | Windows and the programs and the implementation of administrative practices |
| 4 | Compression of files, opening, installation of the package of programs, the removal |
| 5 | Excel program and the introduction of the basic features of |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Cell, address, page, book, concepts of operation, the use of the formula |
| 9 | Cell, address, page, book, concepts of operation, the use of the Formula(cont.) |
| 10 | Working with objects (list boxes, check boxes, option buttons, etc.). |
| 11 | Working with Objects (Button, the spinner, etc.). |
| 12 | Use of an Excel formula |
| 13 | Application made to the profession (the preparation of the survey lists, etc.) |
| 14 | Data protection, encryption, export, taking into |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Ali Atalay

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411132 | **COURSE NAME** | INTRODUCTION TO BUSINESS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 2 | 0 | | 0 | | 2 | | 2 | COMPULSORY (X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | | 1 | | 60 | |
| **FINAL EXAM** | | | | |  | | | | |  | |  | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Human needs; economic phenomena; business; concept of business; the historical development of enterprises; postmodern business; knowledge economy; global economic transformation and revolution in business; digital business; business organization; business environment and objectives; success conditions of business; business efficiency; business risks; components of business. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aim of this course is to teach the basics of business administration. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Candidates those are capable to study and work within the projects which require expertise about introduction to business to develop and mount new applicable ideas to called projects and to bring in the skill of analyzing the interactions between introduction to business and other relevant areas. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Know human needs. Know production sources. Understand economic facts. Knowledge of the history of business and business concepts.  Postmodern business information. Know establishment activities in enterprises. To have knowledge about business and the environment. understand the purposes of businesses. Understand the success conditions of businesses. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | **Rıdvan, K. (2002).** İşletme.Eskişehir: Birlik Ofset | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to Business |
| 2 | General concept of business and business history |
| 3 | Business and other disciplines |
| 4 | Concepts of enterprise, entrepreneurial |
| 5 | Concepts of organization and business |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | The purpose of business administration and other success criteria |
| 9 | Business Classifications |
| 10 | Business Classifications |
| 11 | Foundation studies in Business |
| 12 | Business size |
| 13 | Capacity utilization issues in business |
| 14 | Business and environment |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Tuba YİYİT **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411151 | **COURSE NAME** | LINEAR ALGEBRA |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | | **TYPE** | | | **LANGUAGE** | |
| 1 | 3 | 0 | | 0 | | 3 | | 5 | | COMPULSORY (X) ELECTIVE () | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | | **Computer** | | | **Social Sciences** | | |
|  | | | **X** | | | | | |  | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | | |  | |  | |
| Quiz | | | | | |  | |  | |
| Homework | | | | | |  | |  | |
| Project | | | | | |  | |  | |
| Report | | | | | |  | |  | |
| Others (………) | | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | vector space, vector space, linear independence, base of a vector space, operations with matrices, determinant of a square matrix, minor, rank of a matrix, cofactor and additional matrix, inverse matrix of a square matrix, rank of a matrix, linear equation systems, linear transformations, relationship between linear transformations and matrices, eigenvalues and eigenvectors. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main of the course is to give basic concepts and properties of linear algebra. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Determine problems solve able with linear algebra themes, analyse them and find the solution methods,  Understand the concept vector space,  Operate using matrices,  Know the relation between linear equations and matrices,  Determine eigenvalue and eigenvectors. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Having knowledge about vector space.  Be able to operations related to matrices.  Make contact between matrices and linear transformations. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Taşcı, D. Lineer Cebir, Gazi kitabevi, 2005. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Sabuncuoğlu, A. Lineer Cebir, Nobel Akademik Yayıncılık, 2014.  Akın, Ö. Uygulamalı Lineer Cebir, Palme Yayınları, 2011. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | vector space, vector space |
| 2 | Subvector space |
| 3 | linear independence |
| 4 | The base and size of vector space’s |
| 5 | Basic concepts about matrices |
| 6 | Equality of matrices, sum of matrices, multiplying matrices by scalars, matrix multiplication (MIDTERM EXAM) |
| 7 | Hadamard product and Kronecker product, transpose of a matrix (MIDTERM EXAM) |
| 8 | Special matrices |
| 9 | Inverse of matrices |
| 10 | Elemantary row/column operations and elementary matrices |
| 11 | Determinants |
| 12 | Eigenvalues and eigenvectors |
| 13 | Linear transformations and relationship between linear transformations and matrices |
| 14 | Applications |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Asst. Prof. Dr. Y. Murat BULUT

|  |  |
| --- | --- |
| **Signature**: | **Date:** |

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121411195 | **COURSE NAME** | TURKISH LANGUAGE I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 2 | 0 | | 0 | | 0 | | 2 | COMPULSORY (X) ELECTIVE ( ) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Description and features of language, languages of the world, Position of Turkish among other languages, historical development of Turkish, development of western Turkish, Atatürk’s ideas and projects on Turkish, pronunciation and punctuation, language policies. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The subject of the course is to expose the value of Turkish language by giving information about development of Turkish language, to gain national language awareness, to develop reading and writing skills, to compare and contrast Turkish language to other languages, to compare and contrast language policy of developed countries to Turkish language policy, to gain skill of speaking. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Develop the ability of using Turkish properly at the business life. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Learn Turkish grammar  Gain an understanding of the position of Turkish among other languages  Gain an understanding of history of Turkish language  Gain knowledge about Turkish languages in the world  Develop the ability of using  Turkish properly  Learn the language policies  Gain writing skill  Gain speaking skill  Learn sentence structure and analyzing  Be able to realize Turkish vowels  Be able to realize formation of Turkish  Be able to read and comprehend  Be able to speak simultaneously  Be able to write compositions | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1. Kültür, M. E., “Üniversiteler İçin Türk Dili”, Bayrak Yayınları, İstanbul, 1997.  2. “Türk Dil Yazım Kılavuzu”, TDK Yayınları, 24. baskı, Ankara, 2005 | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Kaplan, M., “Kültür ve Dil”, 8. baskı, ,Dergah Yayınları, İstanbul, 1993.  2. Fuat, M., “Dil Üstüne”, Adam Yayınları, İstanbul, 2001.  3. Ercilasun, A. B., “Başlangıçtan Yirminci Yüzyıla Türk Dili Tarihi”, Akçağ Yayınları, 1. baskı, Ankara, 2004.  4. Aksan, D., “Türkçe’nin Gücü”, Bilgi Yayınevi, 4. baskı, Ankara, 1997.  5. Karamanlıoğlu, A., “Türk Dili”, Degah Yayınları, 3. baskı, İstanbul, 1984.  6. Anday, M. C., “Dilimiz Üstüne Konuşmalar”, YKY, İstanbul, 1996.  7. Karaağaç, G., “Dil Tarih ve İnsan”, Akçağ Yayınevi, Ankara, 2002.  8. Aksan, D., “Dil Şu Büyülü Düzen”, Bilgi Yayınevi, Ankara, 2003.  9. Banarlı, N. S., “Türkçe’nin Sırları”, 18. baskı, Kubbealtı Neşriyatı, İstanbul, 2002 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | DVD, VCD, projection, computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Language. (Language- nation relationship/ language- culture relationship) |
| 2 | All Languages in the world. How basic Turkish Language is amongst other Languages. |
| 3 | The historical development of Turkish language |
| 4 | The historical development of Turkish language |
| 5 | The alphabets of the Turks, Classification of Turkish dialects |
| 6 | Phonetics. (MIDTERM EXAM) |
| 7 | Phonetics. (MIDTERM EXAM) |
| 8 | The words for meanings and functions. |
| 9 | The words for meanings and functions. |
| 10 | The words for meanings and functions. |
| 11 | The type of the words according their semantic features |
| 12 | [Derivational](http://tureng.com/search/derivational%20affix) and [inflexional suffix](http://tureng.com/search/inflexional%20suffix) |
| 13 | Word groups |
| 14 | [Phrase](http://tureng.com/search/phrase) information |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121011010 | **COURSE NAME** | ENGLISH I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | **TYPE** | | | **LANGUAGE** | |
| 1 | 3 | 0 | | 0 | | 0 | | | 3 | | COMPULSORY ( X ) ELECTIVE ( ) | | | TURKISH | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | **Social Sciences** | | |
|  | | |  | | | | |  | | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | | | |  | |  | |
| Quiz | | | | | | |  | |  | |
| Homework | | | | | | |  | |  | |
| Project | | | | | | |  | |  | |
| Report | | | | | | |  | |  | |
| Others (………) | | | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Fundamental concepts and knowledge | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This lesson is programmed to give the basic vocabulary and grammar and make the students hear, understand, speak and write in English at elementary level. | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | This course is aimed at :  Using the basic grammar rules  The ability to use the target language in an English setting  Understanding and making dialogues  The ability to understand what’s read  The ability to communicate with English-speaking people  The ability to write in the target language. | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | At the end of the course studends are able to :  Use the basic grammar rules  Understand and make dialogues  Read and apprehend reading materials  Communicate through writing and speaking | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Top Grammar Plus CEF A1-A2 Lucy Becker, Carol Frain, David A.H, K.T | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Murphy, R., 2004, **English Grammar in Use**, Cambridge University Press, 2. **Dictionary of Contemprary English**, Longman. 3. Start Up Comprehensive English Practice**, 2007, Nüans Publishing** | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Course book, workbook, CD player, loudspeakers, dictionary. | | | | | | | | | | |
|  |  |  |  |  |  | |  |  | |  |  |  |  |  |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Present Be, There is, There are, It’s/that is |
| 2 | Have got/has got |
| 3 | Present Simple, Adverbs of frequency |
| 4 | Present continuous vs. Present simple |
| 5 | To be past, Simple past |
| 6 | To be past, Simple past (MIDTERM EXAM) |
| 7 | Future with going to, imperatives, Infinitive-Gerund (MIDTERM EXAM) |
| 8 | Modals : can. Could, must |
| 9 | Modals : Should, will, would |
| 10 | Articles, nouns, ırregular plurals |
| 11 | Articles, nouns, ırregular plurals |
| 12 | Adjectives, pronouns, Possessives, One/ones |
| 13 | Numbers, Adjectives |
| 14 | Adverbs, Questions, Prepositions |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121011002 | **COURSE NAME** | PHYSICAL EDUCATION I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 1 | 0 | | 0 | | 0 | | 1 | COMPULSORY ( ) ELECTIVE (X ) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Physical education; running, joint and muscle groups convenient to theirs level, sport branch, basketball, volleyball, handball ,football, field measures and rules of game, sport benefits to our health; health, first aid, matches in class. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The ability of having knowledge concerning the orders of the lecture.  The ability of running all the organs and systems to convenience of theirs level.  The ability of improving the nerve muscle and joint coordinating.  The ability of having basic knowledge, skill, manner and habits concerning physical education and sport  Take responsibility and duty, to go with leader and the ability of doing leadership  Playing amicably and competition appreciating the winner acceptance of loosing, and can be object to trick and injustice.  Having knowledge about sport, vehicle and facilities and can use this. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | |  | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The ability of growing health, happy, developed aspect of physical and psychological, self confident individuals who have the sense competitioning amicably. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Physical Education at Schools (Hikmet Aracı l999) | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Basic principles in Physical Education and Sport (Yrd. Doç. Dr. Faruk Yamaner) 2001 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Giving general knowledge about the subject of physical education. |
| 2 | Jogging, rotating which is softening joint and muscle groups. Giving knowledge about basic basketball rules, the matters to take care of passing and rubbing ball. |
| 3 | Jogging, warning movements, defense and offence studies at basketball. |
| 4 | Jogging, stretching movements, rubbing ball, exit to turnstile studies, attack sets at basketball. |
| 5 | Atatürk’s words on sport, jogging, passing and playing short-time match in basketball playing rules. |
| 6 | Jogging, stretching movements, giving basic knowledge about basic volleyball techniques, finger pass on net and control pass studies. (MIDTERM EXAM) |
| 7 | Interval studying, stretching movements headline at volleyball, pass and service firing, return in field at volleyball. (MIDTERM EXAM) |
| 8 | What’s benefit of sport our health? Stretching movements, doing match in volleyball playing rules. |
| 9 | Running athletics (short, middle, long) knowledge about distance, warning studying, short-time volleyball match. |
| 10 | Jogging, stretching movements, giving knowledge about basic handball techniques. |
| 11 | Jogging, movement for strengthening joint and muscles groups, rubbing ball and pass studies at handball. |
| 12 | Exercise for stretching and loosening the muscles, football playing rules and passing studies, short-time football match. |
| 13 | First aid at sport disability, jogging, stretching movements, marches in class. |
| 14 | Jogging, warning movements, matches in class |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121011004 | **COURSE NAME** | GARDEN DESIGNING, TREATING and GREEENHOUSE CULTURE I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 1 | 0 | | 0 | | 0 | | 1 | COMPULSORY ( ) ELECTIVE (X ) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The history of arrangement of garden and greenhouse culture. Ecological needs of plants. Important points of the garden arrangement and its maintenance. The maintenance of decorative flowers, matlocking of the soil, fighting against the herbal disorders. Irrigation. Fertilization Equipments for arrangement of garden and greenhouseculture Herbs used in garden arrangement. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aim of this course, to teach general concept of garden arrangement and Greenhouse techniques, classification of garden types and greenhouse to teach the issues to consider when establishing a greenhouse, to teach detailed information about the history of garden arrangement and greenhouses, internal regulation of gardens and greenhouse and to teach how irrigation should be. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Course will contribute.practical garden arrengement and curation; inner and outer arrengements. to make the students self-confident in works of gardening. To teach conciousness of nature to the students. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Learning general concept of garden designing and greenhouse techniques.  Learning historical development process of gardening.  Comprehending the ecological needs of plants.  Comment about the ecological needs of plants.  Comprehending subjects that is paid attention about gardening.  Recognized the plants that are used in gardening. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | TOKUR, S.,1994. Bitki Yetiştirme Tekniği, T.C. Osmangazi Ünv.Yayınları No:1 Fen Edebiyat Yayınları No:1 ESKİŞEHİR. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. KONEMANN, 1999. BOTANICA, The Illustrated A-Z of over 10000 garden plants and how to cultivate them. Pg:1020, Random House Australia, ISBN:3-8290-3068-1.  2. TOKUR, S., 2000 T.C. Osmangazi Üniversitesi Fen Edebiyat Fakültesi Bahçe Bakımı ve Seracılık I-II Papers, ESKISEHIR  3. ÜRGENÇ, S., 1992. Ağaç ve Süs Bitkileri, Fidanlık ve Yetiştirme Tekniği, İ.Ü. Basımevi ve Film Merkezi, İSTANBUL. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Projector, Computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The historical development of gardening. |
| 2 | Ecological needs of plants(Climatical properties). |
| 3 | Ecological needs of plants(Soil properties). |
| 4 | Properties that is necessary for gardening. |
| 5 | Tools that are used in gardening and greenhouse. |
| 6 | Mosaic plans and upholstery plants. (MIDTERM EXAM) |
| 7 | Mosaic plans and upholstery plants. (MIDTERM EXAM) |
| 8 | Squat, creeping plants. |
| 9 | Grass plants. |
| 10 | Grass plants. |
| 11 | Trees and shrubs. |
| 12 | Trees and shrubs. |
| 13 | Trees and shrubs. |
| 14 | Stony garden plants. |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121011012 | **COURSE NAME** | HEALTHY NUTRITION I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | | **COURSE OF** | | | | | | | | | | | |
| **Theory** | | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | **TYPE** | | | | | **LANGUAGE** | |
| 1 | 1 | | 0 | | 0 | | 0 | | | 1 | | COMPULSORY ( ) ELECTIVE (X) | | | | | TURKISH | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | | | |
| **Statistics** | | | | **Mathematics** | | | | | **Computer** | | | | | | **Social Sciences** | | | |
|  | | | |  | | | | |  | | | | | | X | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | **Evaluation Type** | | | | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | | | | |  | |  | | |
| Quiz | | | | | | | |  | |  | | |
| Homework | | | | | | | |  | |  | | |
| Project | | | | | | | |  | |  | | |
| Report | | | | | | | |  | |  | | |
| Others (………) | | | | | | | |  | |  | | |
| **FINAL EXAM** | | | | | |  | | | | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | | |  | | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | In this course, students are provided with information and skills on healthy nutrition based on their health. | | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | This course aim is to teach knowledge and skills to healthy individuals about sufficient and balanced nutrition, nutrition in special situations, food safety, purchasing, storage, preparation, cooking and the ability to select healthy food outside the home. | | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | |  | | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | * + Know how to eat healthy.   + Know the structure and functions of macro and micro nutrients.   + Know food groups. | | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | | Lecturing | | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | Baysal A. (2008) Beslenme. Hatipoğlu Yayınevi, Ankara. | | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | Applegate L, Özpınar H, (çeviri) (2011) Sağlıklı Yaşam ve Yüksek Performans için Beslenme ve Diyet Temel İlkeleri. İstanbul Tıp Kitabevi, İstanbul.  <http://beslenme.gov.tr/index.php?lang=tr&page=21>  Türkiyeye Özgü Besin ve Beslenme Rehberi-2015  Türkiye Beslenme Rehberi-2015 | | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | Computer , Projector | | | | | | | | | | | | |
|  | |  |  |  |  |  | |  |  | |  | |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to the course, information about the content and process |
| 2 | Definition of nutrition, importance of nutrition for health, characteristics of a registered dietitian |
| 3 | Definition and function of macronutrients, Energy balance |
| 4 | Carbohydrates |
| 5 | Proteins |
| 6 | Fat (MIDTERM EXAM) |
| 7 | Water (MIDTERM EXAM) |
| 8 | Definition and function of micronutrients |
| 9 | Definition and function of micronutrients |
| 10 | Fat soluble vitamins |
| 11 | Water soluble vitamins |
| 12 | Minerals |
| 13 | Food groups |
| 14 | Food groups |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121011006 | **COURSE NAME** | FIRST AID I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 1 | 1 | | 0 | | 0 | | 0 | | 1 | COMPULSORY ( ) ELECTIVE ( X ) | | | | TURKISH | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | |
| **Statistics** | | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
|  | | | |  | | | |  | | | | X | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | In this course, teaches to first aid knowledge and skills which contains sick or injured person until medical help to save lives, maintain safety of the injured person. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | This course aim is to teach first-aid knowledge and skills to healthy individuals which may experience a sudden health problems (Cardiac and respiratory arrest, bleeding, drowning, poisons, burns, fractures etc.) in their daily lives | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | |  | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | * Identify term to first aid and first aider * Identify briefly anatomy and physiology of the human body * Assessment of the injured and scene of accident * Perform basic life support (Cardio-pulmoner resuscitation) * Know a foreign object blocking the airway by removing the object first aid procedure * Know to practises of first aid in near drowning * Know to practises of first aid in bleeding * Know to practises of first aid in shock * Know to practises of first aid in injuries * Know to practises of first aid in poisons * Know to practises of first aid in insect and animal to bite and stings | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | | Lecturing | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | Erdil F, Bayraktar N, Çelik SŞ (2009) Temel İlk Yardım. Eflatun Yayınevi, Ankara. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | Kocatürk C (2005) İlk Yardım El Kitabı. Ohan Matbaacılık, İstanbul.  Tabak S, Somyürek İ (2008) Temel İlk Yardım ve Acil Bakım. Palme Yayıncılık, Ankara.  American Heart Association Guidelines CPR and ECC (2010). <http://www.heart.org/HEARTORG/CPRAndECC/Science/2010-AHA-Guidelines-for-CPR-ECC_UCM_317311_SubHomePage.jsp/> | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | Computer, Projector, Modals of Firstaid | | | | | | | | | |
|  | |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to the course, information about the content and process |
| 2 | Term to first aid and first aider |
| 3 | Briefly anatomy and physiology of the human body |
| 4 | Briefly anatomy and physiology of the human body |
| 5 | Assessment of the injured and scene of accident |
| 6 | Basic life support (Cardio-pulmoner resuscitation) (MIDTERM EXAM) |
| 7 | Basic life support (Cardio-pulmoner resuscitation) (MIDTERM EXAM) |
| 8 | Basic life support (Cardio-pulmoner resuscitation) |
| 9 | A foreign object blocking the airway by removing the object first aid procedure |
| 10 | A foreign object blocking the airway by removing the object first aid procedure |
| 11 | Practises of first aid in bleeding and shock |
| 12 | Practises of first aid in injuries |
| 13 | Practises of first aid in poisons and near drowning |
| 14 | Practises of first aid in insect and animal to bite and stings |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121412119-121432105 | **COURSE NAME** | INTRODUCTION TO ECONOMICS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 1 | 3 | 0 | | 0 | | 3 | | 4 | COMPULSORY (X ) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Introduction to Macroeconomics, Basic Concepts, National Income Analysis, National Income Measurement Methods, National Income Types, Factors of National Income, Consumption-Savings-Investment Function, National Income Equilibrium and Corruption, Factor Analysis, National Income and Prices General Level Relationship, short-Long-Term Stability, Monetary Theory and Policy, Money Market Balance, Balance Corruption, Quantity Theory, Closed economy Equilibrium (IS-LM model), Inflation and Unemployment Analysis, Business Cycle Fluctuations, International Trade Theory and Policy, Balance of Balance of Payments, Foreign Exchange Market and Balance of the International Monetary System, an Open Economy Macro-Economic Stability (IS-LM-BP Model). | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Having knowledge about the science of economics, learning the basic tools used in the analysis of macroeconomic events. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Macroeconomic analysis and interpretation of events to gain theoretical knowledge and skills. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Macroeconomic issues discussed and debated in daily life, be able to analyze and comment | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Kemal YILDIRIM et al. Introduction to Economics,Nisan Bookstore Publicationsi,2017, Eskişehir. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Kemal YILDIRIM et al. Introduction to Macro-Economics, Nisan Bookstore, 2017, Eskişehir. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to Macroeconomics, Basic Concepts |
| 2 | Methods for the Calculation of National Income, National Income Types, Factors of National Revenue |
| 3 | Consumption-Savings-Investment Function |
| 4 | National Income Equilibrium and Corruption, Factor Analysis, |
| 5 | Relation of the General Level of National Income and Prices, |
| 6 | General Level of National Income and Prices Short-Long-Term Stability(MIDTERM EXAM) |
| 7 | Monetary Theory and Policy (MIDTERM EXAM) |
| 8 | Money Market Balance, |
| 9 | Closed economy equilibrium (IS-LM model) |
| 10 | Inflation and Unemployment Analysis, Business Cycle Fluctuations |
| 11 | International Trade Theory and Policy, |
| 12 | Balance of Balance of Payments, Foreign Exchange Markets and Balance |
| 13 | International Monetary Systems |
| 14 | Open Economy Macro-Economic Stability (IS-LM-BP Model) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**Instructor(s):** Assist. Prof. Dr. Mehmet ŞENGÜR

**Signature**: **Date**:



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121412195 | **COURSE NAME** | INTRODUCTORY STATISTICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 2 | 4 | 0 | | 0 | | 4 | | 5 | COMPULSORY (X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | Written | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | Written | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Sampling theory; Sampling distributions; Statistical estimation theory; Hypothesis testing | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course provides an introduction to statistical estimation and inference methods | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To provide necessary statistical background for analyzing data and drawing inferences from that analysis. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | By the end of the course students should be able to:   1. Understand fundamental theory and methods of statistical inference, with application from real life. 2. Use of statistics as decision and problem solving tool. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | **1**. Akdeniz, F., (2002), Olasılık ve İstatistik, Baki Kitapevi, Adana | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Çömlekçi, N., (2005), Temel İstatistik İlke ve Teknikleri, Bilim Teknik Yayınevi, Eskişehir 2. Serper, Ö., (1986), Uygulamalı İstatistik 1, İstanbul. 3. Serper, Ö., (1986), Uygulamalı İstatistik 2, İstanbul 4. Erbaş, S. O., (2007), Olasılık ve İstatistik, Gazi Kitapevi, Ankara 5. Aytaç M. (2004), Matematiksel İstatistik, Ezgi Kitapevi, Bursa | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculator | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Samping theory; Probabilistic sampling; Basic concepts about probabilistic sampling and Techniques of probabilistic sampling |
| 2 | The estimation errors and source of estimation errors; Sampling distributions |
| 3 | Sampling distributions related to the normal distribution;, Central Limit Theorem |
| 4 | Estimation; Point Estimator and some properties of point estimators |
| 5 | Confidence interval; Large-sample confidence interval for a population mean; Small-sample confidence interval for a population mean |
| 6 | Confidence interval for the difference between two population means: Large independent samples; Confidence interval for the difference between two population means: Small independent samples / (MIDTERM EXAM) |
| 7 | Confidence interval for the difference between two population means: Paired difference samples / (MIDTERM EXAM) |
| 8 | Confidence intervals for a population proportion; Confidence interval for the difference between two population proportions |
| 9 | Confidence intervals for a population variance; Confidence intervals for the ratio of two population variances |
| 10 | Hypothesis Testing; Large sample tests for a population mean; Small sample tests for a population mean |
| 11 | Hypothesis tests for the difference between two population means: Large independent samples;  Hypothesis tests for the difference between two population means: Small independent samples |
| 12 | Hypothesis tests for the difference between two population means: Paired difference samples |
| 13 | Hypothesis tests for a population proportion; Hypothesis tests for the difference between two population proportions |
| 14 | Hypothesis test for a population variance; Hypothesis test for the ratio of two population variances |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**Assoc.Prof.Dr. Hatice Şamkar

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121412117-121432103 | **COURSE NAME** | INTRODUCTION TO ANALYSIS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 2 | 4 | 0 | | 0 | | 4 | | 5 | COMPULSORY (X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | | X | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | No prerequisites | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Definite integral, Mean Value Theorems, indefinite integral and fundamental integral formulas, techniques of integration, applications of definite integral, calculation of surface area, calculation of volume, lengths of plane curves, areas of surfaces of revolution, center of mass, improper integrals and Gamma function, numerical integration, the trapezoidal rule, Simpson’s rule. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Understanding of definite and indefinite integrals | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The students must to do all of the integral operations. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Course documents | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Olasılık ve İstatistiğe Giriş Prof. Dr. Salih Çelebioğlu – Prof.Dr. Reşat Kasap | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Olasılık ve İstatistik Prof.Dr. Fikri Akdeniz, Olasılık ve İstatistik Prof.Dr. Semra Erbaş | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculater and related documents | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Definite integral |
| 2 | Definite integral |
| 3 | Mean Value Theorems |
| 4 | Indefinite integral and fundamental integral formulas |
| 5 | Techniques of integration |
| 6 | Applications of definite integral (MIDTERM EXAM) |
| 7 | Calculation of surface area (MIDTERM EXAM) |
| 8 | Calculation of volume |
| 9 | Lengths of plane curves |
| 10 | Areas of surfaces of revolution |
| 11 | Center of mass |
| 12 | Improper integrals |
| 13 | Gamma function, Numerical integration |
| 14 | The trapezoidal rule, Simpson’s rule |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assist. Prof. Dr Hülya ŞEN  **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |
| **COURSE CODE** | 121412196 | **COURSE NAME** | COMPUTER PROGRAMMING | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 2 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X ) ELECTIVE ( ) | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
|  | | |  | | | | X | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | An overview of visual programming, data types in Visual Basic programming language, Visual Basic programming environment, parts of Visual Basic programming environment, form design, toolbox, properties window, project window, introduction to Visual Basic programming, constants, variables, data types, input and output statements, control statements, looping statements, arrays, some string processing functions, private type sub programs, function and sub subprograms, usage of modules, local and global variables, sequential and random access files and applications. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main objective of the course, visual programming,  algorithms and structures, examples of algorithma presentation and visual programming and problem-solving | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Knowledge and understanding of the programming language to troubleshoot problems | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Learn information technologies. 2. Learn the computer components. 3. Understand how operating system works. 4. Learn how to use operating system. 5. Understand working principles of applications. 6. Use Microsoft Visual Basic application. 7. Use Microsoft Excel application. 8. Know  resources and data 9. Understand the working principles of  visual basic. | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Visual Basic 2008 Microsoft yayınları- Prof.Dr. Hamza Erol (2006) Görsel Programlama ve Makrolar  https://docs.microsoft.com/en-us/previous-versions/visualstudio/visual-studio-2008/gg697790(v=vs.88 | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | <http://aliatalay.net/visualb.htm> - https://mynetx.net/uploads/files/mspress-vb2008expr.pdf | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, data show | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The introduction and the basic features of the Windows operating system |
| 2 | Desktop, file folder structures, introduction of system files |
| 3 | Windows and the programs and the implementation of administrative practices |
| 4 | Compression of files, opening, installation of the package of programs, the removal |
| 5 | Excel program and the introduction of the basic features of |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Cell, address, page, book, concepts of operation, the use of the formula |
| 9 | Cell, address, page, book, concepts of operation, the use of the Formula(cont.) |
| 10 | Working with objects (list boxes, check boxes, option buttons, etc.). |
| 11 | Working with Objects (Button, the spinner, etc.). |
| 12 | Use of an Excel formula |
| 13 | Application made to the profession (the preparation of the survey lists, etc.) |
| 14 | Data protection, encryption, export, taking into |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**Ali Atalay

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121412118 | **COURSE NAME** | INTRODUCTION TO BUSINESS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 2 | 2 | 0 | | 0 | | 2 | | 2 | COMPULSORY (X) ELECTIVE ( ) | | | | Turkısh |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Management function, marketing function, finance function, accounting function, human resources function and business information systems. : marketing information system; manufacturing information system; human resources information system; financial information system; accounting information system. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is to introduce students to the functions of businesses. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Candidates those are capable to study and work within the projects which require expertise about introduction to business to develop and mount new applicable ideas to called projects and to bring in the skill of analyzing the interactions between introduction to business and other relevant areas. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Understanding the function of management. Grasping the function of marketing. Knowing production function. Understanding the function of finance. Knowing accounting function. Knowing function of human resources. Understanding the function of public relations. Recognizing the function of business information systems. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Rıdvan, K. (2002). İşletme.Eskişehir: Birlik Ofset | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | General introduction to the business functions |
| 2 | The main function of business: Management |
| 3 | Functions of Management: Planning |
| 4 | Functions of Management: Organization |
| 5 | Functions of Management: Executive |
| 6 | Midterm Exam |
| 7 | Midterm Exam |
| 8 | R&D and Innovation function |
| 9 | Marketing function |
| 10 | Finance function |
| 11 | Production function |
| 12 | Public relations function |
| 13 | Accounting function |
| 14 | Supply Function |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121412197 | **COURSE NAME** | GENERAL STATISTICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 2 | | 2 | 0 | | 0 | | 2 | | 3 | COMPULSORY (**X** ) ELECTIVE () | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | | |
| **Statistics** | | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
| X | | | |  | | | |  | | | | |  | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | |  | | |  | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | | |  | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | Introduction to statistics: Statistics in daily life, role of statistics. Describing, exploring and comparing data: Data sources, data patterns and data summary measures. Probability: Basic probability concepts, random variable and probability distributions. Sampling technique | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | The main of the course is to provide students with basic training in critical thinking via statistical concepts and a statistician’s way of understanding the world | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | | To competence to learn other statistics via general view point,  To competence of look to events with statistical methods and approaches | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | Develop the ability to summarize data and use statistical methods to analyze and interpret data  Understand the basic concepts and techniques necessary to utilize statistic information  Apply statistics to real life problems | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | Güler, F. “*Temel İstatistik*”, Beta Yayıncılık, İstanbul, 2007 | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | Balce, A.O., Demir, S. “*İstatistik Ders Notları*”, Pamukkale Üniversitesi İktisadi ve İdari Bilimler Fakültesi, Ekonometri Bölümü, Denizli, 2007 | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | |  | | | | | | | | | |
|  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |
| **COURSE OUTLINE** | | | | | | | | | | | | | | | |
| **WEEK** | **SUBJECTS / TOPICS** | | | | | | | | | | | | | | |
| 1 | Definition of statistics | | | | | | | | | | | | | | |
| 2 | Basic concepts of statistics | | | | | | | | | | | | | | |
| 3 | Types of statistics | | | | | | | | | | | | | | |
| 4 | Sources of data | | | | | | | | | | | | | | |
| 5 | Methods of data collection | | | | | | | | | | | | | | |
| 6 | Methods of data collection (MIDTERM EXAM) | | | | | | | | | | | | | | |
| 7 | Sampling (MIDTERM EXAM) | | | | | | | | | | | | | | |
| 8 | Summarization of qualitative and quantitative data | | | | | | | | | | | | | | |
| 9 | Summarization of qualitative and quantitative data | | | | | | | | | | | | | | |
| 10 | Measures of central tendency | | | | | | | | | | | | | | |
| 11 | Measures of distribution | | | | | | | | | | | | | | |
| 12 | Definition of probability | | | | | | | | | | | | | | |
| 13 | Types of probability | | | | | | | | | | | | | | |
| 14 | Distributions of probability | | | | | | | | | | | | | | |
| 15,16 | Final Exam | | | | | | | | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assist. Prof. Dr. Serdar NESLİHANOĞLU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121412185 | **COURSE NAME** | TURKISH LANGUAGE II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | **TYPE** | | | **LANGUAGE** | | |
| 2 | 2 | 0 | | 0 | | 0 | | | 2 | | COMPULSORY (X) ELECTIVE ( ) | | | TURKISH | | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | **Social Sciences** | | | |
|  | | |  | | | | |  | | | | | X | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | | **Quantity** | | | **%** | |
| 1st Mid-Term | | | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | | | |  | | |  | |
| Quiz | | | | | | |  | | |  | |
| Homework | | | | | | |  | | |  | |
| Project | | | | | | |  | | |  | |
| Report | | | | | | |  | | |  | |
| Others (………) | | | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Punctuation and Composition (The spelling of capital letters, The writing of quotations. numbers, The Composition the purpose of composition, method in composition writing, planning, introduction, development and result in composition. Speech features. Expression disorders. Forms of expression. The kinds of verbal telling. The kinds of written telling | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Development of Turkish and about the current state of Turkish. İnforming the students and show the richness of Turkish language. Giving awareness of language. Enable them to know and be able to use them in their daily lives of Turkish characteristics. | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | This course provides to use Turkish in a good way for students in their daily-life. It is provides to students express themselves and their job in a good way. | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Comprehend the richness of the Turkish.  Define the rules for Turkish language  Knows phonetic  Applies rules of writing  Creates a composition  Uses the Turkish right. | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1.Türk Dili ve Kompozisyon I-II, Gürer Gülsevin-Erdoğan Boz.  2. Üniversiteler için Türk Dili, Muharrem Ergin. | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Kaplan, M., “Kültür ve Dil”, 8. baskı, ,Dergah Yayınları, İstanbul, 1993.  2. Fuat, M., “Dil Üstüne”, Adam Yayınları, İstanbul, 2001.  3. Ercilasun, A. B., “Başlangıçtan Yirminci Yüzyıla Türk Dili Tarihi”, Akçağ  Yayınları, 1. baskı, Ankara, 2004.  4. Aksan, D., “Türkçe’nin Gücü”, Bilgi Yayınevi, 4. baskı, Ankara, 1997.  5. Karamanlıoğlu, A., “Türk Dili”, Degah Yayınları, 3. baskı, İstanbul, 1984.  6. Anday, M. C., “Dilimiz Üstüne Konuşmalar”, YKY, İstanbul, 1996.  7. Karaağaç, G., “Dil Tarih ve İnsan”, Akçağ Yayınevi, Ankara, 2002.  8. Aksan, D., “Dil Şu Büyülü Düzen”, Bilgi Yayınevi, Ankara, 2003.  9. Banarlı, N. S., “Türkçe’nin Sırları”, 18. baskı, Kubbealtı Neşriyatı,  İstanbul, 2002 | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Projection and computer. | | | | | | | | | | | |
|  |  |  |  |  |  | |  |  | |  |  |  |  | |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Punctuation |
| 2 | Expression disorders |
| 3 | Expression disorders |
| 4 | Written Expression Data |
| 5 | Written Expression Data |
| 6 | Types of Written Expression (MIDTERM EXAM) |
| 7 | Types of Written Expression (MIDTERM EXAM) |
| 8 | Types of Written Expression |
| 9 | Types of Written Expression |
| 10 | Varieties of Expression |
| 11 | Types of Official Correspondence |
| 12 | Preparation Techniques of Scientific Articles |
| 13 | Verbal Expression |
| 14 | Effective Presentation Techniques |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121012010 | **COURSE NAME** | ENGLISH II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | **TYPE** | | | **LANGUAGE** | | |
| 1 | 3 | 0 | | 0 | | 0 | | | 3 | | COMPULSORY ( X ) ELECTIVE ( ) | | | TURKISH | | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | **Social Sciences** | | | |
|  | | |  | | | | |  | | | | | X | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | | **Quantity** | | | **%** | |
| 1st Mid-Term | | | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | | | |  | | |  | |
| Quiz | | | | | | |  | | |  | |
| Homework | | | | | | |  | | |  | |
| Project | | | | | | |  | | |  | |
| Report | | | | | | |  | | |  | |
| Others (………) | | | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Fundamental concepts and knowledge | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This lesson is programmed to give the basic vocabulary and grammar and make the students hear, understand, speak and write in English at elementary level. | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | This course is aimed at :  Using the basic grammar rules  The ability to use the target language in an English setting  Understanding and making dialogues  The ability to understand what’s read  The ability to communicate with English-speaking people  The ability to write in the target language. | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | At the end of the course studends are able to :  Use the basic grammar rules  Understand and make dialogues  Read and apprehend reading materials  Communicate through writing and speaking | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Top Grammar Plus CEF A1-A2 Lucy Becker, Carol Frain, David A.H, K.T | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Murphy, R., 2004, **English Grammar in Use**, Cambridge University Press, 2. **Dictionary of Contemprary English**, Longman. 3. Start Up Comprehensive English Practice**, 2007, Nüans Publishing** | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Course book, workbook, CD player, loudspeakers, dictionary. | | | | | | | | | | | |
|  |  |  |  |  |  | |  |  | |  |  |  |  | |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Present Be, There is, There are, It’s/that is |
| 2 | Have got/has got |
| 3 | Present Simple, Adverbs of frequency |
| 4 | Present continuous vs. Present simple |
| 5 | To be past, Simple past |
| 6 | To be past, Simple past (MIDTERM EXAM) |
| 7 | Future with going to, imperatives, Infinitive-Gerund (MIDTERM EXAM) |
| 8 | Modals : can. Could, must |
| 9 | Modals : Should, will, would |
| 10 | Articles, nouns, ırregular plurals |
| 11 | Articles, nouns, ırregular plurals |
| 12 | Adjectives, pronouns, Possessives, One/ones |
| 13 | Numbers, Adjectives |
| 14 | Adverbs, Questions, Prepositions |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121012002 | **COURSE NAME** | PHYSICAL EDUCATION II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 2 | 1 | 0 | | 0 | | 0 | | 1 | COMPULSORY ( ) ELECTIVE (X) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Physical education; running, joint and muscle groups convenient to theirs level, sport branch, basketball, volleyball, handball field measures and rules of game, sport benefits to our health; health, first aid, matches in class. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The ability of having knowledge concerning the orders of the lecture.  The ability of running all the organs and systems to convenience of theirs level.  The ability of improving the nerve muscle and joint coordinating.  The ability of having basic knowledge, skill, manner and habits concerning physical education and sport  Take responsibility and duty, to go with leader and the ability of doing leadership  Playing amicably and competition appreciating the winner acceptance of loosing, and can be object to trick and injustice.  Having knowledge about sport, vehicle and facilities and can use this. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | |  | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The ability of growing health, happy, developed aspect of physical and psychological, self confident individuals who have the sense competitioning amicably. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Physical Education at Schools (Hikmet Aracı l999) | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Basic principles in Physical Education and Sport (Yrd. Doç. Dr. Faruk Yamaner)2001 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Giving general knowledge about the subject of physical education. |
| 2 | Jogging, rotating which is softening joint and muscle groups. Giving knowledge about basic basketball rules, the matters to take care of passing and rubbing ball. |
| 3 | Jogging, warning movements, defense and offence studies at basketball. |
| 4 | Jogging, stretching movements, rubbing ball, exit to turnstile studies, attack sets at basketball. |
| 5 | Atatürk’s words on sport, jogging, passing and playing short-time match in basketball playing rules. |
| 6 | Jogging, stretching movements, giving basic knowledge about basic volleyball techniques, finger pass on net and control pass studies. (MIDTERM EXAM) |
| 7 | Interval studying, stretching movements headline at volleyball, pass and service firing, return in field at volleyball. (MIDTERM EXAM) |
| 8 | What’s benefit of sport our health? Stretching movements, doing match in volleyball playing rules. |
| 9 | Running athletics (short, middle, long) knowledge about distance, warning studying, short-time volleyball match. |
| 10 | Jogging, stretching movements, giving knowledge about basic handball techniques. |
| 11 | Jogging, movement for strengthening joint and muscles groups, rubbing ball and pass studies at handball. |
| 12 | Exercise for stretching and loosening the muscles, football playing rules and passing studies, short-time football match. |
| 13 | First aid at sport disability, jogging, stretching movements, marches in class. |
| 14 | Jogging, warning movements, matches in class |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121012004 | **COURSE NAME** | GARDEN DESIGNING, TREATING and GREENHOUSE CULTURE II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | **TYPE** | | | **LANGUAGE** | | |
| 2 | 1 | 0 | | 0 | | 0 | | | 1 | | COMPULSORY ( ) ELECTIVE (X) | | | TURKISH | | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | **Social Sciences** | | | |
|  | | |  | | | | |  | | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | | **Quantity** | | | **%** | |
| 1st Mid-Term | | | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | | | |  | | |  | |
| Quiz | | | | | | |  | | |  | |
| Homework | | | | | | |  | | |  | |
| Project | | | | | | |  | | |  | |
| Report | | | | | | |  | | |  | |
| Others (………) | | | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The history of arrangement of garden and greenhouse culture. Ecological needs of plants. Important points of the garden arrangement and its maintenance. The maintenance of decorative flowers, matlocking of the soil, fighting against the herbal disorders. Irrigation. Fertilization Equipments for arrangement of garden and greenhouseculture Herbs used in garden arrangement. | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aim of this course, to teach general concept of garden arrangement and Greenhouse techniques, classification of garden types and greenhouse to teach the issues to consider when establishing a greenhouse, to teach detailed information about the history of garden arrangement and greenhouses, internal regulation of gardens and greenhouse and to teach how irrigation should be. | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Course will contribute . practical garden arrengement and curation; inner and outer arrengements. to make the students self-confident in works of gardening. To teach conciousness of nature to the students. | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Learning general concept of garden designing and greenhouse techniques.  Learning historical development process of gardening.  Comprehending the ecological needs of plants.  Comment about the ecological needs of plants.  Comprehending subjects that is paid attention about gardening.  Recognized the plants that are used in gardening. | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | TOKUR, S.,1994. Bitki Yetiştirme Tekniği, T.C. Osmangazi Ünv.Yayınları No:1 Fen Edebiyat Yayınları No:1 ESKİŞEHİR. | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. KONEMANN, 1999. BOTANICA, The Illustrated A-Z of over 10000 garden plants and how to cultivate them. Pg:1020, Random House Australia, ISBN:3-8290-3068-1.  2.TOKUR, S., 2000 T.C. Osmangazi Üniversitesi Fen Edebiyat Fakültesi Bahçe Bakımı ve Seracılık I-II Papers, ESKISEHIR  3.ÜRGENÇ, S., 1992. Ağaç ve Süs Bitkileri, Fidanlık ve Yetiştirme Tekniği, İ.Ü. Basımevi ve Film Merkezi, İSTANBUL. | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Projection and computer. | | | | | | | | | | | |
|  |  |  |  |  |  | |  |  | |  |  |  |  | |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The historical development of gardening. |
| 2 | Ecological needs of plants(Climatical properties). |
| 3 | Ecological needs of plants(Soil properties). |
| 4 | Properties that is necessary for gardening. |
| 5 | Tools that are used in gardening and greenhouse. |
| 6 | Mosaic plans and upholstery plants. (MIDTERM EXAM) |
| 7 | Mosaic plans and upholstery plants. (MIDTERM EXAM) |
| 8 | Squat, creeping plants. |
| 9 | Grass plants. |
| 10 | Grass plants. |
| 11 | Trees and shrubs. |
| 12 | Trees and shrubs. |
| 13 | Trees and shrubs. |
| 14 | Stony garden plants. |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121012006 | **COURSE NAME** | FIRST AID II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | **TYPE** | | | **LANGUAGE** | | |
| 2 | 1 | 0 | | 0 | | 0 | | | 1 | | COMPULSORY ( ) ELECTIVE (X) | | | TURKISH | | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | **Social Sciences** | | | |
|  | | |  | | | | |  | | | | | X | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | | **Quantity** | | | **%** | |
| 1st Mid-Term | | | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | | | |  | | |  | |
| Quiz | | | | | | |  | | |  | |
| Homework | | | | | | |  | | |  | |
| Project | | | | | | |  | | |  | |
| Report | | | | | | |  | | |  | |
| Others (………) | | | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | In this course, teaches to first aid knowledge and skills which contains sick or injured person until medical help to save lives, maintain safety of the injured person. | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This course aim is to teach first-aid knowledge and skills to healthy individuals which may experience a sudden health problems (Cardiac and respiratory arrest, bleeding, drowning, poisons, burns, fractures etc.) in their daily lives | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | |  | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | * Know to practises of first aid in burns * Know to practises of first aid in heat stroke and frostbite * Know to practises of first aid in fractures, dislocations and sprains * Know to practises of first aid in a foreign object to eyes, nose and ears * Know to practises of first aid in other emergencies (Fainting, Hyperglycemia, Hypoglycemia, epilepsy seizures, heart attack fever etc.) | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Erdil F, Bayraktar N, Çelik SŞ (2009) Temel İlk Yardım. Eflatun Yayınevi, Ankara. | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | * Kocatürk C (2005) İlk Yardım El Kitabı. Ohan Matbaacılık, İstanbul. * Tabak S, Somyürek İ (2008) Temel İlk Yardım ve Acil Bakım. Palme Yayıncılık, Ankara. * American Heart Association Guidelines CPR and ECC (2010). <http://www.heart.org/HEARTORG/CPRAndECC/Science/2010-AHA-Guidelines-for-CPR-ECC_UCM_317311_SubHomePage.jsp/> | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Barcovision, Modals of First aid | | | | | | | | | | | |
|  |  |  |  |  |  | |  |  | |  |  |  |  | |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to the course, information about the content and process |
| 2 | Basic life support (Cardio-pulmoner resuscitation) |
| 3 | Basic life support (Cardio-pulmoner resuscitation) |
| 4 | Practises of first aid in burns |
| 5 | Practises of first aid in burns |
| 6 | Practises of first aid in fractures, dislocations and sprains (MIDTERM EXAM) |
| 7 | Practises of first aid in fractures, dislocations and sprains (MIDTERM EXAM) |
| 8 | Practises of first aid in a foreign object to eyes, nose and ears |
| 9 | Practises of first aid in a foreign object to eyes, nose and ears |
| 10 | Practises of first aid in other emergencies (Fainting, Epilepsy Seizures) |
| 11 | Practises of first aid in other emergencies (Fainting, Epilepsy Seizures) |
| 12 | Practises of first aid in other emergencies (Hyperglycemia, Hypoglycemia) |
| 13 | Practises of first aid in other emergencies (Heart Attack) |
| 14 | Practises of first aid in other emergencies (Hypothermia, Hiperthermia, Fever Convulsion) |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121012011 | **COURSE NAME** | HEALTHY NUTRITION II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 2 | 1 | 0 | | 0 | | 0 | | 1 | COMPULSORY ( ) ELECTIVE (X) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | In this course, students are provided with information and skills on healthy nutrition based on their health. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This course aim is to teach knowledge and skills to healthy individuals about sufficient and balanced nutrition, nutrition in special situations, food safety, purchasing, storage, preparation, cooking and the ability to select healthy food outside the home. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | |  | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | * + Know what is ideal and healthy weight.   + Know the exogenous causes of obesity and underweight.   + Know popular diets and side effects of them   + Know the importance of nutrition to protect your heart health   + Know the importance of nutrition to protect mother and child health   + Know the importance of nutrition in old age   + Know the importance of nutrition in protection from cancer   + Know the relationship between health and physical activity&sports habits.   + Get a habit of reading information and labels on food safety.   + Has knowledge about healthy food selection. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Baysal A. (2008) Beslenme. Hatipoğlu Yayınevi, Ankara. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Applegate L, Özpınar H, (çeviri) (2011) Sağlıklı Yaşam ve Yüksek Performans için Beslenme ve Diyet Temel İlkeleri. İstanbul Tıp Kitabevi, İstanbul.  <http://beslenme.gov.tr/index.php?lang=tr&page=21>  Türkiyeye Özgü Besin ve Beslenme Rehberi-2015  Türkiye Beslenme Rehberi-2015 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer and Projector | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to the course, information about the content and process |
| 2 | Ideal and healthy weight |
| 3 | Obesity, underweight and weight control |
| 4 | Populer diets and side effects |
| 5 | Heart health and nutrition |
| 6 | Mother- Child health and nutrition (MIDTERM EXAM) |
| 7 | Nutrition in old age (MIDTERM EXAM) |
| 8 | Prevent from cancer and nutrition |
| 9 | Physical activity,spor and nutrition |
| 10 | Physical activity,spor and nutrition |
| 11 | Food safety |
| 12 | Label reading |
| 13 | Fast Food and health |
| 14 | Choose healthy food |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121413300 | **COURSE NAME** | PROBABILITY I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 3 | 4 | 0 | | 0 | | 4 | | 6 | COMPULSORY ( X ) ELECTIVE ( ) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | Many times | | 0 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Introduction to probability, Set theory, probability theory, Conditional probability and independence, Bayes rule, Random variables, Distributions of functions of a random variable (discrete and continuous), Density and mass functions, expected values, moments, moment generating functions | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | It is aimed to understand the place and importance of Probability I and Probability II courses to be taken in the following period in Statistics Science | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | After taking this course, the students followed lessons and training understanding and comfortably taken statistics of applications with ease. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Statistics, probability-based subjects used in ability and research skills to comment to be won. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Olasılık İ. Kara, Olasılık ve Matematiksel İstatistik C.İnal S.Günay, Olasılık A.F Yüzer, Matematiksel İstatistik Olasılık ve Önemli Dağılımlar B. Saracoğlu F Çevik | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Internet, Turkish and English probability and mathematical statistic books; | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | At least one basic course book -notebook, pen, calculator. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to probability |
| 2 | Set theory |
| 3 | Properties of set operators, Venn diagram, union, intersection |
| 4 | Counting |
| 5 | Conditional probability and independence, Bayes rule |
| 6 | General repetition of topics that can be processed (MIDTERM EXAM) |
| 7 | General repetition of topics that can be processed (MIDTERM EXAM) |
| 8 | Random variables, Density and mass functions Distributions of functions of a random variable (discrete and continuous) |
| 9 | Distribution functions |
| 10 | Expected Values, variance |
| 11 | Moments, Moment Generating Functions |
| 12 | Probability-Factorial Moment Generating Function, |
| 13 | Moment Generating Function |
| 14 | Characteristic Function, Cumulant Generating Function. |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Günseli Kurt

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121413253-121433253 | **COURSE NAME** | SAMPLING I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 3 | 2 | 0 | | 0 | | 2 | | 5 | COMPULSORY (X ) ELECTIVE() | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Advantages of the sampling method, some uses of sample survey, the principal steps in sample survey, probability sampling and alternatives to probability sampling, bias and its effects, simple random sampling, properties of the estimators, variance estimation of the mean, estimation of the standard error from a sample, estimation of a ratio, estimation of sample size, ratio estimation, linear regression estimation | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Basic concepts about sampling | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To provide solutions to problems encountered in sampling. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Will be able to define the basic concepts of sampling.Apply simple random sampling method.The population average formulates and calculates the sum, the ratio of the two variables to each other, and the ratio and number of units with a particular feature. Determine and interpret confidence intervals with estimates of variance estimates. Determine the appropriate sample width for the SRS method. | | | | | | | | |
| **TEACHING METHODS** | | | | | Lecture, Drill / Practise, Question & Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Çıngı, H. (2009) Örnekleme Kuramı. Ankara:H.Ü. Fen Fakültesi Basımevi. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Yamane, T. (2001)Temel Örnekleme Yöntemleri. Literatür Yayınları:53. (Çeviri)  Özdemir, Y. A., Tekin, S. T., Esin, A. (2015) Örnekleme Yöntemlerine Giriş.  Orhunbilge,Nevran(2000)Örnekleme Yöntemleri ve Hipotez Testleri,Avcıol Basımevi. Sümbüllüoğlu, V. ve Sümbüllüoğlu K. (2005) Klinik ve Saha Araştırmalarında Örnekleme Yöntemleri ve Örneklem Büyüklüğü | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Basic concepts and definitions about sampling |
| 2 | Basic steps of sampling |
| 3 | Sampling methods: probability sampling and non probability sampling techniques |
| 4 | Errors in the sampling |
| 5 | Simple random sampling |
| 6 | Simple estimation in simple random sampling |
| 7 | Properties of the estimators (MIDTERM EXAM) |
| 8 | Bias and its effects (MIDTERM EXAM) |
| 9 | Estimation of population mean (μ) and ratio (π) |
| 10 | Estimation of population total (X) and ratio of two variables (R) |
| 11 | Estimation of the sample size |
| 12 | Estimation of the sample size |
| 13 | Ratio estimations in simple random sampling |
| 14 | Linear Regression Estimation in simple random sampling |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Gaye KARPAT

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |
|  |  |
| **COURSE CODE** | 121413258 | **COURSE NAME** | PROGRAMMING LANGUAGES I | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 3 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X ) ELECTIVE () | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
|  | | |  | | | | X | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The main aim of the course is to introduce basic information about Excel forms, modül, macro :Form design ,toolbox equipments, properties window, project window, add/ins, standard function, statistical  applications and using data | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Excel and Access programs, function modules, and development | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | 1. Use Microsoft Excel application. 2. Know  resources and data 3. Prepare Excel Makro 4. Prepare Excel Modül 5. Prepare Excel VBA 6. Prepare Excel  VBA &  object model 7. Preparing a data base of Access 8. Macro applications 9. Conversions (Excel, Access-Access Excel) | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Learn excel and access macros | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Excel 2010 Makrolar Mustafa Akça  Excel XP ve MAKRO Ötesi / Zirvedeki Beyinler 4  Microsoft Office Excel 2007 [Zeydin Pala](http://www.idefix.com/kitap/zeydin-pala/urun_liste.asp?kid=9571) | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | http://aliatalay.net/excel.htm  [**http://www.excel.gen.tr**](http://www.excel.gen.tr/)  [**http://www.excel.web.tr/**](http://www.excel.web.tr/)  <http://www.vbaexpress.com/forum/forum.php>  [http://www.needforexcel.com](http://www.needforexcel.com/)  <http://nomish.yolasite.com/resources/EXCEL%20VBA%20programing.pdf> | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Data show | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The introduction and the basic features of the Windows operating system |
| 2 | Desktop, file folder structures, introduction of system files |
| 3 | Windows and the programs and the implementation of administrative practices |
| 4 | Compression of files, opening, installation of the package of programs, the removal |
| 5 | Excel program and the introduction of the basic features of |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Cell, address, page, book, concepts of operation, the use of the formula |
| 9 | Cell, address, page, book, concepts of operation, the use of the Formula(cont.) |
| 10 | Working with objects (list boxes, check boxes, option buttons, etc.). |
| 11 | Working with Objects (Button, the spinner, etc.). |
| 12 | Use of an Excel formula |
| 13 | Application made to the profession (the preparation of the survey lists, etc.) |
| 14 | Data protection, encryption, export, taking into |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Lecturer Ali Atalay

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121413214 | **COURSE NAME** | SURVEY DESIGN |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | **LANGUAGE** | |
| 5 | 3 | 0 | | 0 | | 4 | | 5 | COMPULSORY (X) ELECTIVE () | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| **1st Mid-Term** | | | | | 1 | | | 40 |
| **2nd Mid-Term** | | | | |  | | |  |
| **Quiz** | | | | |  | | |  |
| **Homework** | | | | |  | | |  |
| **Project** | | | | |  | | |  |
| **Report** | | | | |  | | |  |
| **Others (………)** | | | | |  | | |  |
| **FINAL EXAM** | | | | | **Written exam** | | | | | 1 | | | 60 |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Designing a survey, analyzing practice and survey data | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Students will learn the design and format of the questionnaire, sample selection and design, interview techniques, data coding and input, and simple data analysis. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | This course will be useful for students who use the survey technique as a data collection tool for their homework in the upper classes | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students who take the survey editing course will have the ability to prepare a research project, design a questionnaire, anticipate the respondents' responses, make the field organization, and code and analyze the data. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming.Teaching TECHNIQUES: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively, Solving Problems, Basic Mathematical Skills, Decision Making Skills. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | \* Türker Baş, “Anket”, Seçkin Publishing, Ankara | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | \*Alison Galloway, *Questionnaire Design & Analysis*,  [www.tardis.ed.ac.uk/~kate/qmcweb/qcont.htm](http://www.tardis.ed.ac.uk/~kate/qmcweb/qcont.htm)  \**Survey Design, Questionnaire Design Tips*, [www.surveysystem.com/ssformu.htm](http://www.surveysystem.com/ssformu.htm)  \**Guide to the Design of questionnaires*, [www.leeds.ac.uk/iss/documentation/top/top2/top2-9.html](http://www.leeds.ac.uk/iss/documentation/top/top2/top2-9.html)  \**Questionnaire Design*,  [www.cc.gatech.edu/classes/cs675-97-winter/Topics/quest-design](http://www.cc.gatech.edu/classes/cs675-97-winter/Topics/quest-design) | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| **1** | Classification of science, research, research according to various criteria |
| **2** | Planning a study |
| **3** | Data collection techniques in research |
| **4** | Survey questionnaire planning |
| **5** | Classification of survey questions |
| **6** | Correction of the questions, the reasons of error in expressing the questions (MIDTERM EXAM) |
| **7** | Physical appearance of question paper (MIDTERM EXAM) |
| **8** | Pilot research |
| **9** | Design of random sample in field studies, calculation of sample volume |
| **10** | Field organization and supervision |
| **11** | Encoding the data, preparing the code key |
| **12** | Computer input and evaluation of data |
| **13** | Analysis of survey data, univariate analyzes |
| **14** | Analysis of survey data |
| **15,16** | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| **1** | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| **2** | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| **3** | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| **4** | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| **5** | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| **6** | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| **7** | The awareness of professional ethics |  | **X** |  |  |
| **8** | The ability or motivation to use statistical concepts and understand it in English |  |  |  |  |
| **9** | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| **10** | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| **11** | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

1: No Contribution 2:Low Contribution 3:Somewhat High Contribution 4: High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121413215 | **COURSE NAME** | NUMERICAL ANALYSIS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 3 | 2 | 0 | | 0 | | 2 | | 4 | COMPULSORY (X) ELECTIVE () | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
|  | | | X | | | |  | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Mathematical Preliminaries and Error Analysis, Solutions of Equations in One Variable, Interpolation and Polynomial Approximation, Numerical Differentiation and Integration, Direct and Iterative Methods for Solutions of Linear Systems, Least-Squares Method. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main of the course is to introduce the concepts and techniques involved in the basic topics listed in this lecture and to develop skills in applying those concepts and techniques to the solution of problems | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The ability to solve mathematical problems using numerical methods. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The ability to apply numerical methods to real world problems | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer. | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Burden and Faires, Numerical Analysis. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | All numerical method books and lecture notes from the internet. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Mathematical Preliminaries and Error Analysis |
| 2 | Bisection method, regula falsi method |
| 3 | Newton metod, secand method |
| 4 | Lagrange interpolation |
| 5 | Divided diferences |
| 6 | Problem solving |
| 7 | MIDTERM EXAM |
| 8 | MIDTERM EXAM |
| 9 | Rectangular, trapezoidal ve Simpson’s mehtods |
| 10 | Combined numerical integration methods |
| 11 | Cramer ve Gauss elimination method |
| 12 | Jacobi ve Gauss Seidel method |
| 13 | Least-Squares Method |
| 14 | Problem solving |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Melis Zorşahin Görgülü

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121413257 | **COURSE NAME** | ANALYSIS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | **ECTS** | | **TYPE** | | | **LANGUAGE** | |
| 3 | 3 | 0 | | 0 | | 3 | 5 | | COMPULSORY (X)  ELECTIVE () | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | **Social Sciences** | | |
|  | | | **X** | | | | |  | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 40 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | |  | | |  |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 60 |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Vector valued functions, functions of several variables, domain of functions, limits and continuity, partial derivatives, chain rule, directional derivatives and gradient vector, maxima and minima of functions of several variables, conditional maxima and minima, Langrange multipliers, double integrals | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main of the course is to introduce the concepts and techniques involved in the basic topics listed in this lecture and to develope skills in applying those concepts and techniques to the solution of problems | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Gain analytical thinking ability and problem solving ability. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Having knowledge about vector valued functions.  Having knowledge about functions of several variables. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Koçak, M. Genel Matematik 2, Nisan Kitabevi, 2016. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Balcı, M. Matematik Analiz 2, Palme Yayıncılık, 2016. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Algebraic operations on vector valued functions |
| 2 | Limit and continuity of vector-valued functions |
| 3 | Derivative and integral of vector valued functions |
| 4 | The arc length of a curve, tangent of a curve, unit tangent-normal-binormal vectors and curvature |
| 5 | Domain of functions of several variables |
| 6 | Limits and continuity of functions of several variables (MIDTERM EXAM) |
| 7 | Partial derivatives (MIDTERM EXAM) |
| 8 | Chain rule |
| 9 | Directional derivatives and gradient vector |
| 10 | Maxima and minima of functions of several variables |
| 11 | Conditional maxima and minima and Langrange multipliers |
| 12 | Double integrals |
| 13 | Double integrals and applications |
| 14 | Applications |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Asst. Prof. Dr. Y. Murat BULUT

|  |
| --- |
| **Signature**: |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121011009 | **COURSE NAME** | HISTORY OF TURKISH REVOLUTION AND PRINCIPLES OF KEMAL ATATÜRK I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 1 | 2 | 0 | | 0 | | 2 | | 2 | COMPULSORY ( X) ELECTIVE () | | | | TURKISH | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
|  | | |  | | | |  | | | | X | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The Description of the term “revolution”; major historical events in the Ottoman Empire to the end of World War I; a general overview of Mustafa Kemal’s life; certain associations and their activities; arrival of Mustafa Kemal to Samsun; the congresses, gathering of the last Ottoman Assembly and the proclamation of the “national oath”; opening of the Turkish Grand National Assembly; War of independence to the Victory of Sakarya; Victory of Sakarya; financial sources of the war of independence; grand counter-attack; Armistice of Mudanya; abolution of the Sultanate; Peace Conference of Lausanne. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To help the students to appreciate the hard conditions under which the war of independence, under the leadership of Mustafa Kemal, was fought and how an independent Turkish state was created. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To underline the idea that the national unity based on the principle “peace in the country peace in the world” can only be achieved through political, economic and military progress. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | At the end of this course; Students  1.Explains Principles of Atatürk and main concepts related to Revolution history.  1.1.Explians the concepts of Reform/Revolution.  1.2.Describes the concept of National Forces.  1.3.Explains the concepts of Republic/Democracy.  1.4.Recognizes the concept of Ideology.  2.Explains the main points of the period related to Turkish War of Independence and foundation of the Turkish State.  2.1.Explains the developments at Ottoman Empire before Turkish Revolution.  2.2.Describes the World War I and its results.  2.3.Explains Turkish War of Independence.  2.4.Recognizes Turkish Revolution.  2.5.Remembers the mian principles of Turkish foreign politics.  2.6.Explains Principles of Atatürk and their importance.  3.Explains the effects of the developments at Europe and World on Turkish Republic.  3.1.Explains the effects of European and World politics on Turkey and the results of them.  3.2.Describes the effects of Capitalism/Emperialism on Turkey.  3.3.Explains the relations / problems between Turkey and its neighbours.  3.4.Explains the importance of Turkey at Europe and World. | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Gazi Mustafa Kemal Atatürk, Nutuk (Söylev), C. I-II, TTK., Ank., 1986.  İmparatorluktan Ulus Devlete Türk İnkılâp Tarihi, Cemil Öztürk (ed.), Ank., 2011. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | \* Ateş,Toktamış.(2001) Türk Devrim Tarihi.İstanbul:Der Yayınları.  \*Aybars,Ergün.(200) Türkiye Cumhuriyeti Tarihi.İzmir:Ercan Kitabevi.  \* Eroğlu,Hamza.(1990) Türk İnkılasp Tarihi.Ankara:Savaş Yayınları. \* Kongar,Emre.(1999) Devrim Tarihi ve Toplumbilim Açısından Atatürk.İstanbul.Remzi Kitabevi.  \* Selek,sebahattin.(1987) Anadolu İhtilali.İstanbul:Kastaç A.Ş.Yayınları.  \* Şamsutdinov,A.M.(1999) Mondros'tan Lozan'a Türkiye Ulusal Kurtuluş Savaşı Tarihi (1918-1923) Çeviren:Ataol Behramoğlu.İstanbul:Doğan Kitapçılık.  \* Timur,Taner.(1997)Türk Devrimi ve Sonrası.Ankara:İmge Kitabevi. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The Balkan Wars. First World War and input to war Ottoman Empire. The fronts that Ottoman Empire fighted and the results of the war. |
| 2 | Revolution, evolution, rebellion, coup and reform. The characteristics of the Turkish Revolution. the reasons of collapse of the Ottoman Empire. |
| 3 | Mondros Armistice Agreeement and occupations on the Ottoman Empire. |
| 4 | National Independence War. The occupation of Izmir and effects of this occupation. |
| 5 | The preparation period of National Independence War |
| 6 | The preparation period of National Independence War (MIDTERM EXAM) |
| 7 | The movement of Mustafa Kemal to Samsun and to be started the organization of Anadolu Revolution. Amasya Circular, Erzurum and Sivas Congresses, to be founded of the Deputation. (MIDTERM EXAM) |
| 8 | Opening of the TBMM. |
| 9 | Rebellions against the TBMM. |
| 10 | Sevr Treaty. |
| 11 | Sevr Treaty. |
| 12 | To be founded "Kuva-yı Milliye" and national army. |
| 13 | Mudanya Armistice Agreement. Abolution of sultanate. |
| 14 | Lausanne Treaty. |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121414223 | **COURSE NAME** | PROBABILITY II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 4 | 4 | 0 | | 0 | | 4 | | 4 | COMPULSORY (X) ELECTIVE ( ) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | Many times | | 0 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Known-specific Discrete distributions, Continuous distributions, expected value, variance, moment generating function, probability-factorial moment generating function, characteristic function., Relationships among Discrete distributions, Relationships among Continuous distributions, transformations, Multiple random variables, Joint and marginal distributions. Conditional distributions and independence, bivariate transformations, Sampling distributions, F and t distributions | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | It is aimed to understand the place and importance of probability courses in statistics science. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | After taking this lesson, the students will be able to understand, interpret and practice easily the following courses and the statistical science they have taken | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Probability courses and the theory of statistics are easily understood. In other practical lessons of the department, it is easy to be able to do statistical operations and understand basic statistical concepts. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Olasılık A.F Yüzer, Olasılık İ:Kara, Olasılık ve Matematiksel İstatistik C. İnal S. Günay, Matematiksel İstatistik Olasılık ve Önemli Dağılımlar B. Saraçoğlu F Çevik | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Probability and Mathematical Statistics books written in Turkish and English, lecture notes written in printed foreign languages, books with solved problems and internet facilities. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | At least one basic(or main) course book, statistical tables, paper and pencil. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Discrete distributions |
| 2 | Discrete distributions, expected value, variance, mom.gen.func. |
| 3 | Relationships among Discrete distributions |
| 4 | Continuous distributions |
| 5 | Continuous distributions expected value, variance, mgf. |
| 6 | Relationships among Continuous distributions (MIDTERM EXAM) |
| 7 | Discrete distributions and Continuous distributions probability-factorial moment generating function, characteristic function, cumulant generating function (MIDTERM EXAM) |
| 8 | Discrete distributions -transformations |
| 9 | Continuous distributions -transformations |
| 10 | Multiple random variables |
| 11 | Joint and marginal distributions. |
| 12 | Conditional distributions and independence, bivariate transformations |
| 13 | Introduction to sampling distributions |
| 14 | Introduction to F and t distributions |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Günseli Kurt

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121414254 | **COURSE NAME** | SAMPLING II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 4 | 2 | 0 | | 0 | | 2 | | 5 | COMPULSORY(X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Stratified random sampling, Proportional stratified sampling, Optimal stratified sampling, Neyman allocation, Systematic sampling, Cluster sampling | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts of sampling techniques. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To introduce the concepts of sampling techniques  and to provide exercises in the application of sampling to related problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Will be able to define the basic concepts of sampling. Çeviri hatasıApply simple random sampling (BRS) method. The population average formulates and calculates the total and the ratio and number of units with a particular feature. Determine and interpret confidence intervals with estimates of variance estimates. Determine the appropriate sample width for the BTÖ method. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Çıngı, H. (2009) Örnekleme Kuramı. Ankara:H.Ü. Fen Fakültesi Basımevi. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Yamane, T. (2001) Temel Örnekleme Yöntemleri. Literatür Yayınları:53. (Çeviri)  Özdemir, Y. A., Tekin, S. T., Esin, A. (2015) Örnekleme Yöntemlerine Giriş. Seçkin.  Orhunbilge, Nevran (2000) Örnekleme Yöntemleri ve Hipotez Testleri, Avcıol Basımevi.  Sümbüllüoğlu, V. ve Sümbüllüoğlu K. (2005) Klinik ve Saha Araştırmalarında Örnekleme Yöntemleri ve Örneklem Büyüklüğü | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Stratified simple random sampling |
| 2 | Stratified simple random sampling (continue) |
| 3 | Proportional stratified sampling (for mean) |
| 4 | Proportional stratified sampling (for ratio) |
| 5 | Optimal stratified sampling (for mean) |
| 6 | Optimal stratified sampling (for ratio) (MIDTERM EXAM) |
| 7 | Neyman allocation (for mean) (MIDTERM EXAM) |
| 8 | Neyman allocation (for ratio) |
| 9 | Sample size for stratified random sampling |
| 10 | Sample size for stratified random sampling (continue) |
| 11 | Systematic sampling |
| 12 | Systematic sampling (continue) |
| 13 | Cluster sampling (for mean) |
| 14 | Cluster sampling (for ratio) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Gaye KARPAT

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |
|  |  |
| **COURSE CODE** | 121414256 | **COURSE NAME** | PROGRAMMING LANGUAGES II | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 4 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X ) ELECTIVE () | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
|  | | |  | | | | X | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | This course focuses on advanced programming topics using the C# programming language. The course aims to improve programming skills of the student using algorithm development in C#.  C programing language profile: Flow controls; Decision mechanizms, sequences and using pointer in C# . Input- output mechanizm, file construction, advanced programing, modeling data base  with pointers. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Statistics and mathematics to solve problems  using  logic  programming, | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Use  C and C++ programs | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Analyze the data, evaluate, and ability to apply 2. To use the Microsoft Visual program. 3.Innovations related to the subject tracking ability  4. Understand  principles of visual programing  5. Use  C programs  6. Prepare C Program layout  7. Understand  file structures  8. Develop proram  9. Compare C and C++ commands and programs | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Bilgisayarda Temel Algoritmalar ve C++ Dili ile Programlama ÖrnekleriProf.Dr. Mithat Uysal  Visual C++ 2008.net Microsoft Yayınları | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | İleri programlama C Dili Murat Taşbaşı, C programlama Dili İbrahim Güney  <http://aliatalay.net/visualc.htm>  <http://www.cplusplus.com/>  http://www.programciyim.com/content/c-ders-notlari-ve-ders-anlatimi | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Data show | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Structure of the C programming language and the concept of variable constants |
| 2 | Data input and output commands |
| 3 | Decision structures-loops |
| 4 | On the use of C language functions |
| 5 | The program errors on the search and removal |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | The concept and application of the console |
| 9 | Comparison with the C and C + + structure and commands |
| 10 | Arrays in C + + on |
| 11 | String arrays and applications |
| 12 | Matrix Sequences with Applications |
| 13 | Multi-Dimensional Arrays |
| 14 | Mathematical Statistics and the use of functions |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**lecturer Ali Atalay

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121414299 | **COURSE NAME** | TECHNICAL ENGLISH I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 4 | 2 | 0 | | 0 | | 2 | | 3 | COMPULSORY (X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Statistical terms on descriptive and inferential statistics, measures of central tendency, measures of variation, measures of position, probability distributions, and estimation theory. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | By the end of the course students should be able to:  1. Be able to understand and read the statistics books, thesis and articles,  2. Be conversant with English statistical terms ad concepts,  3. To translate the concepts and methods of statistics from English to Turkish. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Be able to gain skills of reading and understanding of statistics books, theses, and articles | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Learning the topics related to statistical concepts and techniques in English,  2. Be able to translate statistical terms and concepts from English to Turkish | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | * Spiegel, M.R., Schiller, J., Srinivasan, R.A. (2013). Schaum's Outline of Probability and Statistics. Mc Graw Hill. Fourth Edition. USA. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Dictionary of statistical terms | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Variables and Graphs |
| 2 | Frequency Distributions |
| 3 | The mean, median, mode and other measures of central tendency |
| 4 | The standard deviation and other measures of dispersion |
| 5 | Moments, skewness, and kurtosis |
| 6 | Moments, skewness, and kurtosis (MIDTERM EXAM) |
| 7 | Elementary probability theory (MIDTERM EXAM) |
| 8 | Elementary probability theory |
| 9 | The binomial, normal, and poisson distribuitons |
| 10 | The binomial, normal, and poisson distribuitons |
| 11 | Elementary sampling theory |
| 12 | Elementary sampling theory |
| 13 | Statistical estimation theory |
| 14 | Statistical estimation theory |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121414230 | **Course Name** | TIME SERIES ANALYSİS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 4 | 3 | 0 | | 0 | |  | |  | COMPULSORY ( ) ELECTIVE ( ) | | | |  |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Time series and time series analysis, components of a time series, determination of time series components. Using the time series for forecasting, stages of analysis, selection of the an best forecasting method, trend analysis, moving averages, exponential smooting methods, ARIMA models | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To teach the fundamental concepts and methods of time series analysis and To introduce the time series and provide exercises in the application of forecasting to related problems and to gain the competence of interpreting the results. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To have the fundamentals of time series analysis knowledge, to have ability of forecasting about an events using the time series and to have competence of interpreting the results, to have the competence of evaluating and analysing the similar problems which occur in other course and disciplines | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Determine of the model for the time series data, estimation of the model parameters and understand of the forecasting concept,  Solve time series via statistical softwares in computer,  Forecast using time series and interpretate the results. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Box, G.E.P and Jenkins, G.M. (1976), Time series analysis : Forecasting and Control, Holden-Say, Fransisco. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Özmen, A., (1986), Zaman Serisi Analizinde Box-Jenkins Yöntemi ve Banka Mevduat Tahmininde Uygulama Denemesi" Anadolu Üniversitesi,Eskişehir. Akgül, I., (2003), Geleneksel Zaman Serisi Yöntemleri, D&R Yayınları, İstanbul. Sevüktekin M., Nargeleçekenler M.,(2005), Zaman Serileri Analizi, Nobel Yayın Dağıtım, Ankara. Kadılar C., “SPSS Uygulamalı Zaman Serileri Analizi” Bizim Büro Basımevi, Ankara. 2009 Montgomery D. C., Johnson L. A. and Gardiner J. S.( 1994). Forecasting and Time Series Analysis, MCGraw-Hill, New York. Chatfield, C.,(2001), Time Series Forecasting, Boca Raton : Chapman & Hall/CRC | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Projection | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Time series and time series analysis: Fundemental Concepts |
| 2 | Introduction to forecasting problems |
| 3 | Components of a time series: trend component, seasonality component, cyclical component and irregular component. |
| 4 | Moving Averages |
| 5 | Trend Analysis |
| 6 | Trend Analysis (MIDTERM EXAM) |
| 7 | Determination of seasonality component (MIDTERM EXAM) |
| 8 | Determination of cyclical component |
| 9 | Exponential smooting methods |
| 10 | Exponential smooting methods (cont.) |
| 11 | Autocovariance, autocorrelation, partial autocorrelation functions and stationarity concept |
| 12 | ARIMA models |
| 13 | ARIMA models (cont.) |
| 14 | ARIMA models (cont.) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assoc. Prof. Dr. Fatih ÇEMREK

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121414300 | **COURSE NAME** | DECISION THEORY |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 4 | 4 | 0 | | 0 | | 4 | | 6 | COMPULSORY ( X ) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The course covers modeling uncertainty; rational decision-making principles; representing decision problems with value trees, decision trees, and influence diagrams; solving value hierarchies, decision trees and influence diagrams; defining and calculating the value of information; incorporating risk attitudes into the analysis; and conducting sensitivity analyses. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The objective of this course is to introduce students to the theory of Bayesian inference and decision making. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The primary aim is to present a general framework for handling problems of statistical inference and decision. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Identify the classical and Bayesian approaches in making a decision, define and recognize the various types of decision situations, Gain knowledge about the game theory and use the basic concepts of game theory, Get an understanding of Bayes theorem for discrete and continuous probability models, Get an understanding of expected value of sample information. Understand the significance of sequential decision making. Gain the fundamentals of Utility theory and its axioms. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Peterson Martin. *An Introduction to Decision Theory*, Cambridge, United Kingdon ; New York, NY, USA : Cambridge University Press, [2017] | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Winkler Robert L**.**, *An Introduction to Bayesian Inference and Decision,* 2nd. Edn., Holt, Rinehart and Winston, INC, 2003 2. Lee, Peter, *Bayesian Statistics:  An Introduction,*  2nd. Edn., Arnold, 1997. 3. Mustafa Aytaç, Necmi Gürsakal (editörler), Karar Verme, Dora Yayıncılık, 2015. 4. Şenol Erdoğmuş, Karar Kuramı Ders Notları, ESOGÜ, 2003 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to Decision Theory |
| 2 | Types of Decision Situations |
| 3 | Probabilistic and Non-probabilistic Criteria for Decision Making |
| 4 | Game Theory |
| 5 | Game Theory |
| 6 | Bayesian Inference (MIDTERM EXAM) |
| 7 | Bayes Theorem for Discrete Probability Models (MIDTERM EXAM) |
| 8 | Bayes Theorem for Continuous Probability Models |
| 9 | Decision Tree Analysis |
| 10 | Decision Tree Analysis |
| 11 | Value of Perfect Information and Imperfect Information |
| 12 | Sensitivity Analysis |
| 13 | Utility Theory |
| 14 | Axioms of Utility |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s): Date:**

Prof. Dr. Şenol ERDOĞMUŞ

Prof. Dr. H. Kıvanç AKSOY

Dr. Öğr. Üyesi Sevgi ABDALLA

**Signature:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121012009 | **COURSE NAME** | HISTORY OF TURKISH REVOLUTION AND PRINCIPLES OF KEMAL ATATÜRK II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 2 | 2 | 0 | | 0 | | 2 | | 2 | COMPULSORY (X) ELECTIVE () | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The Description of the term “revolution”; major historical events in the Ottoman Empire to the end of World War I; a general overview of Mustafa Kemal’s life; certain associations and their activities; arrival of Mustafa Kemal to Samsun; the congresses, gathering of the last Ottoman Assembly and the proclamation of the “national oath”; opening of the Turkish Grand National Assembly; War of independence to the Victory of Sakarya; Victory of Sakarya; financial sources of the war of independence; grand counter-attack; Armistice of Mudanya; abolution of the Sultanate; Peace Conference of Lausanne. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To help the students to appreciate the hard conditions under which the war of independence, under the leadership of Mustafa Kemal, was fought and how an independent Turkish state was created. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To underline the idea that the national unity based on the principle “peace in the country peace in the world” can only be achieved through political, economic and military progress. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | At the end of this course; Students  1.Explains Principles of Atatürk and main concepts related to Revolution history.  1.1.Explians the concepts of Reform/Revolution.  1.2.Describes the concept of National Forces.  1.3.Explains the concepts of Republic/Democracy.  1.4.Recognizes the concept of Ideology.  2.Explains the main points of the period related to Turkish War of Independence and foundation of the Turkish State.  2.1.Explains the developments at Ottoman Empire before Turkish Revolution.  2.2.Describes the World War I and its results.  2.3.Explains Turkish War of Independence.  2.4.Recognizes Turkish Revolution.  2.5.Remembers the mian principles of Turkish foreign politics.  2.6.Explains Principles of Atatürk and their importance.  3.Explains the effects of the developments at Europe and World on Turkish Republic.  3.1.Explains the effects of European and World politics on Turkey and the results of them.  3.2.Describes the effects of Capitalism/Emperialism on Turkey.  3.3.Explains the relations / problems between Turkey and its neighbours.  3.4.Explains the importance of Turkey at Europe and World. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Gazi Mustafa Kemal Atatürk, Nutuk (Söylev), C. I-II, TTK., Ank., 1986.  İmparatorluktan Ulus Devlete Türk İnkılâp Tarihi, Cemil Öztürk (ed.), Ank., 2011. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Niyazi Berkes, Türkiye’de Çağdaşlaşma, İstanbul, 1978.  Enver Ziya Karal, Atatürk ve Devrim (Konferanslar ve Makaleler), TTK., Ank., 1980.  Enver Ziya Karal, Atatürk’ten Düşünceler, MEB. Yay., Ankara, 1981.  Bernard Lewis, Modern Türkiye’nin Doğuşu, Çev.M.Kıratlı, TTK., Ank., 1970.  Ahmet Mumcu, Tarih Açısından Türk Devriminin Temelleri ve Gelişimi, Ank., 1976. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Mudanya Armistice Agreement. |
| 2 | Abolution of sultanate. Lausanne Treaty. |
| 3 | Declaration of Republic |
| 4 | Abolution of caliphate and lodges |
| 5 | Constitutional developments in Turkey. Internal and external political developments in the period of Atatürk's and Inönü's. |
| 6 | Constitutional developments in Turkey. Internal and external political developments in the period of Atatürk's and Inönü's. (MIDTERM EXAM) |
| 7 | The political currents that effected Turkish revolution. Democratic law state. (MIDTERM EXAM) |
| 8 | The political currents that effected Turkish revolution. Democratic law state |
| 9 | Establishment of the Turkish law and educational system |
| 10 | Revolution movements in education, culture and health, |
| 11 | Revolution movements in education, culture and health, |
| 12 | Nationalism, Etatism and Populism. |
| 13 | Securalism, Revoluationism |
| 14 | General ecalutation. |
| 15,16 | Final Exam |

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415305 | **COURSE NAME** | MATHEMATICAL STATISTICS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | **LANGUAGE** | |
| 5 | 4 | 0 | | 0 | | 4 | | 7 | COMPULSORY (X) ELECTIVE () | | | Turkısh | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 40 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | |  | | |  |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 60 |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Discrete Probability Distributions (Geometric, Pascal, Multinomial), continuous Probability distributions (Cauchy, Pareto, Log-normal, Weibull, Rayleigh), The distribution functions of random variables | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course explains the random variables and distributions of random variables and show the theoretical structure of discrete and continuous probability distributions | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is providing a solutions for problems concerning discrete or continuous distributions | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to distinguish between the basic properties of probability distributions and they will also be able to solve and interpret problems about them | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming.  Teaching Technıcs: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Mathematical Statistics I Lecture Notes-Prof. Dr. Yilmaz Veysel | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1-Probability and Mathematical Statistics-Prof. Dr. INAL Ceyhan, Professor. Dr. Suleyman Gunay  2 - Mathematical Statistics, I. Miller and M. Miller  3 - Mathematical Statistics, Mustafa Aytac  4- Freund, JE (2001). Mathematical Statistics. (Translated Senesen, Ü.) Istanbul: Literature Publishing.  5) K. Knight (2000). Mathematical Statistics, Chapman & Hall / CRC, U.S..  6) Shao, J. (1999). Mathematical Statistics, Springer-Verlag, New York, Incorporated. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculator and computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Probablity and random variable |
| 2 | Expected Value and Moments |
| 3 | Bernoulli Distribution, Binomial Distribution |
| 4 | Geometric Distribution, Negative Binomial Distribution |
| 5 | Binomial Distribution and Multinomial Distribution |
| 6 | Normal and Lognormal Distribution |
| 7 | Normal and Exponential Distribution (MIDTERM EXAM) |
| 8 | Gamma and Beta Distributions (MIDTERM EXAM) |
| 9 | Gamma and Beta Distributions(continued) |
| 10 | Weibull and Rayleigh Distribution |
| 11 | Cauchy, Pareto and Logistic Distribution |
| 12 | Statistical Software applications of distributions |
| 13 | The distributions of functions of univariate random variables |
| 14 | The distributions of functions of univariate random variables(continued) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **1** | **2** | **3** | **4** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415315 | **COURSE NAME** | OPERATIONS RESEARCH I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 5 | 4 | 0 | | 0 | | 4 | | 7 | COMPULSORY(X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 1 | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Methodology of operations research, basic concepts of linear programming (parameter, decision variable, constraint, objective), model building, graphical and simplex solution techniques, sensitivity analysis, duality, | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Identify the problems in human-machine systems, to provide modeling skills and to teach the necessary approaches and techniques for solution of problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Statisticians in many areas of decision problems managers faced with the data they deal with to solve this problem. These decisions often require analyzing the relevant system and anticipating the future. It is often impossible to work on a real system. Since the search for a scientific solution with modeling approach is taught in this course content, it is directly involved in the scope of vocational education. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Learn the basic concepts and stages of Operations Research, 2. To acquire basic knowledge about the techniques of Operations Research, 3. Being able to determine real life problems as decision problems, 4. Being able to formulate and solve models that can be solved by the techniques of Operations Research by using decision models 5. Being able to solve decision problems by using the software of Operations Research, 6. Students who take this course will have the ability to correctly identify the problems encountered in real life, model and solve problems by genrate solution approaches. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1. Öztürk, A.(2005). Yöneylem Araştırması. Ekin Kitabevi. 2. Winston, W.L.(1994). Operations Research Applications and Algorithms. Duxbury Press. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Kara İ., 2000, Doğrusal Programlama, Bilim Teknik Kitapevi, 27s. 2. Taha H.A., 2000, Yöneylem Araştırması, (6.basımdan çeviri), Literatür, 910 s. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Books, articles, computers, projections etc. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to operations research |
| 2 | Operational research methodology |
| 3 | Linear programming: Model building |
| 4 | Linear programming: Model building |
| 5 | Linear programming: Graphical solution technique |
| 6 | SimplexAlgorithm: Standart Form and Basic solutions |
| 7 | SimplexAlgorithm: Special Cases(MIDTERM EXAM) |
| 8 | Duality: The Dual of a LP model (MIDTERM EXAM) |
| 9 | The relations between primal and dual solutions |
| 10 | Economical interpretation of a dual problem |
| 11 | Sensitivity analysis: some important formulas |
| 12 | Sensitivity analysis: Objective function coefficients, right-hand side constants |
| 13 | Dual Simplex method: Adding a new activity or new constraints |
| 14 | Presentation of computer package programs |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor:** Prof. Dr. H. Kıvanç Aksoy

Prof. Dr. Şenol Erdoğmuş

Ass. Prof. Dr. Sevgi Abdalla

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415310 | **COURSE NAME** | REGRESSION ANALYSIS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 5 | 3 | 0 | |  | | 3 | | 7 | COMPULSORY(X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | 1 | | 10 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | |  | | 50 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Correlation theory, Simple linear regression model, Least squares estimation of the parameters, Multiple linear regression, Estimation of the model parameters in Multiple linear regression. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts of regression analysis | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To introduce the concepts of regression analysis and to provide exercises in the application of regression analysis to related problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | |  | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Theory of Econometrics-A.Koutsoyiannis | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Turkish and English regression and econometrics books. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Correlation theory |
| 2 | Simple linear regression model |
| 3 | Least squares estimation of the parameters |
| 4 | Coefficient of determination and hypothesis testing on the slope. |
| 5 | Continue |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Confidence interval estimation of the mean response |
| 9 | Multiple linear regression |
| 10 | Estimation of the model parameters in Multiple linear regression |
| 11 | Test on individual regression Coefficient |
| 12 | Test for significance of regression |
| 13 | Applied of SPSS and MINITAB |
| 14 | Continue |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** PhD. Cengiz Aktaş  **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415351 | **COURSE NAME** | SCIENTIFIC RESEARCH METHODS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 5 | 3 | 0 | | 0 | | 3 | | 7 | COMPULSORY(X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The importance of scientific methods for positive science, review of the scientific research procedure, statistical description of research problems, planning of research project, collection of research data, organization of the data, analysis of the data, preparation of research report, concept of ethics and professional ethics and principles. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This course aims to have knowledge about the importance of scientific research and scientific research types, to search literature on a specific topic, to have knowledge necessary to prepare research plan, to have knowledge about professional ethics and principles. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | By learning basic concepts and scientific methods related to scientific research, it contributes to the preparation, application and evaluation of appropriate research plan for the structure of scientific research. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. To be able to define basic concepts related to scientific research methods,  2. To be able to search the literature on a specific subject,  3. To be able to define the research topic statistically,  4. Plan research topic in accordance with scientific research method,  5. Having the ability to organize a research report. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Çömlekçi N., 2001, Bilimsel Araştırma Yöntemi ve İstatistiksel Anlamlılık Sınamaları, Bilim Teknik Yayınevi. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | * Karasar N., 2005, Bilimsel Araştırma Yöntemi: Kavramlar, İlkeler, Teknikler. 15. bs. Ankara: Nobel Yayın Dağıtım. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical tables and calculator | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The importance of scientific methods for positive science |
| 2 | Review of the scientific research procedure |
| 3 | Preparation of research project |
| 4 | Statistical description of research problem |
| 5 | Planning of research project |
| 6 | Random sampling design (MIDTERM EXAM) |
| 7 | Sampling design with types of random sampling (MIDTERM EXAM) |
| 8 | Collection of research data, data gathering instrument |
| 9 | Organization of the data, data processing |
| 10 | Classification of univariate and multivariate data |
| 11 | Analysis of the data |
| 12 | Preparation of research project |
| 13 | Preparation of research project |
| 14 | Professional ethics and principles |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415400 | **COURSE NAME** | TECHNICAL ENGLISH II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 5 | 2 | 0 | | 0 | | 2 | | 3 | COMPULSORY (X ) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Scatter plots, regression lines, correlation, regression, coefficient of determination, chi-square distribution, Chi-square goodness-of-fit test, Chi-square test for independence, Contingency tables, F distribution and F test, One way analysis of variance, Two way analysis of variance. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The objective of this course is to introduce statistical terms and concepts to the students. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Students will be able to familiar with the statistical terms and concepts in English which helps them to follow the current literature. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1.Be able to understand and read the statistics books and articles,  2.To translate the concepts and methods of statistics from English to Turkish.  3.Be conversant with statistical terms ad concepts. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Spiegel M. R. ve Stephens L. J., *Theory and Problems of Statistics,* 3rd. Edn., Schaum’s Outline Series, McGraw-Hill, 1998. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Dictionary of statistical terms | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Statistical decisions and hypothesis |
| 2 | Two-tailed and one tailed tests |
| 3 | Small sampling theory |
| 4 | The Chi-Square test |
| 5 | Coefficient of contingency |
| 6 | Curve fitting and the method of least squares (MIDTERM EXAM) |
| 7 | Nonlinear relationships (MIDTERM EXAM) |
| 8 | Correlation theory |
| 9 | The least-squares regression lines |
| 10 | Analysis of variance |
| 11 | One factor experiments |
| 12 | Mathematical model for analysis of variance |
| 13 | Nonparametric tests |
| 14 | The sign test |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Özlem ALPU **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415404 | **COURSE NAME** | PARAMETER ESTIMATION |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | | **TYPE** | | | **LANGUAGE** | |
| 5 | 3 | 0 | | 0 | | 3 | | 5 | | COMPULSORY () ELECTIVE (**X**) | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | | **Computer** | | | **Social Sciences** | | |
| **X** | | | **X** | | | | | |  | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | | |  | |  | |
| Quiz | | | | | |  | |  | |
| Homework | | | | | |  | |  | |
| Project | | | | | |  | |  | |
| Report | | | | | |  | |  | |
| Others (………) | | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Sampling Distribution, Order statistics, Point Estimation; Best Linear Unbiased estimator; Sufficient statistics; Confidence regions, Relating hypothesis tests and confidence regions. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is to teach the importance of parameter estimation in the sense of statistical theory, to investigate the properties of estimates. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To teach students how to derive theoretical expressions of the estimators which are used in the application. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Learn the importance of parameter estimation in the sense of statistical theory,  Learn the theoretical background of the parameter estimation,  Acquire talents for understanding the basis of the statistics,  Understand basic concepts of statistics which is required for the scientific projects of the students in the future. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Öztürk, F., Akdi, Y., Aydoğdu, H., Karabulut, İ., (2006). Parametre Tahmini ve Hipotez Testleri, Bıçaklar Kitabevi. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Lehmann E. L., (1983). Theory of Point Estimation, John-Willey and Sons, NewYork.  Lehmann E. L.,(1959). Thesting Statistical Hypothesis, John-Willey and Sons,NewYork.  Rogathi V. K., (1976). An Introduction to Probability Theory and Mathematical Statistics, John-Willey and Sons, NewYork. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Parameter, Parameter space |
| 2 | Sampling Distribution |
| 3 | Sampling Distribution |
| 4 | Order statistics |
| 5 | Order statistics |
| 6 | Point Estimation (Midterm Exam) |
| 7 | Point Estimation (Midterm Exam) |
| 8 | Best Linear Unbiased Estimation |
| 9 | Sufficient statistics |
| 10 | Parameter Estimation Methods |
| 11 | Parameter Estimation Methods |
| 12 | Parameter Estimation Methods |
| 13 | Confidence regions |
| 14 | Relating hypothesis tests and confidence regions |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Asc. Dr. Arzu ALTIN YAVUZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415402 | **COURSE NAME** | STATISTICAL SOFTWARES |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 5 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( X ) ELECTIVE ( ) | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
| X | | |  | | | | X | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | 1 | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Data entry, preparation of data to statistical analysis and making statistical analysis are explained in the statistical sowtwares. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | In this course, aims to teach students how to make theoretical topics they have seen for four years in statistical software. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The students will learn to use statistical software to provide statistical solutions to the problems that will be encountered when they graduate. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Can perform data entry in statistical software.  2. With the statistical software, raw data can be prepared for analysis.  3. Can perform simple statistical analysis with the statistical software. | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Application/Practice. | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | EROL, H., SPSS Paket Programı ile İstatistiksel Veri Analizi, Nobel Kitabevi, ADANA, 2010. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Özdamar, K., Paket Programlar ile İstatistiksel veri Analizi I, 5. Basım, Kaan Kitabevi, ESKİŞEHİR, 2004.  Özdamar, K., Paket Programlar ile İstatistiksel veri Analizi II Çok Değişkenli Analizler, 5. Basım, Kaan Kitabevi, ESKİŞEHİR, 2004.  Tekin, V. N., SPSS Uygulamalı İstatistik Teknikleri, Seçkin Yayınevi, 2. Baskı, Ankara, 2009. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Projector | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Statistical softwares used for statistical analysis and introduction to SPSS |
| 2 | Data and variable view in SPSS, data entry and variable definition |
| 3 | Data menu in SPSS |
| 4 | Transform menu in SPSS |
| 5 | Analyze menü, descriptive statistics (Frequencies, descriptive statistics and data description) |
| 6 | Raw data, Ci-Square analysis with cross tabulations **(Midterm Exam)** |
| 7 | Comparision of means – one sample t test **(Midterm Exam)** |
| 8 | Comparision of means- independent two samples t test) |
| 9 | Comparision of means- paired samples |
| 10 | Comparision of means- One WAy Anova |
| 11 | Measure of relations between variables |
| 12 | Linear Regression Analysis |
| 13 | Multiple Linear Regression Analysis |
| 14 | Multiple Linear Regression Analysis (cont.) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121415403 | **COURSE NAME** | CAUSALITY ANALYSIS IN TIME SERIES |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 5 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY () ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Foracasting and time series analysis, forecasting techniques, testing for stationarity, with autocorrelation test and unit root tests, concepts related causality, testing for causality. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts and tests of causality in time series,  To provide exercises in the application of forecasting to related economical events | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Apply knowledge of Time series analysis  Design and conduct experiments as well as to analyze and interpret data Identify, formulate and solve problems in the related fields | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To have the knowledge and culture for time series analysis techniques  To have the ability of investigation and determine the causal relations  betweeen time series  To have the competence of evaluating and analyzing the similar problems  which ocur in the the other disciplines. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice,Project/Homework | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Işığıçok E.(1994). Zaman Serilerinde Nedensellik Çözümlemesi, Bursa | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Kadılar C. (2000). Uygulamalı Çok Değişkenli Zaman Serileri Analizi, Ankara.  Sevüktekin M., Nargeleçekenler M., (2010), Ekonometrik Zaman Serileri Analizi, Eviews Uygulamalı, Geliştirilmiş 3.Baskı, Nobel Yayın Dağıtım, Ankara.  Montgomery D. C., Johnson L. A. & Gardiner J. S.( 1994). Forecasting and Time Series Analysis, MCGraw-Hill, New York. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Projection | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introducing to time series analysis and stationarity |
| 2 | Introducing to time series analysis and stationarity (cont.) |
| 3 | Autocorrelation test for stationarity |
| 4 | Testing og stationarity: Unit Root Tests |
| 5 | Testing og stationarity: Unit Root Tests (cont.) |
| 6 | Testing og stationarity: Unit Root Tests (cont.) (MIDTERM EXAM) |
| 7 | Concepts for Causality (MIDTERM EXAM) |
| 8 | Concepts for Causality (cont.) |
| 9 | Direction of causality between variables |
| 10 | Causality tests: Granger Causality Test |
| 11 | Causality tests: Granger Causality Test:Computer Application |
| 12 | Causality tests: Sims Causality Test |
| 13 | Causality tests: Haugh Causality Test |
| 14 | General overview of causality tests |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assoc. Prof. Dr. Fatih ÇEMREK

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416341 | **COURSE NAME** | MATHEMATICAL STATISTICS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | **LANGUAGE** | |
| 6 | 4 | 0 | | 0 | | 4 | | 7 | COMPULSORY (X) ELECTIVE () | | | Turkısh | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 40 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | |  | | |  |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 60 |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Sampling Distributions (Chisquare Distribution, F and Student’s T distribution) Method of Moments and Maximum likelihood Method, Goodness-of-fit tests, Multivariate Normal Distribution | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course introduces the method of point estimation and explain sampling distributions with theory and applications | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is to provide problem solving skills for sampling distributions for students | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to construct the sampling distributions and also will be able to use point estimation methods. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming.  Teaching Technıcs: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1- Mathematical Statistics II Lecture Notes-Prof. Dr. Yilmaz Veysel | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1-Probability and Mathematical Statistics-Prof. Dr. INAL Ceyhan, Professor. Dr. Suleyman Gunay  2 - Mathematical Statistics, I. Miller and M. Miller  3 - Mathematical Statistics, Mustafa Aytac  4- Freund, JE (2001). Mathematical Statistics. (Translated Senesen, Ü.) Istanbul: Literature Publishing.  5) K. Knight (2000). Mathematical Statistics, Chapman & Hall / CRC, U.S..  6) Shao, J. (1999). Mathematical Statistics, Springer-Verlag, New York, Incorporated. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculator and computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Distribution of functions of multivariate random vectors |
| 2 | Sampling Distributions |
| 3 | Chisquare Distribution and statistical software applications |
| 4 | F Distribution |
| 5 | F Distribution(continued) and statistical software applications |
| 6 | T Distribution (Students’ T Distribution) (MIDTERM EXAM) |
| 7 | T Distribution (Students’ T Distribution) (continued) (MIDTERM EXAM) |
| 8 | Point Estimation |
| 9 | Method of Moments |
| 10 | Goodness-of-fit tests for discrete distributions |
| 11 | Goodness-of-fit tests for continuous distributions |
| 12 | Statistical Software Applications for goodness-of-fit tests |
| 13 | Maximum Likelihood Method |
| 14 | Multivariate Normal Distribution |
| 15,16 | Final exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416320 | **COURSE NAME** | OPERATIONS RESEARCH II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 6 | 4 | 0 | | 0 | | 4 | | 7 | COMPULSORY(X) ELECTIVE(X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Goal Programming (modeling and solution techniques), Assignment and transportation models (initial solution techniques, optimum solution techniques and sensitivity analysis ,) traveling salesman problems, Network models (minimum spanning tree problems , shortest path problems, maximum flow problems , CPM , PERT) and solution techniques | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Identifying problems in human-machine systems, and to give the ability of modeling approach and teach the techniques needed to solve problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Statisticians hammer away at problems which decision problems faced by managers in many fields. These decisions require analyzing the system, to predict the future most of the time. Work on a real system is often impossible. Modeling approach to seeking solutions to the scientific content of these courses are taught, directly within the scope of vocational training is stationed. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1.Determining, modeling and solving real-life problems as decision problems  2. Understanding to use of applied mathematical techniques in decision-making process,  3. Understanding the advantages and limits of deterministic operations research techniques for real-life problems  4. To understand the underlying algorithms for software programs  İn operations research  5. A variety of techniques and concepts of operations research to implement real-life problems. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1. Öztürk, A.(2012). Yöneylem Araştırması. Ekin Kitabevi.  2. Winston, W.L.(1994). Operations Research Applications and Algorithms. Duxbury Press. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Difference of multi criteria and multi objective programming from linear programming, basic concepts |
| 2 | Goal Programming: modeling |
| 3 | Solution of variety of goal programming models using graphical technique |
| 4 | Solution of variety of goal programming models using simplex technique |
| 5 | Assignment problems |
| 6 | Assignment problems: solution techniques and sensitivity analysis(Mid-term Exam) |
| 7 | Transportation problems and initial solution techniques (Mid-term Exam) |
| 8 | Optimum solution techniques for transportation problems and sensitivity analysis |
| 9 | Introduction to Network problems |
| 10 | Minimum spanning tree problems , shortest path problems, maximum flow problems |
| 11 | CPM |
| 12 | PERT |
| 13 | Inventory theory |
| 14 | Inventory theory |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy

Prof. Dr. Şenol Erdoğmuş

Ass. Prof. Dr. Sevgi Abdalla

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416343 | **COURSE NAME** | ECONOMETRICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 6 | 4 | 0 | |  | | 4 | | 7 | COMPULSORY (X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | 1 | | 10 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | |  | | 50 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | What is econometrics, Normality test, Autocorelation, Heteroscedasticity | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts of econometrics | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To introduce the concepts of econometrics and to provide exercises in the application of econometrics to related problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | |  | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | COURSE TEXT | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Turkish and English econometrics books. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | What is econometrics |
| 2 | Normality test |
| 3 | Heteroscedasticity and Test of detecting heteroscedasticity |
| 4 | Continue |
| 5 | What to do if heteroscedasticity is observed? |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Autocorelation and concequences of autocorelation |
| 9 | Test of detecting autocorelation |
| 10 | Continue |
| 11 | What to do ıf autocorelation is observed? |
| 12 | The first difference method |
| 13 | ρ estimated from Durbin-Watson d statistics |
| 14 | Continue |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** PhD. Cengiz Aktaş  **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416339 | **COURSE NAME** | QUALITY CONTROL |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | **ECTS** | | | **TYPE** | | | | **LANGUAGE** | | |
| 6 | 3 | 0 | | 0 | | 3 | 5 | | | COMPULSORY ( X ) ELECTIVE ( ) | | | | Turkish | | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | **Social Sciences** | | | |
| X | | |  | | | | |  | | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | | **Quantity** | | | **%** | |
| 1st Mid-Term | | | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | | | |  | | |  | |
| Quiz | | | | | | |  | | |  | |
| Homework | | | | | | |  | | |  | |
| Project | | | | | | |  | | |  | |
| Report | | | | | | |  | | |  | |
| Others (………) | | | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Quality, quality control concepts and development of the quality in Turkey and World, Statistical Quality Control, Qualitative variables and basic structures of control charts for attributes, topics related with specifications, tolerance and standards, one -stage and two- stage acceptance sampling, and interperations of these concepts. | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main purpose of this course is to give our students a contemporary perspective on quality topics. | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | After taking this course the students what they can do about quality control and be able to develop themselves by seeing the possibilities of finding a job after graduation in this area | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Understand the concepts of Quality and Quality Control and their historical development.  Will be able to apply quality control processes.  Will have knowledge of statistical quality control techniques.  Will be able to use statistical quality control techniques in real production processes. | | | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNİCS** | | | | | Lecturing, Application/Practice. | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Burnak N., Toplam Kalite Yönetimi, ESOGÜ Müh. Mim. Fak. Yayınları, Eskişehir, 1997. | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Akkurt, M., Kalite Kontrol Excel Destekli, Birsen Yayınevi, İstanbul, 2002  Ertuğrul, İ., Toplam Kalite Kontrol, Ekin Kitabevi, Bursa, 2006.  Öztürk, A., Kalite Yönetimi ve Planlaması, Ekin Yayınevi, Bursa,2009 | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Projector | | | | | | | | | | | |
|  |  |  |  |  |  |  | |  |  | |  |  |  | |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Quality, control, quality control |
| 2 | Development of quality control |
| 3 | Quality control in the World and Turkey |
| 4 | Quality control and statistics, Statistical techniques used in quality control |
| 5 | Statistical techniques used in quality control (cont.) |
| 6 | Control Charts, Quality control charts for quantitative variables **(Midterm Exam)** |
| 7 | Quality control charts for quantitative variables (cont.) **(Midterm Exam)** |
| 8 | Statistical testing for production process |
| 9 | Determination the ability of process for quantiatative variables |
| 10 | Quality control charts for qualitative variables |
| 11 | Quality control charts for qualitative variables (cont.) |
| 12 | Determination the ability of process for qualitative variables |
| 13 | Acceptance sampling |
| 14 | Acceptance sampling (cont.) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416348 | **COURSE NAME** | HYPOTHESIS TESTING |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | **ECTS** | | **TYPE** | | | **LANGUAGE** | |
| 6 | 3 | 0 | | 0 | | 3 | 5 | | COMPULSORY ()  ELECTIVE (**X**) | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | **Social Sciences** | | |
| **X** | | | **X** | | | | |  | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 40 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | |  | | |  |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 60 |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Hypothesis concept, Test statistics, main principles of hypothesis testing and applications of hypothesis testing. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is to teach theory of the statistical hypothesis. Thus, students will learn how to obtain the test statistics theoretically for the real life problems | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The main idea of this lesson is to show how to obtain test statistics which is used frequently by student. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Learn the theoretical background of the statistical tests, Acquire different perspectives for the solutions of the real life problems, Acquire talents for understanding the basis of the statistics, Understand basic concepts of statistics which is required for the scientific projects of the students in the future. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Casella, G., Berger, R. L., (1990). Statistical Inference, Duxbury Press. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Larsen, R. J., Marx, M. L., (1986). An Introduction to: Mathematical Statistics and Its Applications, Prentice-Hall. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Simple and composite hypotheses |
| 2 | Tests |
| 3 | Type-I and type-II errors |
| 4 | Power of the tests |
| 5 | Randomized tests |
| 6 | Neyman Pearson Theorem (MIDTERM EXAM) |
| 7 | Neyman Pearson Theorem (MIDTERM EXAM) |
| 8 | Testing mean in normal distribution |
| 9 | Testing variance in normal distribution |
| 10 | Behrens-Fisher Problem |
| 11 | Likelihood ratio tests |
| 12 | Generalized Likelihood Ratio Test |
| 13 | Generalized Likelihood Ratio Test |
| 14 | Bayesian Tests |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Asc. Dr. Arzu ALTIN YAVUZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121414239 | **COURSE NAME** | DEMOGRAPHIC TECHNIQUES |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | | | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 6 | | | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (X) | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
| X | | | | |  | | | |  | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | Written | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | | | |  | | | | | Written | | 60 | | |
| **PREREQUISITE(S)** | | | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | | Demography; the basic concept of demography; population theories; population policies; the relationship between population and economy; history of population growth; census and demographic data sources; population projection methods; basic demographic techniques. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | | To give about presentation and calculation of basic demographic indicators | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | | | The course will be useful for students who want to work on techniques for population in their graduation projects and professional lives | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | | By the end of the course, the students will be able to become familiar with the use of various kinds of demographic data and to use basic techniques and methods for thinking and conducting demographic analysis. In addition, they will be able to do population estimates, and to interpret the information produced with demographic methods. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | | | Lecturing, Application/Practice, Question-Answer, | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | | **1**. Başar, E., (2013), Demografiye Giriş, Gazi Kitapevi, Ankara | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | | **1.** Newell C., 1988, Methods and models in Demograph*,* Belhaven Pres, London  **2.** Smith D.P., 1992, Formal Demograph, Plenum Press, New York and London  **3.** Barclay G. W., 1958, Techniques of Population Analysis*,* John Wiley&Sons, Inc., New York, London, Sydney  **4**. Shryock H.S., Siegel J.S. and Ass., 1976, The methods and materials of Demography, Academic Pres, New York,London, Toronto, Sydney, San Francisco | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | | Calculator | | | | | | | | | |
| **COURSE SCHEDULE** | | | | | | | | | | | | | | |
| **WEEK** | **SUBJECTS** | | | | | | | | | | | | | |
| 1 | A general introduction to the study of demography, its content and concepts | | | | | | | | | | | | | |
| 2 | The history of population growth in the World and Turkey | | | | | | | | | | | | | |
| 3 | Population theories and population theories in Turkey | | | | | | | | | | | | | |
| 4 | Population politics and population politics in Turkey | | | | | | | | | | | | | |
| 5 | Population and economic development | | | | | | | | | | | | | |
| 6 | Census and census methods / MIDTERM EXAM | | | | | | | | | | | | | |
| 7 | Analysis of age structure of population and population pyramid/ MIDTERM EXAM | | | | | | | | | | | | | |
| 8 | Analysis of sex structure of population | | | | | | | | | | | | | |
| 9 | Methods of measuring population change and population projection | | | | | | | | | | | | | |
| 10 | Measurement of fertility : Crude birth rate, the child women ratio, general fertility rate | | | | | | | | | | | | | |
| 11 | Measurement of fertility : Age specific fertility rate, total fertility rate | | | | | | | | | | | | | |
| 12 | Reproduction rates: Gross reproduction rate, net reproduction rate, reproduction index | | | | | | | | | | | | | |
| 13 | Measurement of mortality: Crude death rate, age specific death rate, infant death rate | | | | | | | | | | | | | |
| 14 | Life tables: Constructing a life table, abridged life tables, life table functions and interpretation of the life table | | | | | | | | | | | | | |
| 15,16 | Final Exam | | | | | | | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assoc.Prof.Dr. Hatice Şamkar

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416345 | **COURSE NAME** | STOCHASTIC PROCESSES |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 6 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY( ) ELECTIVE(X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Understand forecasting, inventory, reliability and service systems models. Markov Chains. Queuing systems. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The major objective of this course is to provide an in-depth examination of the theory, methods, and approaches to the analysis and design of stochastic systems as they occur throughout physical and human systems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The primary aim is to present a general framework for methods and approaches to handling stochastic problems. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Gain knowledge of Markov chains. Gain knowledge of model simple birth-death models. Gain knowledge of single channel exponential queuing models. Gain knowledge of open and closed network of queues. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Introduction to Probability Models, 11th Ed. by Sheldon M. Ross, Academic Press, 2014. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Ross, S. M., Stochastic Processes, John Wiley & Sons , 1983 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Probability review |
| 2 | Conditional probability and conditional expectation |
| 3 | Markov Chains |
| 4 | First step analysis |
| 5 | Some special Markov chains |
| 6 | The Long Run Behavior of Markov Chains (Mid-term Exam) |
| 7 | The Classification of States (Mid-term Exam) |
| 8 | Reducible Markov Chains |
| 9 | Poisson Process |
| 10 | Continuous Time Markov Chains |
| 11 | The limiting behavior of birth death process |
| 12 | Finite state continuous time Markov Chains |
| 13 | Queuing systems |
| 14 | Queuing systems |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121416346 | **COURSE NAME** | DATA ANALYSIS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 6 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Exploratory data analysis, Stem and leaf displays, Letter values, Box-plots, Q-Q plots, Tests for normality, Transformations to near normality, Resistant lines for y versus x, Identification of outliers, Robust location estimators, Robust scale estimators, Comparing locations estimators, Comparing scale estimators. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is to teach how to evaluate the data set in detail (in terms of symmetry, skewness, estimation of location and scale, outliers etc.) and to be able to decision which estimators to be used. Thus, students will gain a statistical data analysis practice for the real data set. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | 1. Detailed evaluation of data sets encountered in the real life problems,  2. Identify the suitable analysis depending on the data structure, | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will gain the ability to perform data analysis on real data sets. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Hoaglin, D. C., Mosteller, F., Tukey, J. W. (1983). Understanding Robust and Exploratory Data Analysis, John Wiley & Sons. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Huber, P. J. (1981).Robust Statistics, John Wiley & Sons. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical tables, computer and calculator | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Exploratory data analysis and role of graphics in data analysis |
| 2 | Stem and leaf displays |
| 3 | Letter values |
| 4 | Boxplots |
| 5 | Q-Q Plots for various distributions |
| 6 | Tests of outliers (MIDTERM EXAM) |
| 7 | Tests for normality (MIDTERM EXAM) |
| 8 | Transformations |
| 9 | Comparing location estimators |
| 10 | Robust location estimators |
| 11 | Comparing scale estimators |
| 12 | Robust scale estimators |
| 13 | M estimators of location/scale parameters |
| 14 | Computer applications |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417432 | **COURSE NAME** | EXPERIMENTAL DESIGN I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 4 | COMPULSORY (X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written Exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Experiment, treatment and experimental error concepts, principles of experimental design, analysis of variance, completely randomized design, randomized blocks, latin squares, comparing pairs of treatment means, estimating missing values, estimating model parameters and the general regression significance test. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce students to the standart concepts and methods of experimental design, modeling and to provide exercises in the application of simple experimental design to appropriate problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To introduce students to the standart concepts and methods of experimental design, modeling and to provide exercises in the application of simple experimental design to appropriate problems. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Design and conduct experiments as well as to analyze and interpret data | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Applicaton / Practice, Question & Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Deney Tasarımı İlke ve Teknikleri (Necla Çömlekçi) | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Design and Analysis of Experiments (Montgomery)  Design and Analysis of Experiments (Kempthorne)  The Design and Analysis of Experiments (Mendelhall) | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Experiment, experimental design, treatment and experimental error concepts |
| 2 | Principles of experimental design |
| 3 | Variance analysis assumptions, sum of squares, degree of freedom and mean square |
| 4 | Completely randomized design |
| 5 | Lsd, Duncan, Tukey and Dunnett test in completely randomized design |
| 6 | Unbalaced case in completely randomized design (MIDTERM EXAM) |
| 7 | Regression analysis in completely randomized design (MIDTERM EXAM) |
| 8 | Randomized blocks design |
| 9 | Missing value in randomized blocks design |
| 10 | Lsd, Duncan, Tukey and Dunnett test in the randomized blocks design |
| 11 | Regression analysis in randomized blocks design |
| 12 | Latin square design |
| 13 | Missing value in Latin square design, Lsd, Duncan, Tukey and Dunnett test |
| 14 | Regression analysis in Latin square design |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Zeynep FİLİZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417442 | **COURSE NAME** | MULTIVARIATE STATİSTICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 4 | 0 | | 0 | | 4 | | 6 | COMPULSORY (X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | |  | | 60 | |
| **PREREQUISITE(S)** | | | | | Multivariate data analysis and its application areas, data matrices and measurement scales, the multivariate normal distribution (MND), inferences about a mean vector, comparisons of several multivariate means, cluster analysis, discriminant analysis, logistic regression analysis, Principal component and factor analysis, Canonical correlation, multidimensional scaling. | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | To introduce the concepts and methods of multivariate analysis and to teach exercises in the application of multivariate data analysis to related problems | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aim of this course is to teach the application of multivariate statistical methods and to give examples and exercises using real data. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is evaluating alternative methods and using the multivariate techniques in problem solving. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To introduce the concepts and methods of multivariate analysis and to provide exercises in the application of multivariate data analysis to related problems. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Uygulamalı Çok Değişkenli İstatistiksel Analiz, Hüseyin Tatlıdil, Ankara, 1992. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1) Jobson, J, D.(1991). Applied Multivariate Data Analysis, Volume I-II, Springer- Verlag, New York. 2) Özdamar, K.( 1999). Paket Programlar ile İstatistiksel Veri Analizi, Kaan Kitabevi, Eskişehir. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical Lab. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Multivariate data analysis and its application areas |
| 2 | Data matrices and measurement scales |
| 3 | The multivariate normal distribution: the multivariate normal density and its properties, sampling from a MND and maximum likelihood estimation. |
| 4 | Inferences about a mean vector: Hotelling’s T2 and Likelihood ratio tests. |
| 5 | Comparisons of several multivariate means: comparing mean vectors from two populations. One-way MANOVA |
| 6 | Cluster analysis: similarity measures, hierarchical clustering methods (MIDTERM EXAM) |
| 7 | Cluster analysis: Nonhierarchical clustering methods (MIDTERM EXAM) |
| 8 | Discriminant analysis: Classification with two multivariate normal populations. |
| 9 | Discriminant analysis: Classification with several populations. |
| 10 | Logistic regression analysis |
| 11 | Principal component analysis |
| 12 | Factor analysis: the factor analysis model and estimation, factor rotation, factor scores. |
| 13 | Canonical correlation |
| 14 | Multidimensional scaling |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Zeki YILDIZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417403 | **COURSE NAME** | SIMULATION |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY( ) ELECTIVE(X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 30 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 1 | | 20 | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 50 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Covers model design and development, verification, validation, and experimentation for discrete event simulation models. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course introduces the method of simulation and explains its utility in solving various types of real-world problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is providing a problem solving skills for complex systems to students with illustrative examples.. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to construct the conceptual model for system design and system analysis. Also will be able to construct discrete event simulation model. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Kelton, W. David, Sadowski, Randall P., and Swets, Nancy B. (2010). Simulation with Arena, Fifth Edition. McGraw-Hill Higher Education. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Ross, S. M., A course in Simulation, Macmillan Publishing Co., 1990  Law, A., and Kelton, W., Simulation Modeling and Analysis, 2nd. Edn., New York: McGraw-Hill Book Co., 1991.. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Simulation and modeling.. |
| 2 | Fundamentals of Simulation analysis and model development. |
| 3 | Data collection and analysis. |
| 4 | Random numbers and discrete random variable generation. |
| 5 | Continuous random variable generation. |
| 6 | Discrete event simulation. (MIDTERM EXAM) |
| 7 | Statistical tests for random numbers. (MIDTERM EXAM) |
| 8 | Goodness of fit tests and model validation. |
| 9 | Output analysis. |
| 10 | Simulation output planning and analysis. |
| 11 | Dynamic models. |
| 12 | Queuing models. |
| 13 | Queuing networks. |
| 14 | Inventory models. |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy

Prof. Dr. Şenol Erdoğmuş

Ass. Prof. Dr. Sevgi Abdalla

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417510 | **COURSE NAME** | STATISTICAL TECHNIQUES FOR MARKETING RESEARCHES I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY () ELECTIVE (X) | | | | Turkısh |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Discussion of research subject, The process of data preparation, Hypothesis and model design | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Data collection regarding the purposes of the corporation and the preparation of the projects analyzed by the methods that were determined and the determination of the methods | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is providing a Marketing researches problem solving skills to students | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to recognize and solve the marketing research problem and also will be able to produce solutions. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming.  Teaching Technıcs: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1- KURTULUŞ, K., (2004). Pazarlama Araştırmaları, Literatür yayıncılık  2-NAKİP, M.(2006) Pazarlama Araştırma teknikleri ve SPSS destekli uygulamalar,Seçkin Yayınevi, Ankara | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1- KOTLER, P., (1991). Marketing Management Analysis, Implementation and Control, Prentice – Hall Internation  2- ODABAŞI, Y., (1998). Tüketici Davranışı ve Pazarlama Stratejisi, Anadolu Üniversitesi  3- SHARMA, S. ,(1993). Applied Multivariate Techniques, John Wiley and Sons Inc, New York.  4- TABANICK, G.B. FIDELL, L.S., (1996). Using Multivariate Statistics, Harper Collngs College Publisher Inc., New York. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Discussion of research subject |
| 2 | Preliminary assessments of the research project |
| 3 | The choice of research subject |
| 4 | The design of the research hypothesis |
| 5 | The design of the research model |
| 6 | The process of data preparation (MIDTERM EXAM) |
| 7 | Coding (MIDTERM EXAM) |
| 8 | Data analysis strategy selection |
| 9 | Marketing research hypotheses |
| 10 | Hypotheses testing and applications with the relevant statistical software |
| 11 | Categorical data analysis and applications with the relevant statistical software |
| 12 | Correspondence analysis and applications with the relevant statistical software |
| 13 | Loglinear models and applications with the relevant statistical software |
| 14 | Parametric tests and applications with the relevant statistical software |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417508 | **COURSE NAME** | MONEY AND CAPITAL MARKETS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (**X**) | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | | X | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | |  | | |  | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The definition of money, its functions, disclosure of the basic functions of financial markets and intermediary institutions, monetary policy tools and their effects on the money market, the monetary policy of the Central Bank, inflation, exchange rates, theory of interest | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Identification of the definition and function of money in financial markets | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Informing about money and interest theory in financial markets | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The ability to understand how the financial markets function and how the equilibrium interest rate is determined  The skill of banks to learn where they are in the money market and how they work  The execution of central bank and monetary policy | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Mishkin F. S. **“***The Economics of Money, banking ad financial markets***”** Addison Wesley: NewYork, 2009 | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Parasız İ.“*Para Banka ve Finansal Piyasalar”*.Ezgi Kitapevi,2003  Keyder N. “ *Para teori-politika-uygulama*”, Bizim Hür Basım evi, 2002 | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE OUTLINE** | |
| **WEEK** | **SUBJECTS / TOPICS** |
| 1 | Definition and functions of Money |
| 2 | Definition and functions of Money |
| 3 | Interest rates |
| 4 | Interest rates |
| 5 | Theories of Interest |
| 6 | Theories of Interest (MIDTERM EXAM) |
| 7 | Financial markets and institutions (MIDTERM EXAM) |
| 8 | Financial markets and institutions |
| 9 | Politics of Money |
| 10 | Politics of Money |
| 11 | Determination of exchange rate |
| 12 | Determination of exchange rate |
| 13 | Inflation |
| 14 | Inflation |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assist. Prof. Dr. Serdar NESLİHANOĞLU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417511-121437513 | **COURSE NAME** | STATISTICAL COMPUTING I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | No prerequisites | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Random variables, moment concept, some important inequalities, discrete probability distributions, continuous probability distributions, sampling and sampling distributions, estimation. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Basic statistical concepts and techniques, distributions, sampling and estimation issues to be handled in general terms. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Examination of the issues mentioned in a variety of practical problems. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Written text | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Related documents | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Related documents | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculater and related documents | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Expected values ​​and variances of discrete and continuous random variables, |
| 2 | The concept of moment, some important inequalities, law of large numbers |
| 3 | Discrete probability distributions |
| 4 | Discrete probability distributions Continuous probability distributions |
| 5 | Continuous probability distributions |
| 6 | Continuous probability distributions (MIDTERM EXAM) |
| 7 | Sampling and sampling distributions (MIDTERM EXAM) |
| 8 | Sampling and sampling distributions |
| 9 | Interval estimation, interval estimation for the mean mass |
| 10 | Interval estimation for large samples |
| 11 | Interval estimation for small samples |
| 12 | The mean difference between the estimated mass range for independent samples |
| 13 | Mass for the proportion of interval estimation, interval estimation for the difference in two rates |
| 14 | Interval estimation of variance and standard deviation, Interval estimation for two variance ratio |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417502-121437502 | **COURSE NAME** | ECONOMETRICS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY( ) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | Regression Analysis | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | By use statistical package program(s), Estimation of the simple and multiple linear / nonlinear regression model, Making the necessary tests for the econometric model, interpreting the results, Estimation of autoregressive models, Model selection | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To be able to apply basic concepts related to econometrics by using current programs with help of package programs | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To provide solutions to the problems related to econometrics. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | •Define econometric concepts and analysis. •Simple and multi-linear / non-linear econometric models can be estimated with the aid of the package program (s), EKK. •Can do the basic tests for the econometric model. •examine the assumptions of the econometric model. •Examine the assumption of consecutive dependence. •Examine the normality assumption. •Review the assumption of constant variance. •Examine the assumption of multiple linearity. •Analyze autoregressive models. •Can define delayed variables. • Analyze autoregressive models. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNİCS** | | | | | Lecturing, Application/Practice on Computer, Question-Answer. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | D. Gujarati, (2001). Temel Ekonomtetri, (Çev. Ü. Şenesen ve G. Günlük Şenesen) Literatür Yayıncılık. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | H. Özkoç ve M. H. Van (2013). Ekonometri I, Nobel Yayınevi.  R. Tarı (2010). Ekonometri, Umuttepe Yayıınları. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, package program (Eviews, SPSS) | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Estimation and interpretation of Simple Linear Regression Model with OLS |
| 2 | Estimation and interpretation of Multiple Linear Regression Model with OLS |
| 3 | Testing the assumptions of the econometric model: normality assumption |
| 4 | Testing the assumptions of the econometric model: Autocorrelation |
| 5 | Testing the assumptions of the econometric model: Homoscedasticity |
| 6 | Testing the assumptions of the econometric model: Multicolinearity (MIDTERM EXAM) |
| 7 | Estimation of simple and multiple nonlinear models with OLS (MIDTERM EXAM) |
| 8 | Estimation of simple and multiple nonlinear models by using the LSM (cont.) |
| 9 | General significance of the model and testing of the significance of the coefficients |
| 10 | Testing the equality of the coefficients, the necessity of a new variable |
| 11 | Testing structural equilibrium, equality of two regression equations) |
| 12 | Autoregressive models |
| 13 | Autoregressive models (continued) |
| 14 | Model selection |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Gaye KARPAT

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417517 | **COURSE NAME** | RISK ANALYSIS AND INSURANCE |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (**X**) | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | | | X | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | |  | | |  | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Risk premium calculations in insurance, statistical distributions used in insurance | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | General concepts about insurance risk measurement and risk management | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Statistical distributions used for risk analysis in insurance and their applications | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The ability to use statistical distributions used in insurance  The ability to use risk models used in insurance | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Boland, P. J. “*Statistical and Probabilistic Methods in Actuarial Science*”, Chapman & Hall/CRC Interdisciplinary Statistics, 2007 | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Bowers N.L., Gerber H.V., Hickman J.C., Jones D.A. and Nesbitt C.J. “*Actuarial Mathematics*”, SOA, USA, 1997 | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE OUTLINE** | |
| **WEEK** | **SUBJECTS / TOPICS** |
| 1 | Definition and types of risk |
| 2 | Definition and types of insurance |
| 3 | Statistical distributions |
| 4 | Statistical distributions |
| 5 | Risk premium calculations |
| 6 | Risk damage calculations (MIDTERM EXAM) |
| 7 | Definition of methods of calculating total damage distribution (MIDTERM EXAM) |
| 8 | Definition of methods of calculating total damage distribution |
| 9 | Method of convolution |
| 10 | Method of convolution |
| 11 | Compound distribution approach |
| 12 | Compound distribution approach |
| 13 | Normality approach |
| 14 | Normality approach |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assist. Prof. Dr. Serdar NESLİHANOĞLU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417506 | **COURSE NAME** | ROBUST STATISTICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY () ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | - | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Introduction to topic, general concepts, concept of robust estimation, functions used in robust estimation, concept of breaking point, mismatch measure, source of mismatched measures and their effect on estimates with least squares method, weighted least squares estimator, regulated least squares estimator Robust regression method, robust two- and three-dimensional transformation techniques, robust estimation and deformation analysis, robust estimation, robust estimation. The use of robust statistic in various applications. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To explore the use of Classical and Robust Methods for measurement and experimental applications. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To teach how to use alternative methods when analyzing data that do not have normal distribution. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Can compare Classic and Robust Approaches. I. He remembers classic predictors. ii. Robust expresses necessary concepts in statistics. iii. Robust recognizes the features that must be estimated. Calculate robust estimators of position and scale i. Median and MAD calculations and comments. ii. The Impact Function refers to the Break Point. iii. For some robust predictors, the Impact Function may obtain the Refraction Point. Robust refers to regression estimators and applies i. Robust calculates the regression estimators using the matlab program. ii. Robust can apply the regression on samples taken from real life. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecture, Drill / Practice, Question & Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | |  | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Basic Statistical Concepts such as Estimator, Unemployment |
| 2 | Comparison of Classic and Robust Approaches |
| 3 | Position and Scale Robust Prediction |
| 4 | Median, Clipped Averages, MAD and other Robust Scale Estimators |
| 5 | Matlab Applications |
| 6 | Measuring Integrity: Impact Function, Break Point (MIDTERM EXAM) |
| 7 | Matlab Applications (MIDTERM EXAM) |
| 8 | Robust Regression |
| 9 | Trimmed Least Squares |
| 10 | M-estimation |
| 11 | Smallest Absolute Deviations (LAD) |
| 12 | Weighted Least Squares |
| 13 | Applications of Robust Statistic |
| 14 | Applications of Robust Statistic |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s): Prof.Dr.Zeynep FİLİZ**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | Fall |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417403 | **COURSE NAME** | SIMULATION |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY( ) ELECTIVE(X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 30 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 1 | | 20 | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 50 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Covers model design and development, verification, validation, and experimentation for discrete event simulation models. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course introduces the method of simulation and explains its utility in solving various types of real-world problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is providing a problem solving skills for complex systems to students with illustrative examples.. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to construct the conceptual model for system design and system analysis. Also will be able to construct discrete event simulation model. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Kelton, W. David, Sadowski, Randall P., and Swets, Nancy B. (2010). Simulation with Arena, Fifth Edition. McGraw-Hill Higher Education. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Ross, S. M., A course in Simulation, Macmillan Publishing Co., 1990  Law, A., and Kelton, W., Simulation Modeling and Analysis, 2nd. Edn., New York: McGraw-Hill Book Co., 1991.. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Simulation and modeling.. |
| 2 | Fundamentals of Simulation analysis and model development. |
| 3 | Data collection and analysis. |
| 4 | Random numbers and discrete random variable generation. |
| 5 | Continuous random variable generation. |
| 6 | Discrete event simulation. (Mid-term Exam) |
| 7 | Statistical tests for random numbers. (Mid-term Exam) |
| 8 | Goodness of fit tests and model validation. |
| 9 | Output analysis. |
| 10 | Simulation output planning and analysis. |
| 11 | Dynamic models. |
| 12 | Queuing models. |
| 13 | Queuing networks. |
| 14 | Inventory models. |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417423 | **COURSE NAME** | QUALITY MANAGEMENT |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | | COMPULSORY ( ) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | | |  | |  | |
| Quiz | | | | | |  | |  | |
| Homework | | | | | |  | |  | |
| Project | | | | | |  | |  | |
| Report | | | | | |  | |  | |
| Others (………) | | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Quality control techniques, Management and quality management, quality of management and necessary works in quality management, quality assurance systems, the advances of quality management in Turkey and world ISO 9000 quality assurance systems. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Our Aim is to show that statistics plays a major role in experimental quality control. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | A person with a degree in statistics will work quality control departments in factories. Students will be able to use that learned from this course in the professional work life. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Will be able to Total Quality Management and its processes.  Will be able to Quality Assurance Systems.  Will be able to statistical techniques used in Total Quality Management. | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNİCS** | | | | | Lecturing | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Burnak N., Toplam Kalite Yönetimi, ESOGÜ Müh. Mim. Fak. Yayınları, Eskişehir, 1997. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Öztürk, A., 2009, Kalite Yönetimi ve Planlaması, Ekin Yayınevi, Bursa.  Efil, İ., 2010, Toplam Kalite Yönetimi, Dora Yayıncılık, 462 s.  Küçük, O., 2016, Toplam Kalite Yönetimi-Sınırsız İyileşme EFQM Mükemmellik Modeli, Seçkin Yayıncılık, 368 s.  [David L. Goetsch](http://www.dr.com.tr/Yazar/david-l--goetsch/s=330526), [Stanley B. Davis](http://www.dr.com.tr/Yazar/stanley-b--davis/s=330527), 2017, Toplam Kalite Yönetimi-Toplam Kaliteye Giriş, Nobel Akademik Yayıncılık, 470 s.  Ertuğrul, İ., 2014, Toplam Kalite Kontrol, Ekin Kitabevi Yayınları, 456 s. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Projector | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to total quality management |
| 2 | Quality, management, total quality management, quality of management. |
| 3 | Aproaches in total quality management |
| 4 | The principals of total quality management |
| 5 | Necessary studies for establishment total quality management system |
| 6 | Quality assurrance systems (MIDTERM EXAM) |
| 7 | ISO 9000 etc.(MIDTERM EXAM) |
| 8 | Total quality management and quality assurrance standarts |
| 9 | Total quality management and statistics |
| 10 | Techniques for quality planning and improvements |
| 11 | Quality in the relationship between customer and supplier |
| 12 | Necessary regulations in the bussines for quality |
| 13 | Motivating and autorizating of employees in total quality management, quality leadership |
| 14 | Competition, comparison of total quality management and the other managemets systems |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417531 | **COURSE NAME** | APPLIED STATISTICS USING R I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Introduction to R, R basics, data structures, entry of data, plotting, probability and distributions, discrete and continuous distributions, descriptive statistics. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Having knowledge about R program and giving ability to use | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | This course provides students with the ability to solve problems in real life by using R program and to apply statistical techniques. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Identify entry of data, data frames, vector, matrix commands in R  2. Use functions, operators and loops.  3. Detailed evaluation of descriptive statistics | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Verzani J, 2001, Using R for Introductory Statistics, Chapman & Hall. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Crawley., M. J.,2007,The R Book, Wiley | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | A brief introduction to R, load R packages |
| 2 | R Fundamentals:Workspace, command line, derived variables, numbers |
| 3 | R Fundamentals:Objects, Operators, Tables, Lists |
| 4 | Accessing data, data manipulation |
| 5 | R Fundamentals: Matrix operations, vectors, factors |
| 6 | Functions and loops (MIDTERM EXAM) |
| 7 | Functions and loops (MIDTERM EXAM) |
| 8 | Graphics in R |
| 9 | Contingency tables |
| 10 | Descriptive statistics |
| 11 | Probability distributions |
| 12 | Discrete distributions |
| 13 | Continuous distributions |
| 14 | Algoritms additional points on the use of R |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417532-121437534 | **COURSE NAME** | ENTREPRENEURSHIP |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 4 | 0 | | 0 | | 4 | | 5 | COMPULSORY () ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | |  | |  | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 1 | | 30 | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Project | | | | | 1 | | 70 | |
| **PREREQUISITE(S)** | | | | | - | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Establishing a business and keeping it alive, the proposed business structure, production plan, market research, financial plan, SWOT analysis and business plan development | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main objective of the Entrepreneurship Course is to increase entrepreneurial performances and to give students the ability to take initiative, self-confidence and entrepreneurship spirit when necessary. Thus, observing, evaluating, communicating, using and managing resources, assessing risks, team building, etc. a large number of students can be developed. While discussing different concepts of entrepreneurship, it will focus on issues of leadership, sensitivity to business ethics and commitment to the positive value system. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | It will be ensured that the problems encountered in the planning, initiation and maintenance of a job are correctly identified and analyzed. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | As an entrepreneur, students should have the skills they need to possess, Developing leadership, self-confidence, initiative, overcoming ambiguity, loyalty, creativity, team building and reliability, Making simple demand forecasting, interpreting and researching, Preparing a business plan and presenting a project report, To develop the necessary knowledge and skills that an entrepreneur must possess by making applications to students in different fields such as calculation of loss and loss, determination of costs, management of finance, market dynamics and evaluation of resources, To introduce entrepreneurial discipline to students and to overcome them. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecture, Drill / Practice, Question & Answer, Project / homework, Teamwork, Case Study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Course notes | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Girişimci ve girişimcilik Prof.Dr. Mehmet Ali Gürol, Gazi Kitabevi, 2006 2. http://www.sba.gov/category/navigation-structure/starting-managing-business/starting-business | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Books, articles, computers, projections etc. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | What is entrepreneurship? What an entrepreneur should have |
| 2 | Foundation of entrepreneurship |
| 3 | Evaluation and development of entrepreneurship skills of students |
| 4 | What is a business idea? Business ideas and opportunities, Planning a business venture, Business modeling |
| 5 | Thinking to start a business, 20 questions to be answered before starting a business, 10 steps to be done when starting a business, Market understanding, Business statistics, Job types, Questions to ask when starting a job |
| 6 | Making a business plan, Management plan, Defining a company, Creating an organization and management, Choosing an organization and its equipment, Employee planning, Determining a service / production line (MIDTERM EXAM) |
| 7 | Marketing and sales, Market research (MID-TERM EXAM) |
| 8 | Preparation of financial plan, Business start costs, personnel costs, analysis of financial situation, Cash flow analysis, Financial projections |
| 9 | Performing SWOT analyzes |
| 10 | Company types and the most appropriate company structure, Acquisition of company licenses and licenses Introduction of business law and restrictions |
| 11 | Capital requirements and funding, Funds, support and incentives, What kind of consultants may be needed? |
| 12 | Examination of previously made business plans |
| 13 | Presentations of student business plans |
| 14 | Presentations of student business plans |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Zeynep FİLİZ  **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417516 | **COURSE NAME** | STATISTICAL QUALITY CONTROL AND TOTAL QUALITY MANAGEMENT I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | | X | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | |  | |  | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | 1 | | 40 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The purpose of this course is understand and research (with scientifically, efficiently and effectively using) to application Statistical QC (Quality Control) and TQM (Total Quality Management). İn addition, The QC problem-solving approach is being used with great success in all areas of to TQM. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | In application and theory, the meaning and significance of the QC problem-solving approach and TQM.  the QC viewpoint needed for the QC problem-solving approach putting the QC problem-solving approach into practice.  Using QC tools as part of the QC problem-solving approach. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The theoretical knowledge learned in the course is tried to be put into practice in real life. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Understanding the importance of Statistical Quality Control and Total Quality Management in practice and in theory,  Having knowledge about necessary techniques for statistical quality control and total quality management,  To be able to use the necessary package programs for Statistical Quality Control and Total Quality Management,  Evaluating the strengths and weaknesses of different forms of management  Ability to use contemporary methods such as computers, computer software, techniques, tools, to solve problems in real life  Will be able to analyze and evaluate the importance of Statistical Quality Control and Total Quality Management.  It is aimed that there will be fewer problems in this area after graduation | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Statistical Quality Control and Total Quality Management courses books and other materials | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | All books and resources related to homework and internet facilities, | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Determination of the issue of homework |
| 2 | Preparation studies |
| 3 | The application studies |
| 4 | Collecting of theoretical infornation |
| 5 | Study of of theoretical infornation |
| 6 | Finding application data (MIDTERM EXAM) |
| 7 | Collecting of application data (MIDTERM EXAM) |
| 8 | Statistical evaluation of data |
| 9 | Preparation of report |
| 10 | Evaluation of the application portion of the assignment |
| 11 | Writing the assignment |
| 12 | Discussion of the conclusions |
| 13 | Presentation of assignment, discussion |
| 14 | General evaluation, statistical evaluation of the benefit application |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr.Öğr.Üyesi Günseli Kurt

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417517 | **COURSE NAME** | MANAGERIAL DECISION MAKING I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | |  | |  | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (oral exam) | | | | | 1 | | 30 | |
| **FINAL EXAM** | | | | | Homework | | | | | 1 | | 70 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Determination, examination and discussion of decision problems related to real life. Determination of the research problem, researching literature related to the subject, preparation of the research plan. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To define the selected research problem correctly, to produce the solutions by doing the relevant literatüre reviews, to scientifically test the results obtained and to evaluate the test results. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To be able to apply the theoretical and practical knowledge learned and to be able to manage the research process. It gives the ability to use these steps by applying every step of the scientific research. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To be able to define a statistical research problem, to compile sources and data related to problem, to make evaluations, to develop solutions, to select appropriate statistical method, to report the results and to apply the results obtained. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | |  | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Examination of real life problems |
| 2 | Examination of real life problems |
| 3 | Determination of research problem |
| 4 | Review the literature |
| 5 | Review the literature |
| 6 | The literature analysis (MIDTERM EXAM) |
| 7 | Identification and identification of the variables (MIDTERM EXAM) |
| 8 | Modelling |
| 9 | Examination of model solution techniques |
| 10 | Determination of model solution techniques |
| 11 | Preparing the Research Plan |
| 12 | Preparing the Research Plan |
| 13 | Preparation of presentation of the research plan |
| 14 | Preparation of the research plan |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Şenol Erdoğmuş

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417464 | **COURSE NAME** | REPEATED MEASURES EXPERIMENTS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 4 | 2 | | 0 | | 5 | | 10 | COMPULSORY ( ) ELECTIVE ( X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | Single factor experiments having repeated measures, notation and computational procedures, statistical basis for the analysis, reliability of measurements, assumptions, analysis of variance for ranked data, dichtomous data, Hotelling’s T2. | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | To introduce the concepts and repeated measures experiments and to teach exercises in the application of repeated measures experiments to related problems. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts and repeated measures experiments and to provide exercises in the application of repeated measures experiments to related problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is evaluating alternative methods and using the repeated measures techniques in problem solving. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to; know terminology, decide exact test, apply the tests to real data correctly. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | B.J. Winer, Statistical Principles in Experimental Design | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | B.J. Winer, Statistical Principles in Experimental Design | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical Lab. | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Single Factor Experiments Having Repeated Measures |
| 2 | Single Factor Experiments Having Repeated Measures (Continue) |
| 3 | Notation And Computational Procedures |
| 4 | Notation And Computational Procedures (Continue) |
| 5 | Statistical Basis For The Analysis |
| 6 | Reliability Of Measurements (MIDTERM EXAM) |
| 7 | Reliability Of Measurements: Numerical Example (MIDTERM EXAM) |
| 8 | Assumptions: Equality Of Covariance Matrices |
| 9 | Assumptions: Symmetry Of Covariance Matrices |
| 10 | Analysis Of Variance For Ranked Data |
| 11 | Analysis Of Variance For Ranked Data. Numerical Example |
| 12 | Dichtomous Data |
| 13 | Hotelling’s T2 |
| 14 | Evaluation Of Methods |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Zeki YILDIZ

|  |  |
| --- | --- |
| **Signature**:  **Date:** | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417465 | **COURSE NAME** | ECONOMETRICS THEORY I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | |  | | 3 | |  | COMPULSORY () ELECTIVE (X) | | | |  |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | |  | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Errors in variables, Time as a variable, Dummy variables, Estimation from grouped data, Methods of estimation of lagged models, simultaneous dependence of economic variables, Consequences of simultaneous relations, Solution to the simultaneous-equation bias, Level of aggregation - number of equations — number of variables, The problem of identification, Identifying restrictions, Tests for identifying restrictions, Identification and choice of econometric method | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts of econometrics | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Econometrics and to provide exercises in the application of econometrics to related problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | |  | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | COURSE TEXT | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Turkish and English econometrics books. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Errors in variables |
| 2 | Time as a variable |
| 3 | Dummy variables |
| 4 | Continue |
| 5 | Estimation from grouped data |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Methods of estimation of lagged models |
| 9 | Simultaneous dependence of economic variables |
| 10 | Consequences of simultaneous relations |
| 11 | Solution to the simultaneous-equation bias |
| 12 | Level of aggregation - number of equations — number of variables |
| 13 | The problem of identification |
| 14 | Identifying restrictions |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**PhD. Cengiz Aktaş

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417466 | **COURSE NAME** | APPLICATIONS OF STATISTICS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | **LANGUAGE** | |
| 7 | 2 | 2 | | 0 | | 5 | | 10 | COMPULSORY (X) ELECTIVE () | | | Turkish | |
| **COURSE CATEGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 25 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | | 1 | | | 25 |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 50 |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Planning of a statistical research, How to manage a research project and model design | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This course will be expressed statistically how a research problem, how to design research model and hypotheses, how to compile statistical data, how to encode the data available software, the most appropriate statistical technique for data analysis are taught how to choose the topics. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Providing skills that would help solve problems in real life | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Be able to produce solutions to reconcile the data with the knowledge he or she gained from the course. | | | | | | | | |
| TEACHING METHODS AND TECHNICS | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming. Teaching TECHNIQUES: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively, Solving Problems, Basic Mathematical Skills, Decision Making Skills. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1- KURTULUŞ, K., (2004). Pazarlama Araştırmaları, Literatür Yayıncılık  2-NAKİP, M.(2006) Pazarlama Araştırma teknikleri ve SPSS destekli uygulamalar,Seçkin Yayınevi, Ankara | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1) FREUND, JE (2001). Mathematical Statistics. (Translated Şenesen, Ü.) Istanbul: Literature Publishing.  2- SHARMA, S., (1993). Applied Multivariate Techniques, John Wiley and Sons Inc, New York.  3- TABANICK, G.B. FIDELL, L.S., (1996). Using Multivariate Statistics, Harper Collngs College Publisher Inc., New York | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The determination of the aim of the Project |
| 2 | The design of the research hypothesis |
| 3 | The design of the research models |
| 4 | The design of the research models(continued) |
| 5 | Compilation of data and the compiler designs |
| 6 | Compilation of data and the compiler designs(continued) (MIDTERM EXAM) |
| 7 | Sampling Design (MIDTERM EXAM) |
| 8 | The collection of data and importing the data to the statistical software |
| 9 | The collection of data and importing the data to the statistical software(continued) |
| 10 | Discussion about the proper statistical methods for analyzing the data(univariate design) |
| 11 | Discussion about the proper statistical methods for analyzing the data(univariate design)(continued) |
| 12 | Discussion about the proper statistical methods for analyzing the data(multivariate design) |
| 13 | Discussion about the proper statistical methods for analyzing the data(multivariate design)(continued) |
| 14 | General assessment and preparation of a report |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417521-121437523 | **COURSE NAME** | STATISTICAL PACKAGE PROGRAMS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | No prerequisites | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Data collecting, reaserching and understanding of the appropriate statistical software (minitab, SPSS, Statistica, SAS etc.) analysis of the data in the choosen software. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Determining of an application according to the technique, collecting of data and data analysis. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Ensure convenient use of statistical package programs | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Written text | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Related documents | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Related documents | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computers and related documents | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Determination of the how the data collect |
| 2 | Determination of the how the data collect |
| 3 | Determination of the how the data collect |
| 4 | Collecting of the Data |
| 5 | Collecting of the Data |
| 6 | Collecting of the Data |
| 7 | Writing of the informations about statistical software (MIDTERM EXAM) |
| 8 | Writing of the informations about statistical software (MIDTERM EXAM) |
| 9 | Analysis of Data using software |
| 10 | Analysis of Data using software |
| 11 | Analysis of Data using software |
| 12 | Obtaining of the Analysis Results |
| 13 | Obtaining of the Analysis Results |
| 14 | Interpreting and reporting of the results |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Hülya ŞEN

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417522-121437524 | **COURSE NAME** | METHODS FOR ANALYZING STATISTICAL DATA I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X ) ELECTIVE (**X**) | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | | | X | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 30 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | | 1 | | | 30 | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | | 40 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Checking adequacy of model assumptions, Normality assumption, Independence assumption, Homogeneity of variances assumption, Outlier detection methods, Least squares estimation, Maximum likelihood estimation, Method of moment estimation, Effects of nonnormality on the estimators and test statistics, Alternative methods for analyzing nonnormal data. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is to teach how to check the basic model assumptions before starting to analyze data and to use alternative methods for analyzing nonnormal data . | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Teach how to check the basic model assumptions before starting to analyze data and use of alternative methods when the assumptions are not met | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will gain a statistical data analysis practice for the real data set. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | The Analysis of Variance, by Hardeo Sahai, Mohammed I. Ageel, Birkhauser, Boston, 2000. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Robust Regression And Outlier Detection, by Peter J. Rousseeuw, Annick M. Leroy, John Wiley & Sons, 1987.  Robust Statistics, by P. J. Huber, John Wiley & Sons, 1981. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE OUTLINE** | |
| **WEEK** | **SUBJECTS / TOPICS** |
| 1 | Checking adequacy of model assumptions |
| 2 | Checking adequacy of model assumptions |
| 3 | Normality assumption |
| 4 | Normality assumption |
| 5 | Independence assumption |
| 6 | Independence assumption |
| 7 | Homogeneity of variances assumption (MIDTERM EXAM) |
| 8 | Homogeneity of variances assumption (MIDTERM EXAM) |
| 9 | Outlier detection methods |
| 10 | Outlier detection methods |
| 11 | Least squares estimation,Maximum likelihood estimation, Method of moment estimation |
| 12 | Least squares estimation,Maximum likelihood estimation, Method of moment estimation |
| 13 | Effects of nonnormality on the estimators and test statistics |
| 14 | Alternative methods for analyzing nonnormal data |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assoc. Prof. Dr. Arzu ALTIN YAVUZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |
| **COURSE CODE** | 121417523 | **COURSE NAME** | COMPUTING STATISTICAL DATA ANALYSIS I | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | **ECTS** | | **TYPE** | | | | | | **LANGUAGE** | | | |
| 7 | 2 | 2 | | 0 | | 3 | 5 | | COMPULSORY (X ) ELECTIVE ( ) | | | | | | Turkish | | | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | | **Social Sciences** | | | | | |
|  | | |  | | | | X | | | | | |  | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | | **Quantity** | | | | | **%** | | |
| 1st Mid-Term | | | | | | 1 | | | | | 40 | | |
| 2nd Mid-Term | | | | | |  | | | | |  | | |
| Quiz | | | | | |  | | | | |  | | |
| Homework | | | | | |  | | | | |  | | |
| Project | | | | | |  | | | | |  | | |
| Report | | | | | |  | | | | |  | | |
| Others (………) | | | | | |  | | | | |  | | |
| **FINAL EXAM** | | | | |  | | | | | | 1 | | | | | 60 | | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Using the data between statistical package programs and the other package programs, Creating a database, elements of database, and databases, connecting databases, sorting of information in the databases tables, listing of information according to condition in database tables, making of inquiry in the database consitional inquiries, entrying knowledge to database, creating of forms to displaying of knowledge from database, preparing report in database, Macros in database and relations between modules and the other database programs. | | | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To mak connection between statistical package programs and the other package programs | | | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To making İstatistik alanında karşılaşılan problemleri bilgisayar ortamında çözümlemek için gerekli hazır yazılım kullanma ve program yazma becerisi | | | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | 1. Learn information technologies. 2. Learn the computer components. 3. Understand how operating system works. 4. Learn how to use operating system. 5. Understand working principles of applications. 6. Use Microsoft Visual Basic application. 7. Use Microsoft Excel application. 8. Know  resources and data 9. Understand the working principles of  Data Base. | | | | | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application | | | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Paket Programlar İle İstatistiksel Veri Analizi 1-2 Prof.Dr. Kazım Özdamar,Excel XP ve MAKRO Ötesi / Zirvedeki Beyinler 4  Access Veri tabını yönetimi Mithat Uysal | | | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | MS SQL Server ile Temel Veritabanı Programlama Tasarım ve Gerçekleme [Yaşar Gözüdeli](http://www.idefix.com/kitap/yasar-gozudeli/urun_liste.asp?kid=95929) | | | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer, Data show | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  | |  | |  | | |  |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The introduction and the basic features of the Windows operating system |
| 2 | Desktop, file folder structures, introduction of system files |
| 3 | Windows and the programs and the implementation of administrative practices |
| 4 | Compression of files, opening, installation of the package of programs, the removal |
| 5 | Excel program and the introduction of the basic features of |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Cell, address, page, book, concepts of operation, the use of the formula |
| 9 | Cell, address, page, book, concepts of operation, the use of the Formula(cont.) |
| 10 | Working with objects (list boxes, check boxes, option buttons, etc.). |
| 11 | Working with Objects (Button, the spinner, etc.). |
| 12 | Use of an Excel formula |
| 13 | Application made to the profession (the preparation of the survey lists, etc.) |
| 14 | Data protection, encryption, export, taking into |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):Lecturer** Ali Atalay

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417524 | **COURSE NAME** | MULTIVARIATE REPEATED MEASURES DESIGN I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | |  | |  | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | 1 | | 40 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Homework | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Determine of research problem, review the literatüre on the topic, Making research plan, preparation of research plan, determination of data related to research problem, selection of one of the sampling or integer techniques, analysis and application of the selected technique. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To define the selected research problem correctly, to produce the solutions by doing the relevant literatüre reviews, to scientifically test the results obtained and to evaluate the test results. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To be able to apply the theoretical and practical knowledge learned and to be able to manage the research process. It gives the ability to use these steps by applying every step of the scientific research. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To be able to define a statistical research problem, to compile sources and data related to problem, to make evaluations, to develop solutions, to select appropriate statistical method, to report the results and to apply the results obtained. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | |  | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Determination of research problem |
| 2 | Determination of research problem |
| 3 | Review the literature |
| 4 | Review the literature |
| 5 | Making research plan |
| 6 | Making research plan (MIDTERM EXAM) |
| 7 | Compilation of source and data related to topic (MIDTERM EXAM) |
| 8 | Compilation of source and data related to topic |
| 9 | Compilation of source and data related to topic |
| 10 | Compilation of source and data related to topic |
| 11 | Compilation of source and data related to topic |
| 12 | Report presentation |
| 13 | Report presentation |
| 14 | Report presentation |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Zeynep FİLİZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417503 | **COURSE NAME** | RELIABILITY ANALYSIS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY(X ) ELECTIVE( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Studies principles of the methods of risk assessment and reliability analysis including fault trees, decision trees, and reliability block diagrams. Discusses classical, Bayesian, and median rank methods for analysis of components and systems reliability | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main objective of the course is presenting knowledge about performance, cost and reliability. Also introducing quality and safety concepts. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Principles of the methods of risk assessment and reliability analysis | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Get knowledge of Quality and its measures. Expertise to the Taguchi methodology. Knowledge of robust design. Knowledge about the six sigma methodology. Expertise yield and system complexity. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | E. E. Lewis, Introduction to Reliability Engineering (John Wiley & Sons, 1994 | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Probability and Sampling |
| 2 | Continuous Random Variable |
| 3 | Quality and its measures |
| 4 | Quality and reliability |
| 5 | The Taguchi methodology |
| 6 | Robust design (Mid-term Exam) |
| 7 | The six sigma methodology(Mid-term Exam) |
| 8 | Process capability |
| 9 | Yield and system complexity |
| 10 | Data and distribution |
| 11 | Nonparametric methods |
| 12 | Probability plotting |
| 13 | Least squares fit |
| 14 | Point and interval estimates |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417526 | **COURSE NAME** | QUALITATIVE DEPENDENT VARIABLE MODELS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Data structure used in qualitative dependent variable models, random utility theory, latent variable theory, linear probability model, Probit model, Logit model and assumptions of these models, estimation of the model parameters, comparison of these models, goodness of fit tests | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main of the course is to introduce qualitative dependent variable models and explores the mathematical structure of these methods. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | 1.Understand the importance of qualitative dependent variable models as it is applied in the theory and practice of statistics,  2.Evaluate the strengths and weaknesses of different qualitative dependent variable models,  3.Gain techniques, skills, computers and software knowledge to solve real life problems with qualitative dependent variable | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Interpret, evaluate and analyze the qualitative dependent variable models. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Aldrich J.H. and Nelson F.D.(1984). Linear Probability, Logit and Probit Models, Sage Publications Inc. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Greene W.H.(1997). Econometric Analysis. Prentice Hall International Inc. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical tables, statistical software | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Why probability models? |
| 2 | Generalized Linear models |
| 3 | Random Utility Theory |
| 4 | Binary Probit model |
| 5 | Hypothesis tests in binary probit model |
| 6 | Application (MIDTERM EXAM) |
| 7 | Binary Logit model (MIDTERM EXAM) |
| 8 | Hypothesis tests in binary Logit model |
| 9 | Application |
| 10 | Interpretation Probit model |
| 11 | Interpretation Logit model |
| 12 | Goodness of fit tests, Pseudo R^2, |
| 13 | Marginal effects and discrete changes |
| 14 | Applications in statistical packages |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417527 | **COURSE NAME** | ADVANCED DEMOGRAPHIC TECHNIQUES I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 7 | | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | |
| **Statistics** | | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
| X | | | |  | | | |  | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | Written | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | | |  | | | | | Written | | 60 | | |
| **PREREQUISITE(S)** | | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | To introduce “modelling” concept to student and to learn about the use of demographic models. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | The main of the course is to inform about modelling in demography and to interpret the information gathered by different demographic models. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | | The course will be helpful to students who want to work as statisticians and planer in government agencies concerned with population matters. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | By the end of the course students should be able to:   1. Understand importance of modeling in demographic analyses, 2. Calculate natural increase from crude rate of natural increase, 3. Understand what a model life table is and why it is useful, 4. Calculate relational model life tables, 5. Fit models of nuptiality and fertility to a data set, 6. Project population, 7. Interpret the information gathered by different demographic models. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | | Application / Practice, Question - Answer, Problem solving, Project / Homework | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | 1. Newell C., 1988, Methods and models in Demograph*,* Belhaven Press, London | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | **1.** Smith D.P., 1992, Formal Demograph, Plenum Press, New York and London  **2.** Barclay G. W., 1958, Techniques of Population Analysis*,* John Wiley&Sons, Inc., New York, London, Sydney  **3**. Shryock H.S., Siegel J.S. and Ass., 1976, The methods and materials of Demography, Academic Pres, New York,London, Toronto, Sydney, San Francisco | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | Computer | | | | | | | | | |
| **COURSE SCHEDULE** | | | | | | | | | | | | | | |
| **WEEK** | **SUBJECTS** | | | | | | | | | | | | | |
| 1 | Introduction to demographic models | | | | | | | | | | | | | |
| 2 | Models of age structure | | | | | | | | | | | | | |
| 3 | The stationary population, the stable population, | | | | | | | | | | | | | |
| 4 | The intrinsic rate of natural increase, calculation of the stable age distribution, doubling time. | | | | | | | | | | | | | |
| 5 | Empirical model life tables | | | | | | | | | | | | | |
| 6 | The 1955 United Nation set, the 1982 United Nation set relational model life tables / MIDTERM EXAM | | | | | | | | | | | | | |
| 7 | The Princeton regional model life tables / MIDTERM EXAM | | | | | | | | | | | | | |
| 8 | The Brass relational two parameter logit system | | | | | | | | | | | | | |
| 9 | Fitting a logit model life table, | | | | | | | | | | | | | |
| 10 | Four parameter life table systems | | | | | | | | | | | | | |
| 11 | Models of nuptiality and fertility: The Coale-McNeil nuptiality model, | | | | | | | | | | | | | |
| 12 | The Coale-Trussell fertility model, | | | | | | | | | | | | | |
| 13 | Gompertz relational fertility model, other models of fertility. | | | | | | | | | | | | | |
| 14 | Population projection and forecasts: The component method of projection. | | | | | | | | | | | | | |
| 15,16 | Final Exam | | | | | | | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**Assoc.Prof.Dr. Hatice Şamkar

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417528-121437530 | **COURSE NAME** | MAIN ECONOMIC INDICATORS I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X ) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | |  | |  | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | 1 | | 40 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Homework | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Importance of the basic economic indicators and basic definitions and concepts about them: Indexes Calculated in Turkiye (CPI, PPI, etc.), definition of inflation and calculating methods, Exchange rates and factors that determine Exchange rates, interest rates, Money and fiscal policies that applied in Turkiye, GNP and GDP concepts, human development index, poorness index and interpretation | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Teaching definition and concepts about basic economic indicators with details. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Interpreting the data in related with main economic indicators and eveluating of economic events using this indicators | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Basic economic indicators will be perceived and interpret by the students. By the way students will be able to understand and to opine about data and interpretations about economy of Turkiye published in visual or written press. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Çepni, Elif (2005). Ekonomik Göstergeler ve İstatistikler Rehberi, Seçkin Yayıncılık. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Kepenek ve Yentürk (2005). Türkiye Ekonomisi, Remzi Kitabevi, 18. Baskı, İstanbul.  Uygur, E. (2001). "Krizden Krize Türkiye: 2000 Kasım ve 2001 Şubat Krizleri", Türkiye Ekonomi Kurumu Tartışma Metni, No:2001/01, Ankara. (genişletilmiş son versiyonu)  Temel Ekonomik Göstergeler, (http://www.dpt.gov.tr/)  Ekonomik Göstergeler, (http://www.hazine.gov.tr/)  İstatistik Göstergeler, (http://tuik.gov.tr/)  Temel Ekonomik Göstergeler ve Gelişmeler,  (http://www.ceterisparibus.net/turkiye/gostergeler.htm)  (http://www.ceterisparibus.net/turkiye/makaleler.htm) | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Importance of the basic economic indicators |
| 2 | Basic definitions and concepts about main economic ındicators |
| 3 | Indexes Calculated in Turkiye (CPI, PPI, etc.), definitons and using fields |
| 4 | Calculating Methods of CPI and PPI |
| 5 | Definition of inflation and using fields |
| 6 | Calculating methods of Inflation (Mid term Exam) |
| 7 | Application of inflation calculation (Midterm Exam) |
| 8 | Exchange rates and factors that determine Exchange rates, |
| 9 | Interest Rates |
| 10 | Money and fiscal policies that applied in Turkiye |
| 11 | GNP and GDP concepts |
| 12 | Human Development Index, Poorness Index, GINI and ınterpretation |
| 13 | The Other Economıc Indıcators ( |
| 14 | Literature Survey for Main Economic Indicators |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. ÜyesiGaye KARPAT

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417529-121437531 | **COURSE NAME** | FORECASTING TECHNIQUES |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY ( X ) ELECTIVE (X) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Introduction to the forecasting techniques: Trend Analysis, Moving Averages, Ouantitative and Qualitative Forecasting Techniques, Errors of forecasting, Methods of Smoothing: Simple Smoothing Methods and Holt-Winters exponantial smoothing methods, decomposition methods, seasonal decomposition and seasonal smoothing methods | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main of the course is to introduce “forecasting techniqeus and concepts” to student and to learn about the use of the forecasting models | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To have forecast,ng knowledge and culture  to have the competence of evaluating and analysing the similar problems which occur in other course and disciplines.  Analysing the time series for undergraduate and graduate courses or work life and to have competence of forecasting of time series | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Understand importance of concepts in used to forecasting in the univariate time series. modeling in demographic analyses,  Application of the forecasting techniques and gain to ability of the forecasting, | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Application/Practice, Project/Homework | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Chatfield, C.,(2001), Time Series Forecasting, Boca Raton : Chapman & Hall/CRC | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Box, G.E.P and Jenkins, G.M. (1976), Time series analysis:Forecasting and Control, Holden-Say, Fransisco..  Akgül, I., (2003), Geleneksel Zaman Serisi Yöntemleri, D&R Yayınları, İstanbul.  Akmut, Ö., Aktaş, R., Binay, H.S, (1999), Öngçrü Teknikleri ve Finans Uygulamaları, Ankara Üniversitesi Siyasal Bilgiler Fakültesi Yayınları, Yayın No:584, Ankara.  Makridakis, S., Wheelwright S.C., Hyndman, R.J., (1998), Forecasting: Methods and Applications, Third edition. John Wiley and Sons.  Montgomery D. C., Johnson L. A. and Gardiner J. S.( 1994). Forecasting and Time Series Analysis, MCGraw-Hill, New York. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Forecasting concept |
| 2 | Introducing to forecasting techniques |
| 3 | Choosing of forecasting technique |
| 4 | Qulitative forecasting techniques |
| 5 | Quantitative forecasting techniques |
| 6 | Forecasting errors (MIDTERM EXAM) |
| 7 | Trend analysis (MIDTERM EXAM) |
| 8 | Introducing to exponential smoothing |
| 9 | Simple exponential smoothing technsiques |
| 10 | Holt-Winters technique |
| 11 | Decomposition methods in time series |
| 12 | Decomposition methods in time series (cont.) |
| 13 | Seasonal decomposition methods |
| 14 | Seasonal decomposition methods (cont) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assoc. Prof. Dr. Fatih ÇEMREK

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417530 | **COURSE NAME** | STATISTICAL ANALYSIS WITH SOFTWARES I |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | | | **COURSE OF** | | | | | | | | | | | | |
| **Theory** | **Practice** | | | | | **Labratory** | **Credit** | | **ECTS** | | **TYPE** | | | | | | | | **LANGUAGE** |
| 7 | 2 | 2 | | | | | 0 | 3 | | 5 | | COMPULSORY (X) ELECTIVE (X) | | | | | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | | | **Computer** | | | | | | **Social Sciences** | | | | |
| X | | | X | | | | | | | X | | | | | | X | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | | **Evaluation Type** | | | | | | | **Quantity** | | | | **%** | | |
| 1st Mid-Term | | | | | | | 1 | | | | 25 | | |
| 2nd Mid-Term | | | | | | |  | | | |  | | |
| Quiz | | | | | | |  | | | |  | | |
| Homework | | | | | | | 1 | | | | 25 | | |
| Project | | | | | | |  | | | |  | | |
| Report | | | | | | |  | | | |  | | |
| Others (………) | | | | | | |  | | | |  | | |
| **FINAL EXAM** | | | | | | |  | | | | | | | 1 | | | | 50 | | |
| **PREREQUISITE(S)** | | | | | | |  | | | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | | In a comprehensive investigation of the statistical analysis technique and then its application in proper statistical software or programing language. | | | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | | To teach the students how to perform statistical analyzes in computer environment. | | | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | | | The student is getting able to use software package for statistical analysis of data and ability to interpret the results. | | | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | | 1. Gain the ability to conduct a scientific research. 2. Solve a problem with a statistical approach. 3. Gain ability to analyze statistical techniques in computer environment. 4. Gain the ability to use various statistical programs and programming languages. | | | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | | | Project/Homework, Team work | | | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | | Özdamar, K., Paket Programlar ile İstatistiksel veri Analizi I, 5. Basım, Kaan Kitabevi, ESKİŞEHİR, 2004.  Özdamar, K., Paket Programlar ile İstatistiksel veri Analizi II Çok Değişkenli Analizler, 5. Basım, Kaan Kitabevi, ESKİŞEHİR, 2004. | | | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | | Tekin, V. N., SPSS Uygulamalı İstatistik Teknikleri, Seçkin Yayınevi, 2. Baskı, Ankara, 2009.  EROL, H., SPSS Paket Programı ile İstatistiksel Veri Analizi, Nobel Kitabevi, ADANA, 2010.  Gürsakal, N., (1997), Bilgisayar Uygulamalı İstatistik I, Marmara Yayınları, Bursa.  Gürsakal, N., (1997), Bilgisayar Uygulamalı İstatistik II, Marmara Yayınları, Bursa.  Gamgam, H., Altunkaynak, B., (2008), Parametrik Olmayan Yöntemler SPSS Uygulamalı, Gazi Kitabevi, Ankara.  Akgül, A., Çevik, O., (2005), İstatistiksel Analiz Teknikleri - SPSS'de İşletme Yönetimi Uygulamaları, Emek Ofset  SAS User’s Guide.  SPSS User’s Guide  Minitab User’s Guide | | | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | |  | | | | | | | | | | | | | |
|  |  |  | |  |  |  | |  |  | |  | |  | |  | |  | |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | The Main Statistical softwares used for statistical analysis |
| 2 | Chi-square Analysis and practices in statistical softwares |
| 3 | Independent samples t test and practices in statistical softwares |
| 4 | Paired samples t test and practices in statistical softwares |
| 5 | One way ANOVA and practices in statistical softwares |
| 6 | Reliability analysis and practices in statistical softwares(MIDTERM EXAM) |
| 7 | Matrices definitions and aplications (MIDTERM EXAM) |
| 8 | Applications of matrices in statistical softwares |
| 9 | Two-way Anova, Manova |
| 10 | Application of Two-way Anova, Manova in statistical softwares |
| 11 | Factor analysis |
| 12 | Application of factor analysis in statistical softwares |
| 13 | Correspondence Analysis |
| 14 | Application of correspondence analysis in statistical softwares |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Özer ÖZAYDIN

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121417534 | **COURSE NAME** | KNOWLEDGE DISCOVERY 1 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY ( X ) ELECTIVE ( X) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | |  | |  | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 3 | | 45 | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written /Report | | | | | 1 | | 55 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Knowledge discovery in databases, basic concepts of data mining, machine learning, literature review, software implementations (R, Matlab, Weka, LISp-Miner and Enterprise Miner) | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Implementing a research project will be equipped with research development skills. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Accurately determine the problems encountered in real life, and by bringing to produce modeling and solution approaches. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Understand the role of machine learning and KDD for data analysis,  Suggest solution approximations for real world data  Understand basic preprocessing operations  Use the various software systems efficiently  Determine and select the best solution among the candidate solutions  To take part in a scientific study,  The literature review and scientific reporting skills  Presentation practice and skills | | | | | | | | |
| **TEACHİNG METHODS AND TECHNİCS** | | | | | Application/Practice, Question-Answer, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Data Mining: Concepts and Techniques. J. Han and M. Kamber. Morgan Kaufmann, 2000. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Knowledge Discovery in Databases. G. Piatetsky-Shapiro and W. J. Frawley. AAAI/MIT Press, 1991. 2. Data Mining Techniques: for Marketing, Sales and Customer Support. M. Berry, G. Linoff (Wiley) 3. Advances in Knowledge Discovery and Data Mining. U.S. Fayyad, G. Piatetsky-Shapiro, P. Smyth, R. Uthurusamy, AAAI/MIT Press, | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Book, article, software, computer, R and MatLAb Software, projection etc. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Knowledge Discovery in Databases (KDD): Basic Concepts |
| 2 | KDD Process |
| 3 | KDD relationships with other disciplines |
| 4 | Reviewing the algorithms and techniques |
| 5 | Literature review |
| 6 | Literature review (MIDTERM EXAM) |
| 7 | Project 1 presentation (MIDTERM EXAM) |
| 8 | Problem determination |
| 9 | Data Processing and Algorithm selection |
| 10 | Software implementation |
| 11 | Project 2 presentation |
| 12 | Software implementation |
| 13 | Software implementation |
| 14 | Project 3 presentation |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

Ass. Prof. Dr. Sevgi ABDALLA

**Signature: Date:20.04.2018**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418478 | **COURSE NAME** | EXPERIMENTAL DESIGN II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 4 | COMPULSORY (X) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written Exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Two-factor factorial design, avarage effect of A and B, and interaction effect, and three-factor factorial design. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce students to the standart concepts and methods of experimental design, modeling and to provide exercises in the application of simple experimental design to appropriate problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To introduce students to the standart concepts and methods of experimental design, modeling and to provide exercises in the application of simple experimental design to appropriate problems. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Design and conduct experiments as well as to analyze and interpret data. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Applicaton / Practice, Question & Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Deney Tasarımı İlke ve Teknikleri (Necla Çömlekçi) | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Design and Analysis of Experiments (Montgomery)  Design and Analysis of Experiments (Kempthorne)  The Design and Analysis of Experiments (Mendelhall) | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Experiment and treatment concepts |
| 2 | Two-factor factorial design. |
| 3 | Lsd, Duncan, Tukey and Dunnett test in two-factor factorial design. |
| 4 | Regression analysis in two-factor factorial design. |
| 5 | Models in two-factor factorial designs |
| 6 | Examples of two-factor factorial design. |
| 7 | Application in SPSS of two-factor factorial design. (MIDTERM EXAM) |
| 8 | Introduction to three-factor factorial design. (MIDTERM EXAM) |
| 9 | Three-factor factorial design. |
| 10 | Lsd, Duncan, Tukey and Dunnett test in three-factor factorial design. |
| 11 | Regression analysis in three-factor factorial design. |
| 12 | Models in three-factor factorial designs |
| 13 | Examples of three-factor factorial design. |
| 14 | Application in SPSS of three-factor factorial designs |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Zeynep FİLİZ **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418443-121438005 | **COURSE NAME** | NONPARAMETRIC STATISTICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 4 | 0 | | 0 | | 4 | | 6 | COMPULSORY (X ) ELECTIVE ( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | Measurement scales, rank-order statistics, some important terminology, the one-sample tests, making inference about a location parameter, randomness tests, goodness-of-fit tests, two-samples tests, procedures that utilize data from three or more independent (or related) samples, rank correlation and other measures of association. | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The course evaluates parametric and nonparametric techniques and teaches to apply nonparametric techniques. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aim of this course is to teach the application of nonparametric statistical methods and to give examples and exercises using real data. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is evaluating alternative methods and using the nonparametric techniques in problem solving. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to; know terminology, decide exact test, apply the tests to real data correctly. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | |  | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Gamgam, H. Ve Altunayak, B., (2008), Parametrik Olmayan Yöntemler, Gazi Kitabevi, Ankara. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1) Canküyer, E. Ve Aşan, Z., (2004), Parametrik Olmayan İstatistiksel Teknikler, Anadolu Üniversitesi, Eskişehir.  2) Daniel, W., W., Aplied Nonparametric Statistics, Houghton Mifflin Copmpany, Boston, 1978. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical Lab. | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Some important terminology. |
| 2 | The power and efficiency of a hypothesis test, measurement scales |
| 3 | Making inferences about a location parameter (the one-sample sign test, the Wilcoxon signed-ranks test, the binomial test) |
| 4 | Making inferences about a location parameter (the one-sample runs test for randomness, the Kolmogorov-Smirnov one-sample test) |
| 5 | procedures that utilize data from two independent samples (the median test, the Mann-Whitney test) |
| 6 | procedures that utilize data from two independent samples ( the Fisher exact test, the Kolmogorov-Smirnov two-sample test) (MIDTERM EXAM) |
| 7 | procedures that utilize data from two related samples (the sign test for two related samples) (MIDTERM EXAM) |
| 8 | procedures that utilize data from two related samples (the Wilcoxon matched-pairs signed-ranks test) |
| 9 | Chi-Square tests of independence and homogeneity |
| 10 | procedures that utilize data from three or more independent samples (the Kruskal-Wallis ANOVA by ranks) |
| 11 | procedures that utilize data from three or more independent samples (multiple comparisons) |
| 12 | procedures that utilize data from three or more related samples (the Friedman two-way ANOVA by ranks) |
| 13 | procedures that utilize data from three or more related samples (multiple comparisons) |
| 14 | rank correlation and other measures of association |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**Instructor(s):** Prof. Dr. Zeki YILDIZ

|  |  |
| --- | --- |
| **Signature**:  **Date:** | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418444-121438006 | **COURSE NAME** | CATEGORY DATA ANALYSIS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY () ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | - | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Identification and classification of categorical variables, intermittent variables, contingency tables, evaluation of two-dimensional contingency tables, homogeneity in I \* J dimensional contingency tables, correlation and fit tests, analysis of over-varying contingency tables, logarithmic linear models, compliance goodness tests; Lojit and Probit Modeller; Logistic Regression Analysis. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Students should be able to identify and analyze categorical data, to learn the use of SPSS and Statistica packet program to perform these analyzes. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Understanding the importance of categorical variables in applied and theoretical statistics, Having knowledge about research techniques related to categorical data, To evaluate the strengths and weaknesses of different techniques used in categorical data analysis, Contribution to the ability to solve real life problems using SPSS and Statistica package programs | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | They will have the knowledge and skills to analyze and evaluate categorical data. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecture, Drill / Practice, Question & Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Agresti, A. (1990). **Categorical Data Analysis, John Wiley&Sons.** | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | **Freeman, D. H.** **(1987).** Applied Categorical Data Analysis, Marcel Dekker.  **Wrigley, N. (2002).** Categorical Data Analysis for Geographers and Environmental Scientists, The Blackburn Press. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical package programs, computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Identification and classification of categorical variables |
| 2 | Intermittent variables, contingency tables |
| 3 | Evaluation of two-dimensional contingency tables |
| 4 | I \* J-dimensional contingency tables |
| 5 | Homogeneity, correlation and consistency tests in I \* J dimensional contingency tables |
| 6 | Analysis of excessively variable contingency tables (MIDTERM EXAM) |
| 7 | Logarithmic linear models (MIDTERM EXAM) |
| 8 | Compliance Goodness Tests |
| 9 | Computer Application |
| 10 | Logit Models |
| 11 | Logit model application |
| 12 | Probit Models |
| 13 | Probit Model application |
| 14 | Example applications |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Zeynep FİLİZ  **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418445 | **COURSE NAME** | SERVICE SYSTEMS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY( ) ELECTIVE(X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Discusses the role of services in an economy, managing services for competitive advantage, structuring the service enterprise, managing service operations, service productivity, quality and growth, and concerns quantitative models with service operations. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The objective of this course is to familiarize students with service organizations and their characteristics. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The primary aim is to introduce students to techniques and methods that can be instrumental for making service operations more effective and efficient | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Gain knowledge of server types and service policies. Understand queuing models. Gain knowledge of managing service interruptions. Gain knowledge of capacity planning problem in queuing systems. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | C.Haksever, B.Render, R.S. Russell and R.G. Murdick, Service Management and Operations (Printice Hall, Uppersaddle River, NJ, 2000 | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | J.A.Fitzsimmous, M.J. Fitzsimmons, Service Management Operations, Strategy and Informatiuon Technology, International Edition; 2001 | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to Service Systems |
| 2 | Types of Servers and Serving Policies |
| 3 | Queueing Models |
| 4 | Queueing Models |
| 5 | Queueing Models |
| 6 | Queueing Models (MIDTERM EXAM) |
| 7 | Server Unavailability (MIDTERM EXAM) |
| 8 | Server Unavailability |
| 9 | Capacity Planning and Queueing Models |
| 10 | Capacity Planning and Queueing Models |
| 11 | Managing Capacity and Demand |
| 12 | Managing Capacity and Demand |
| 13 | Performance Measure- Service Level |
| 14 | Performance Measure- Service Level |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418477 | **COURSE NAME** | FINANCIAL ECONOMICS |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (**X**) | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | | | X | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | |  | | |  | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Definition of the financial system and its function, definition of financial instruments and intermediaries and their functions, definition of the exchange rates and theory of interest | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Defining concepts related to financial system and function | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Informing about financial system and functions | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The skill of learning how the financial system works  The ability to learn how financial instruments and instruments work  The ability to learn how interest rate theory and exchange rates are determined | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Mishkin F. S. **“***The Economics of Money, banking ad financial markets***”** Addison Wesley: NewYork, 2009 | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Parasız İ.“*Para Banka ve Finansal Piyasalar”*.Ezgi Kitapevi,2003  Keyder N. “ *Para teori-politika-uygulama*”, Bizim Hür Basım evi, 2002 | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE OUTLINE** | |
| **WEEK** | **SUBJECTS / TOPICS** |
| 1 | Financial System and functioning |
| 2 | Financial System and functioning |
| 3 | Financial System and functioning |
| 4 | Financial instruments |
| 5 | Financial instruments |
| 6 | Financial instruments (MIDTERM EXAM) |
| 7 | Financial intermediation and regulation (MIDTERM EXAM) |
| 8 | Financial intermediation and regulation |
| 9 | Financial intermediation and regulation |
| 10 | Determination of interest and interest rates |
| 11 | Determination of interest and interest rates |
| 12 | Foreign exchange markets |
| 13 | Foreign exchange markets |
| 14 | Risk management of exchange rate |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  | **X** |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | **X** |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assist. Prof. Dr. Serdar NESLİHANOĞLU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |
| **COURSE CODE** | 121418479 | **COURSE NAME** | STATISTICAL TECHNIQUES FOR MARKETING RESEARCHES II | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | **LANGUAGE** | |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY () ELECTIVE (X) | | | Turkısh | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 40 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | |  | | |  |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 60 |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The purposes of analysis, the relationships between techniques, analysis of variance, multiple regression, discriminant analysis, factor analysis, cluster analysis,correspondence analysis, multidimensional scaling, non-parametric techniques | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Data collection regarding the purposes of the corporation and the preparation of the projects analyzed by the methods that were determined and the determination of the methods | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is providing a Marketing researches problem solving skills to students | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to recognize and solve the marketing research problem and also will be able to produce solutions. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming.  Teaching Technıcs: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1- KURTULUŞ, K., (2004). Pazarlama Araştırmaları, Literatür yayıncılık  2-NAKİP, M.(2006) Pazarlama Araştırma teknikleri ve SPSS destekli uygulamalar, Seçkin Yayınevi, Ankara | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1- KOTLER, P., (1991). Marketing Management Analysis, Implementation and Control, Prentice – Hall Internation  2- ODABAŞI, Y., (1998). Tüketici Davranışı ve Pazarlama Stratejisi, Anadolu Üniversitesi  3- SHARMA, S. ,(1993). Applied Multivariate Techniques, John Wiley and Sons Inc, New York.  4- TABANICK, G.B. FIDELL, L.S., (1996). Using Multivariate Statistics, Harper Collngs College Publisher Inc., New York. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Purposes of statistical analysis |
| 2 | The relationship between statistical techniques |
| 3 | The relationship between statistical techniques(continued) |
| 4 | Analysis of variance and applications with the relevant statistical software |
| 5 | Multiple regression and applications with the relevant statistical software |
| 6 | Discriminant analysis and applications with the relevant statistical software (MIDTERM EXAM) |
| 7 | Factor analysis and applications with the relevant statistical software (MIDTERM EXAM) |
| 8 | Factor analysis(continued), cluster analysis and applications with the relevant statistical software |
| 9 | Cluster analysis and applications with the relevant statistical software(continued) |
| 10 | multidimensional scaling and applications with the relevant statistical software |
| 11 | Applications with the relevant statistical software |
| 12 | nonparametric tests and applications with the relevant statistical software |
| 13 | nonparametric tests and applications with the relevant statistical software(continued) |
| 14 | Applications with the relevant statistical software |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | **X** |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics |  | **X** |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418481-121438481 | **COURSE NAME** | STATISTICAL COMPUTING II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE () | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | No prerequisites | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Hypothesis testing, error types, categorical data analysis, regression and correlationanalysis of variance. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Hypothesis testing, categorical data analysis, regression and correlation analysis,analysis of variance to be addressed. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Examination of the issues mentioned in a variety of practical problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Written text | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Olasılık ve İstatistiğe Giriş Prof. Dr. Salih Çelebioğlu – Prof.Dr. Reşat Kasap | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Olasılık ve İstatistik Prof.Dr. Fikri Akdeniz, Olasılık ve İstatistik Prof.Dr. Semra Erbaş | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Calculater and related documents | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Types of error in hypothesis testing, tests of hypotheses about the mean mass |
| 2 | For large samples and small bulk samples averaging hypothesis testing |
| 3 | The mean difference of two clusters of hypothesis testing, the dependent and independent tests of hypotheses about large samples, averaged for the stack, the stack for small samples independent tests of hypotheses about the mean difference |
| 4 | Mass ratio and rate difference of the two stack tests of hypotheses about |
| 5 | Goodness of fit tests: binomial distribution of the compliance, compliance with the Poisson distribution, normal distribution fit |
| 6 | Independence test, homogeneity test, measuring the relationship (MIDTERM EXAM) |
| 7 | Simple linear regression, least squares method (MIDTERM EXAM) |
| 8 | Assumptions of regression analysis, the standard deviation of random errors |
| 9 | The coefficient of determination, confidence intervals and hypothesis testing |
| 10 | F test for the significance of the model, the use of regression models and correlation |
| 11 | One-way analysis of variance, the model equation, the calculation formulas |
| 12 | Bartlett's test for equality of variances |
| 13 | Multiple comparisons, Tukey test , Two-way analysis of variance |
| 14 | Model equation and calculation formulas, Random block design, Latin square layout |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assist. Prof. Dr.Hülya ŞEN

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121438485 | **COURSE NAME** | INSURANCE STATISTICS AND ACTUARY |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (**X**) | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | | | X | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 40 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | |  | | |  | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Concepts and types of insurance, statistical distributions used in insurance, types of index used in insurance premium calculations | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | General concepts related to insurance and actuarial risk measurement and premium calculations | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Learning the statistical distributions and applications used for risk analysis and risk premium calculations related to insurance and actuarial | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The ability to recognize the basic concepts of insurance and actuarial  The ability to use statistical distributions used in insurance  The ability to use risk models used in insurance | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Boland, P. J. “*Statistical and Probabilistic Methods in Actuarial Science*”, Chapman & Hall/CRC Interdisciplinary Statistics, 2007 | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Bowers N.L.,Gerber H.V., Hickman J.C., Jones D.A. and Nesbitt C.J. “*Actuarial Mathematics*”, SOA, USA, 1997 | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE OUTLINE** | |
| **WEEK** | **SUBJECTS / TOPICS** |
| 1 | Definition of insurance |
| 2 | Types of insurance |
| 3 | Terms of insurance |
| 4 | Statistical distributions |
| 5 | Statistical distributions |
| 6 | Calculations of insurance Premium (MIDTERM EXAM) |
| 7 | Calculations of insurance Premium (MIDTERM EXAM) |
| 8 | Calculations of insurance damage |
| 9 | Calculations of insurance damage |
| 10 | Methods of calculating total damage distribution |
| 11 | Methods of calculating total damage distribution |
| 12 | Methods of calculating total damage distribution |
| 13 | Types of Index |
| 14 | Types of Index |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assist. Prof. Dr. Serdar NESLİHANOĞLU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418504 | **COURSE NAME** | Introduction to Data Mining |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE ( X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 25 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 2 | | 30 | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Project | | | | |  | | 45 | |
| **PREREQUISITE(S)** | | | | | To have basic knowledge about probability and statistics | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Data Mining and Knowledge Discovery, Data Preprocessing, Exploratory Data Analysis, Prediction and Classification, Clustering, Association Rules, Model Evaluation Techniques | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aims of this course are to discuss data mining concepts and to teach implementations of data mining techniques (classification, clustering, etc.) in Database | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Suggest appropriate solutions to real world problems  Build up team spirit in solving challenging data mining problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able:  To explain and use the mining process for descriptive and predictive analytics. to explore data using various visualization techniques. to understand and apply the core data mining methods of Classification, Association Analysis, Cluster Analysis, to conduct a complete data mining project including data preparation and documentation of the results. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNİCS** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1. Daniel T. Larose, Discovering Knowledge in Data: An Introduction to Data Mining, John Wiley & Sons, Inc. 2005. 2. J. W. Han and M. Kamber, Data Mining: Concepts and Techniques, Morgan Kaufmann, 2000. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Data Mining and Business Analytics with R, Johannes Ledolter | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Book, article, software, computer, R and MATLAB software, projection etc. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | SUBJECTS |
| **1** | Introduction to Data Mining: Basic Concepts |
| **2** | Data Preprocessing: Basic Approximations |
| **3** | Exploratory Data Analysis |
| **4** | Supervised Learning versus Unsupervised Learning |
| **5** | Prediction and Classification |
| **6** | Classification Techniques and Algorithms (MIDTERM EXAM) |
| **7** | Classification Techniques and Algorithms: R Implementation (MIDTERM EXAM) |
| **8** | Classification Techniques and Algorithms: R Implementation |
| **9** | Project 1 presentation |
| **10** | Clustering: |
| **11** | Clustering: R Implementation |
| **12** | Association Rules: R Implementation |
| **13** | Model Evaluation and Comparative Studies |
| **14** | Project 2 presentation |
| 15,16 | **Final Exam** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Ass. Prof. Dr. Sevgi ABDALLA

**Signature: Date:20.04.2018**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418501 | **COURSE NAME** | APPLIED STATISTICS USING R II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 3 | 0 | | 0 | | 3 | | 5 | COMPULSORY ( ) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Univariate, bivariate and multivariate data, random generators, exploratory data analysis, normality tests, confidence interval estimation, hypothesis tests, anova and ancova, regression analysis, transformations, variable selection. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This course includes the analysis and interpretation of statistical techniques practically in the R program. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | This course provides students with the ability to solve problems in real life by using R program and to apply statistical techniques. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To be able to operate statistical programs with R program, to develop codes and to make statistical applications with them. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Verzani J, 2001, Using R for Introductory Statistics, Chapman & Hall. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Crawley., M. J.,2007,The R Book, Wiley | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Univariate and bivariate data |
| 2 | Multivariate data |
| 3 | Random data and random number generators |
| 4 | Exploratory data analysis |
| 5 | Normality tests |
| 6 | Normality tests (MIDTERM EXAM) |
| 7 | Transformations (MIDTERM EXAM) |
| 8 | Estimation theory |
| 9 | Confidence interval estimation |
| 10 | Hypothesis testing |
| 11 | Hypothesis testing |
| 12 | Analysis of variance and analysis of covariance |
| 13 | Regression analysis |
| 14 | Variable selection |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRİNG |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418486 | **COURSE NAME** | STATISTICAL QUALITY CONTROL AND TOTAL QUALITY MANAGEMENT II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY ( x ) ELECTIVE ( ) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | | X | | | | X | | | | X | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The subjects covered in the third year spring semester Quality Control (mandatory) and fourth year fall semester Total Quality Management (elective) courses are examined in detail. Later, studies are being carried out in real life in factories. The Quality Control Unit is monitored with the permission of the managers and participated in the workshops that have been made. Statistical Quality Control studies are performed by using computer package programs and the results obtained are evaluated. In addition, publications-literature on the subject of total quality management are followed and evaluations are made on the total quality understanding of the factory without any name. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is understand and research to application Statistical Quality Control and Quality Management. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Once they have taken this course, they will be able to easily implement the quality control of statistical science they have studied in various sectors. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | In practice and in theory, be able to analyze the importance of Statistical Quality Control and Total Quality Management, would have to evaluate knowledge and equipment. Develop approaches and tools using to solve managerial and quality problems, apply modern Statistical Quality Control and Quality Management techniques, and evaluate the strengths and weaknesses of different management methods, effectively use computer and packages program to solve problems.etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Statistical Quality Control and Total Quality Management courses books and other materials. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Statistical Quality Control and Total Quality Management courses books and other materials. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | computer | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Determination of the issue of homework |
| 2 | Preparation studies |
| 3 | The application studies |
| 4 | Collecting of theoretical infornation |
| 5 | Study of of theoretical infornation |
| 6 | Finding application data (MIDTERM EXAM) |
| 7 | Collecting of application data (MIDTERM EXAM) |
| 8 | Statistical evaluation of data |
| 9 | Preparation of report |
| 10 | Evaluation of the application portion of the assignment |
| 11 | Writing the assignment |
| 12 | Discussion of the conclusions |
| 13 | Presentation of assignment, discussion |
| 14 | General evaluation, statistical evaluation of the benefit application |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics | **X** |  |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods | **X** |  |  |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process | **X** |  |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | **X** |  |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr. Öğr. Üyesi Günseli Kurt **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418487 | **COURSE NAME** | MANAGERIAL DECISION MAKING II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 7 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | |  | |  | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (Oral exam) | | | | | 1 | | 30 | |
| **FINAL EXAM** | | | | | Homework | | | | | 1 | | 70 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Establishing the model for the research problem, obtaining the data, analysis and application of the selected technique. Reporting studies and presentation of the report. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Applying, reporting and presenting a scientific work plan on real life problem | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | To be able to apply the theoretical and practical knowledge learned and to be able to manage the research process. It gives the ability to use these steps by applying every step of the scientific research. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To be able to define a statistical research problem, to compile sources and data related to problem, to make evaluations, to develop solutions, to select appropriate statistical method, to report the results and to apply the results obtained. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | |  | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Examination of research plan |
| 2 | Modeling studies |
| 3 | Modeling studies |
| 4 | Obtaining the input data |
| 5 | Application of Solution Techniques |
| 6 | Application of Solution Techniques (MIDTERM EXAM) |
| 7 | Intermediate Evaluation (MIDTERM EXAM) |
| 8 | Model Validation |
| 9 | Model Verification |
| 10 | The Report preparing |
| 11 | The Report preparing |
| 12 | The Report preparing |
| 13 | Preparing the report presentation |
| 14 | The report presentation |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Şenol Erdoğmuş **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418464 | **COURSE NAME** | REPEATED MEASURES EXPERIMENTS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 4 | 2 | | 0 | | 5 | | 10 | COMPULSORY ( ) ELECTIVE ( X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | Multifactor experiments having repeated measures,two-factor experiment with repeated measures on one factor, three -factor experiment with repeated measures (caseI), three -factor experiment with repeated measures (caseII), tests of signifficiant in repeated measures experiments, assumptions, multiple comparisons in repeated measures experiments | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | To introduce the concepts and repeated measures experiments and to teach exercises in the application of repeated measures experiments to related problems. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts and repeated measures experiments and to provide exercises in the application of repeated measures experiments to related problems. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | The major objective of this course is evaluating alternative methods and using the repeated measures techniques in problem solving. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will be able to; know terminology, decide exact test, apply the tests to real data correctly. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | B.J. Winer, Statistical Principles in Experimental Design | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | B.J. Winer, Statistical Principles in Experimental Design | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical Lab. | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Multifactor Experiments Having Repeated Measures |
| 2 | Two-Factor Experiment With Repeated Measures On One Factor |
| 3 | Two-Factor Experiment With Repeated Measures On One Factor: İllustrative Applications |
| 4 | Three -Factor Experiment With Repeated Measures (Caseı) |
| 5 | Three -Factor Experiment With Repeated Measures (Caseı): Continue |
| 6 | Three -Factor Experiment With Repeated Measures (Caseı): İllustrative Applications (MIDTERM EXAM) |
| 7 | Three -Factor Experiment With Repeated Measures (Caseıı) (MIDTERM EXAM) |
| 8 | Three -Factor Experiment With Repeated Measures (Caseıı): Continue |
| 9 | Three -Factor Experiment With Repeated Measures (Caseıı): İllustrative Applications |
| 10 | Tests Of Signifficiant İn Repeated Measures Experiments |
| 11 | Assumptions: Equality Of Covariance Matrices |
| 12 | Assumptions: Symmetry Of Covariance Matrices |
| 13 | Multiple Comparisons İn Repeated Measures Experiments |
| 14 | Evaluation Of Methods |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  | **X** |  |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Zeki YILDIZ

|  |  |
| --- | --- |
| **Signature**:  **Date:** | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418466 | **COURSE NAME** | APPLICATIONS OF STATISTICS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | **LANGUAGE** | |
| 8 | 2 | 2 | | 0 | | 5 | | 10 | COMPULSORY (X) ELECTIVE () | | | Turkısh | |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | | **%** |
| 1st Mid-Term | | | | | 1 | | | 25 |
| 2nd Mid-Term | | | | |  | | |  |
| Quiz | | | | |  | | |  |
| Homework | | | | | 1 | | | 25 |
| Project | | | | |  | | |  |
| Report | | | | |  | | |  |
| Others (………) | | | | |  | | |  |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | | 50 |
| **PREREQUISITE(S)** | | | | | none | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | The multivariate analysis of compiled data with relevant statistical software | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | In this course, the compiled data for the analysis of how to select the most appropriate multivariate statistical technique, categorical data analysis, software applications for multivariate data and structural equation models are taught. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Providing skills that would help solve problems in real life | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Be able to produce solutions to reconcile the data with the knowledge he or she gained from the course. | | | | | | | | |
| TEACHING METHODS AND TECHNICS | | | | | Teaching Methods: Lecture, Discussion, Question & Answer, Application-Research, Problem Solving, Brain Storming. Teaching TECHNIQUES: Productive, Rational, Entrepreneurial, Creative, Adhering to Ethical Rules, Interrogating, Using Time Effectively, Solving Problems, Basic Mathematical Skills, Decision Making Skills. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1- KURTULUŞ, K., (2004). Pazarlama Araştırmaları, Literatür yayıncılık  2-Nakip, M.(2006) Pazarlama Araştırma teknikleri ve SPSS destekli uygulamalar,Seçkin Yayınevi, Ankara | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1) FREUND, JE (2001). Mathematical Statistics. (Translated Şenesen, Ü.) Istanbul: Literature Publishing.  2- SHARMA, S. ,(1993). Applied Multivariate Techniques, John Wiley and Sons Inc, New York.  3- TABANICK, G.B. FIDELL, L.S., (1996). Using Multivariate Statistics, Harper Collngs College Publisher Inc., New  4- TABANICK, G.B. FIDELL, L.S., (1996). Using Multivariate Statistics, Harper Collngs College Publisher Inc., New York | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Categorical data analysis with relevant statistical software |
| 2 | Categorical data analysis with relevant statistical software(continued) |
| 3 | Correspondence analysis and application of correspondence analysis with relevant statistical software |
| 4 | Loglinear models and application of loglinear models with relevant statistical software |
| 5 | Loglinear models and application of loglinear models with relevant statistical software(continued) |
| 6 | Factor analysis and application of factor analysis with relevant statistical software (MIDTERM EXAM) |
| 7 | Factor analysis and application of factor analysis with relevant statistical software(continued) (MIDTERM EXAM) |
| 8 | Clustering and application of Clustering with relevant statistical software |
| 9 | Clustering and application of Clustering with relevant statistical software(continued) |
| 10 | Discriminant analysis and application of discriminant analysis with relevant statistical software |
| 11 | Discriminant analysis and application of discriminant analysis with relevant statistical software(continued) |
| 12 | Structural Equation Modelling and application of Structural Equation Modelling with relevant statistical software |
| 13 | Structural Equation Modelling and application of Structural Equation Modelling with relevant statistical software(continued) |
| 14 | General assessment |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  | X |  |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | X |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | X |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | X |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  | X |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics | X |  |  |  |
| 7 | The awareness of professional ethics |  | X |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | X |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | X |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | X |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | X |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr.Veysel YILMAZ **Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418491-121438491 | **COURSE NAME** | STATISTICAL PACKAGE PROGRAMS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY ( X ) ELECTIVE (X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | No prerequisites | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Data collecting, reaserching and understanding of the appropriate statistical software (minitab, SPSS, Statistica, SAS etc.) analysis of the data in the choosen software. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Determining of an application according to the technique, collecting of data and data analysis. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Ensure convenient use of statistical package programs | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Written text | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Related documents | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Related documents | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computers and related documents | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Determination of the how the data collect |
| 2 | Determination of the how the data collect |
| 3 | Determination of the how the data collect |
| 4 | Collecting of the Data |
| 5 | Collecting of the Data |
| 6 | Collecting of the Data (MIDTERM EXAM) |
| 7 | Writing of the informations about statistical software (MIDTERM EXAM) |
| 8 | Writing of the informations about statistical software |
| 9 | Analysis of Data using software |
| 10 | Analysis of Data using software |
| 11 | Analysis of Data using software |
| 12 | Obtaining of the Analysis Results |
| 13 | Obtaining of the Analysis Results |
| 14 | Interpreting and reporting of the results |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr.Öğr.Üyesi Hülya ŞEN

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418492-121438492 | **COURSE NAME** | METHODS FOR ANALYZING STATISTICAL DATA II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE HOURS** | | | | |  | | | | | | | | |
| **Theoretical** | **Practice** | | **Laboratory** | | **Credits** | | **ECTS** | **COURSE TYPE** | | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X ) ELECTIVE (**X**) | | | | | Turkish |
| **COURSE CATEGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | | | X | | |
| **ASSESSMENT CRITERIAS** | | | | | | | | | | | | | | |
| **TERM TIME** | | | | | **Activity** | | | | | **Number** | | | **Percentage (%)** | |
| 1st Mid-Term | | | | | 1 | | | 30 | |
| 2nd Mid-Term | | | | |  | | |  | |
| Quiz | | | | |  | | |  | |
| Homework | | | | | 1 | | | 30 | |
| Project | | | | |  | | |  | |
| Report | | | | |  | | |  | |
| Others (………) | | | | |  | | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | | 40 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Robust parameter estimation, Nonparametric parameter estimation, Least-Absolute-Deviations Regression, M-Regression, Nonparametric regression, Other regression methods, Robust experimental design, Nonparametric experimental design, Comparing robust and nonparametric methods. | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The purpose of this course is to teach how to use alternatives methods for analyzing nonnormal data. | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Teach how to use alternatives methods for analyzing nonnormal data. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students will gain a statistical data analysis practice for the real data set. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Applied Nonparametric Statistics by Wayne W. Daniel, Houghton Miflin Company, 1978. | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Alternative Methods of Regression by David Birkes, Yadolah Dodge, John Wiley & Sons, 1993.  Understanding Robust and Exploratory Data Analysis by David C. Hoaglin, Frederich Mosteller, John W. Tukey, John Wiley & Sons, 1983.  Robust Statistics, by P. J. Huber, John Wiley & Sons, 1981. | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE OUTLINE** | |
| **WEEK** | **SUBJECTS / TOPICS** |
| 1 | Robust parameter estimation |
| 2 | Nonparametric parameter estimation |
| 3 | Nonparametric parameter estimation |
| 4 | Least-Absolute-Deviations Regression |
| 5 | Least-Absolute-Deviations Regression |
| 6 | M-Regression (MIDTERM EXAM) |
| 7 | M-Regression (MIDTERM EXAM) |
| 8 | Nonparametric regression |
| 9 | Nonparametric regression |
| 10 | Other regression methods |
| 11 | Other regression methods |
| 12 | Robust experimental design |
| 13 | Nonparametric experimental design |
| 14 | Comparing robust and nonparametric methods |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  | **X** |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  | **X** |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor (s):** Assoc. Prof. Dr. Arzu ALTIN YAVUZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |
|  |  |
| **COURSE CODE** | 121418493 | **COURSE NAME** | COMPUTING STATISTICAL DATA ANALYSIS II | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Using the events of defined in Visual Basic programming language, Creating of graphs, Making of Menu based program, Object oriented programming, Using of Excel data in Visual Basic, Using of Axess data in Visual Basic, Data management in Visual Basic, Internet and Web applications in Visual Basic, Generation of the by new projects and present softwares and statistical package programmes, | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Understanding the links of web pages by visual programming  Researching and designing the data saving preferences of the web pages in the statistical meaning | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Creating the some statistical modules by visual programming,  Preparing the web pages | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Understanding information Technologies  Use Visual Basic program  Know internet resources and services.  Understand the working principles of web pages. | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Excel XP ve MAKRO Ötesi / Zirvedeki Beyinler 4  Access Veri tabını yönetimi Mithat Uysal   PHP, MySQL ve APACHE (yazar: Julie C. Meloni) | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Uzmanlar için PHP (yazar: Mehmet Şamlı)  MS SQL Server ile Temel Veritabanı Programlama Tasarım ve Gerçekleştirme Yaşar Gözüdeli | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer and İnternet | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to programs of hte web pages preperation |
| 2 | Introduction to programs of hte web pages preperation (cont.) |
| 3 | Wordpress in Local host and code writing in asp |
| 4 | Comparision with the other buildings in Local host and Operating in msql |
| 5 | Applications of differences and similarities between Php and asp |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Applications of differences and similarities between Php and asp |
| 9 | Applications of differences and similarities between Php and asp (cont) |
| 10 | Program writing on Web |
| 11 | Visual basic |
| 12 | Using the C+ , Delphi, Java |
| 13 | Comparision of the programmes |
| 14 | Database control on the Web |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):Lecturer** Ali Atalay

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418494 | **COURSE NAME** | MULTIVARIATE REPEATED MEASURES DESIGN II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | |  | |  | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | | 1 | | 40 | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Homework | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Doubly multivariate hypothesis technique, multivariate mixed hypothesis technique, investigation of the assumptions of validaiton of hyothesis testing, adjusted multivariate mixed significance technique when the multivariate sphericity consitions doesn’t held, comparision of the multivariate significance techniques. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | How the repeated design should do and analysis of collected data. | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | How the repeated design should do and analysis of collected data. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Design and conduct experiments as well as to analyze and interpret data. | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Experiment Design: Procedures for the Behavioral Sciences (Kırk) | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Design and Analysis of Experiments (Montgomery)  Design and Analysis of Experiments (Kempthorne)  The Design and Analysıs of Experiments (Mendelhall) | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Repeated measures designs |
| 2 | Repeated measures designs and random blocks design |
| 3 | Two factors experiment with repeated measures on one time factor |
| 4 | Two factors experiment with repeated measures on one time factor |
| 5 | Two factors experiment with repeated measures on one time factor |
| 6 | Tree factors experiment with repeated measures on two time factors and split plot desings (MIDTERM EXAM) |
| 7 | Signifinance tests in repeated measures designs on time (MIDTERM EXAM) |
| 8 | Signifinance tests in repeated measures designs on time |
| 9 | Significance techniques of the effects of within groups in Split plot design and split split plot design |
| 10 | The Doubly Multivariate Model |
| 11 | The Multivariate Mixed Model |
| 12 | Validity Conditions and on Approximate Test |
| 13 | The Adjusted Multivariate Mixed Model |
| 14 | Comparision of the Multivariate Tests |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **x** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **x** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **x** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **x** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **x** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **x** |
| 7 | The awareness of professional ethics |  |  |  | **x** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **x** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **x** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **x** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **x** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. Zeynep FİLİZ

|  |  |
| --- | --- |
| **Signature**: | **Date:** |



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418495 | **COURSE NAME** | RELIABILITY ANALYSIS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY(X ) ELECTIVE( ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| x | | |  | | | | x | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written exam | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Practical applications, examples, and problems cover a broad range of engineering fields, such as mechanical, electrical, industrial, computer, structures, and automatic control systems. | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | This course presents various factors that determine the stress and strength of components and their impact on system reliability | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Principles of the methods of risk assessment and reliability analysis | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Gain knowledge of reliability and rates of failure. Knowledge of reliability characterization. Knowledge of constant failure rate model. Knowledge of time-dependent failure rates. Knowledge of component failures and failure modes. | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | E. E. Lewis, Introduction to Reliability Engineering (John Wiley & Sons, 1994 | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | |  | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Computer. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Reliability and Rates of Failure |
| 2 | Reliability Characterization |
| 3 | Constant rate failure model |
| 4 | Time dependent failure rates |
| 5 | Component failures and failure modes |
| 6 | Reliability with a single loading (Mid-term Exam) |
| 7 | Reliability and safety factors (Mid-term Exam) |
| 8 | Reliability testing |
| 9 | Accelerated life testing |
| 10 | Active and standby redundancy |
| 11 | Multiply redundant systems |
| 12 | Preventive maintenance |
| 13 | Corrective maintenance |
| 14 | System availability |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  |  | **X** |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  | **X** |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  |  | **X** |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof. Dr. H. Kıvanç Aksoy

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418496 | **COURSE NAME** | QUALITATIVE DEPENDENT VARIABLE MODELS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X ) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
|  | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Ordered and Multinomial Probit and Logit models, estimation methods, latent variable approach, marginal effects, goodness of fit measures | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Understand the mathematical structure of qualitative dependent variable models which are ordered and multinomial outcomes as it is applied in the theory and practice of statistics | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Evaluate and analyze the qualitative dependent variable models. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Evaluate the strengths and weaknesses different estimation methods | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | Lecturing, Application/Practice | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Aldrich J.H. and Nelson F.D.(1984).Linear Probability, Logit and Probit Models. Thousand Oaks: Sage Publications Inc. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Liao T.F.(1994). Interpreting Probability Models: Logit, Probit and Other Generalized Linear Models. Thousand Oaks:Sage Publications Inc. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Statistical package programs | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Ordinal Probit models |
| 2 | Ordinal Logit models |
| 3 | Interpretation Ordinal Probit model coefficients |
| 4 | Interpretation Ordinal Logit model coefficients |
| 5 | Model parameters estimation, Hypothesis tests, Goodness of fit tests |
| 6 | Applications (MIDTERM EXAM) |
| 7 | Multinomial Probit models (MIDTERM EXAM) |
| 8 | Interpretation Multinomial Probit model coefficients |
| 9 | Model parameters estimation |
| 10 | Hypothesis tests, Goodness of fit tests |
| 11 | Multinomial Logit models |
| 12 | Interpretation Multinomial Logit model coefficients |
| 13 | Hypothesis tests, Goodness of fit tests |
| 14 | Applications |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  | **X** |  |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  | **X** |  |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  | **X** |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas | **X** |  |  |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics | **X** |  |  |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. | **X** |  |  |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Prof.Dr. Özlem ALPU

|  |  |
| --- | --- |
| **Signature**: | **Date:** |

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418497 | **COURSE NAME** | ADVANCED DEMOGRAPHIC TECHNIQUES II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | | | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** | |
| 8 | | | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY (X) ELECTIVE (X) | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | |
| **Statistics** | | | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | | |
| X | | | | |  | | | |  | | | |  | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | | |
| 1st Mid-Term | | | | | Written | | 40 | | |
| 2nd Mid-Term | | | | |  | |  | | |
| Quiz | | | | |  | |  | | |
| Homework | | | | |  | |  | | |
| Project | | | | |  | |  | | |
| Report | | | | |  | |  | | |
| Others (………) | | | | |  | |  | | |
| **FINAL EXAM** | | | | | | |  | | | | | Written | | 60 | | |
| **PREREQUISITE(S)** | | | | | | | None | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | | | Indirect techniques for demographic measures from incomplete and deficient data | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | | | The main of the course is to enable students acquire indirect techniques of estimating demographic measures | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | | | This course is useful for the statisticians and demographers to derive the maximum of reliable information from incomplete data in a census or demographic survey. | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | | | By the end of the course students should be able to:   1. Useindirect techniques for demographic measures from incomplete and deficient basic data 2. Be made familiar with the most mortality and fertility models,   **3.** Read demographic literature. | | | | | | | | | |
| **TEACHING METHODS AND TECHNIQUES** | | | | | | | Application / Practice, Question - Answer, Problem solving, Project / Homework | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | | | 1. Shryock, H.S., Siegel, J.S. and Ass. (1976). The Methods and Materials of Demography. Academic Pres. London | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | | | 1. Preston, S.H., Heuveline, P. And Guillot, M. (2001). Demography: Measuring and Modeling Population Processes. Blachwell Publishing. UK   1. Manual IV. (1967). Methods of Estimating Basic Demographic Measures from Incomplete Data. Population Studies. No: 42. United Nations publications. New York   **3.** Manual X. (1983). Indirect Techniques for Demographic Estimation. Population Studies. No: 81. United Nations publication. New York | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | | | Calculator and Computer | | | | | | | | | |
| **COURSE SCHEDULE** | | | | | | | | | | | | | | |
| **WEEK** | **SUBJECTS** | | | | | | | | | | | | | |
| 1 | Introduction to indirect techniques: Definition of indirect techniques in demographic estimation | | | | | | | | | | | | | |
| 2 | Need for indirect estimation | | | | | | | | | | | | | |
| 3 | Estimation of fertility based on information about children ever born | | | | | | | | | | | | | |
| 4 | Estimation of child mortality from information on children ever born and children surviving | | | | | | | | | | | | | |
| 5 | Estimation of adult mortality from information on the distribution of deaths by age | | | | | | | | | | | | | |
| 6 | Preston and Coale method / (MIDTERM EXAM) | | | | | | | | | | | | | |
| 7 | Brass growth balance method / (MIDTERM EXAM) | | | | | | | | | | | | | |
| 8 | Fertility and mortality estimation using model stable age distributions | | | | | | | | | | | | | |
| 9 | Estimation of adult mortality using successive census age distributions | | | | | | | | | | | | | |
| 10 | Estimation of mortality from intercensal survivorship probabilities | | | | | | | | | | | | | |
| 11 | Intercensal survival with additional information on the age distribution and intercensal growth rates | | | | | | | | | | | | | |
| 12 | Intercensal survival with additional information on the age distribution and intercensal growth rates | | | | | | | | | | | | | |
| 13 | Estimation of a post childhood life table from an age distribution and intercensal growth rates | | | | | | | | | | | | | |
| 14 | Estimation of a post childhood life table from an age distribution and intercensal growth rates | | | | | | | | | | | | | |
| 15,16 | Final Exam | | | | | | | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  | **X** |  |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest | **X** |  |  |  |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  | **X** |  |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  | **X** |  |  |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management | **X** |  |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. | **X** |  |  |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**Assoc.Prof.Dr. Hatice Şamkar

|  |  |
| --- | --- |
| **Signature**: | **Date:** |

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418498-121438498 | **COURSE NAME** | MAIN ECONOMIC INDICATORS II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | | 0 | | 3 | | 5 | COMPULSORY ( X) ELECTIVE (X) | | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | |
| **MID-TERM** | | | | **Evaluation Type** | | | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | | |  | |  | |
| 2nd Mid-Term | | | | | | |  | |  | |
| Quiz | | | | | | |  | |  | |
| Homework | | | | | | | 1 | | 40 | |
| Project | | | | | | |  | |  | |
| Report | | | | | | |  | |  | |
| Others (………) | | | | | | |  | |  | |
| **FINAL EXAM** | | | | Homework | | | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | |  | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | Multivariate Reggression Analysis: Models with Qualitative Parameters, Dynamic Econometric Models.  Multivariate Analysis Methods: Principle Component Analysis, Cluster Analysis, Factor Analysis  Time Series Analysis: Causality Tests, Estimate Methods | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | Teaching the determination of the factors that thought to be attracted by economic indicators or attract economic indicators by using statistical and econometric analyse TECHNIQUES and how to estimate the future trend of the basic economic indicators | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | To competence of the determining of relations between main economic indicators and the other factors and foracasitng of the future term values of these indicators. | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | Students will be able to apply the analysis methods on economic indicators and able to interpret the conclusions. On the other hand they will be able to use the statistical programmes (SPSS, Eviews, etc.) in analysis | | | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | Lecturing, Application/Practice, Question-Answer, Project/Homework, Team work, Case study | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | Gujarati, D. (1995 ).Temel Ekonometri, Çev. Şenesen, Ü. ve Şenesen, G.G., Ekonomik Baskı, Literatür Yayıncılık. | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | Akaya, Ş. ve Pazarlıoğlu, M.V. (1998). Ekonometri II, 4. Baskı, Anadolu Matbaacılık, İzmir.  Bozkurt, H. (2007). Zaman Serileri Analizi, Ekin Kitabevi.  Kip, E. (1997). Ekonometrik Yöntemler, Teori ve Uygulama, Gazi Üniversitesi İletişim Fak. Basımevi, Ankara.  Kutlar, A. (2000). Ekonometrik Zaman Serileri, Teori ve Uygulama, Gazi Kitabevi, Ankara.  Kutlar, A. (2005). Uygulamalı Ekonometri, Nobel Yayın Dağıtım, 2. Baskı.  Maddala, G.S. (1999). Introduction to Econometrics, 3. Edition | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | |  | | | | | | | | | | |
|  |  |  |  | |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Determining of the factors which affects the economic indicators |
| 2 | Determining of the statistical and econometric methods |
| 3 | Multivariate Regression Analysis: Models with Qualitative Dependent Variable |
| 4 | Multivariate Regression Analysis: Models with Quantitative Dependent Variable |
| 5 | Multivariate Regression Analysis: Dynamic Econometric Models |
| 6 | Multivariate Analysis Methods : Principal Components Analysis (MIDTERM EXAM) |
| 7 | Multivariate Analysis Methods : Cluster Analysis (MIDTERM EXAM) |
| 8 | Multivariate Analysis Methods : Factor Analysis |
| 9 | Multivariate Analysis Methods : Discriminant Analysis |
| 10 | Time Series Analysis : Stationarity tests |
| 11 | Time Series Analysis: Causality Tests |
| 12 | Time Series Analysis: Cointegration Tests (Engle-Granger, Johansen Test) |
| 13 | Time Series Analysis: Foracasting Methods |
| 14 | Computer Application of statistical and econometric analysis (SPSS, Eviews, etc.) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **x** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Dr.Öğr.Üyesi Gaye KARPAT

**Signature: Date**

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | FALL |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418499 | **COURSE NAME** | FORECASTING TECHNIQUES II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY ( X ) ELECTIVE ( X) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | | 1 | | 40 | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | | 1 | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Introduction to the forecasting techniques: Trend Analysis, Moving Averages, Ouantitative and Qualitative Forecasting Techniques, Errors of forecasting, Methods of Smoothing: Simple Smoothing Methods and Holt-Winters exponantial smoothing methods, decomposition methods, seasonal decomposition and seasonal smoothing methods | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main of the course is to introduce “forecasting techniqeus and concepts” to student and to learn about the use of the forecasting models | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Understand importance of concepts in used to forecasting in the univariate time series. modeling in demographic analyses,  Application of the forecasting techniques and gain to ability of the forecasting, | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To have knowlede about seasonal time series  to have the competence of evaluating and analysing seasonal time series  Analysing the seasonal time series for undergraduate and graduate courses or work life and to have competence of forecasting of time series | | | | | | | | |
| **TEACHİNG METHODS AND TECHNIQUES** | | | | | Application/Practice, Project/Homework | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | Chatfield, C.,(2001), Time Series Forecasting, Boca Raton : Chapman & Hall/CRC | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Box, G.E.P and Jenkins, G.M. (1976), Time series analysis : Forecasting and Control, Holden-Say, Fransisco..  Akgül, I., (2003), Geleneksel Zaman Serisi Yöntemleri, D&R Yayınları, İstanbul.  Akmut, Ö., Aktaş, R., Binay, H.S, (1999), Öngçrü Teknikleri ve Finans Uygulamaları, Ankara Üniversitesi Siyasal Bilgiler Fakültesi Yayınları, Yayın No:584, Ankara.  Makridakis, S., Wheelwright S.C., Hyndman, R.J., (1998), Forecasting: Methods and Applications, Third edition. John Wiley and Sons.  Montgomery D. C., Johnson L. A. and Gardiner J. S.( 1994). Forecasting and Time Series Analysis, MCGraw-Hill, New York. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Regression Analysis in Time Series |
| 2 | Regression Analysis in Time Series (cont.) |
| 3 | Transfer Function Models |
| 4 | Transfer Function Models (cont.) |
| 5 | Seasonal Time Series |
| 6 | Seasonal Time Series (Mid term Exam) |
| 7 | Testing of seasonality in time series (Midterm Exam) |
| 8 | Removing of Seasonality |
| 9 | Removing of Seasonality (cont.) |
| 10 | Smoothing Methods of Seasonal Time Series |
| 11 | Smoothing Methods of Seasonal Time Series (cont.) |
| 12 | Seasonal ARIMA Models |
| 13 | Seasonal ARIMA Models (cont.) |
| 14 | Seasonal ARIMA Models (cont.) |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assoc. Prof. Dr. Fatih ÇEMREK

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418465 | **COURSE NAME** | ECONOMETRICS THEORY II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Laboratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | |  | | 3 | |  | COMPULSORY () ELECTIVE (X) | | | |  |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | |  | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Midterm | | | | | 1 | | 40 | |
| 2nd Midterm | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | |  | |  | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | |  | | | | |  | | 60 | |
| **PREREQUISITE(S)** | | | | |  | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Indirect Least Squares ,The method of Instrumental Variables,Two-stage Least Squares , Mixed Estimation Methods: general notes,Restricted Least Squares ,Pooling cross-section and time-series data, Durbin's Generalised Least Squares, Theil and Goldberger's Mixed Linear Estimation,The method of Principal Components | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To introduce the concepts of econometrics | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Econometrics and to provide exercises in the application of econometrics to related problems | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | |  | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | COURSE TEXT | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | Turkish and English econometrics books. | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | |  | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Indirect Least Squares |
| 2 | Continue |
| 3 | The method of Instrumental Variables |
| 4 | Continue |
| 5 | Two-stage Least Squares |
| 6 | MIDTERM EXAM |
| 7 | MIDTERM EXAM |
| 8 | Restricted Least Squares |
| 9 | Continue |
| 10 | Pooling cross-section and time-series data |
| 11 | Durbin's Generalised Least Squares |
| 12 | Continue |
| 13 | Theil and Goldberger's Mixed Linear Estimation |
| 14 | Continue |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  | **X** |  |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  |  | **X** |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**PhD. Cengiz Aktaş

|  |  |
| --- | --- |
| **Signature**: | **Date:** |

 **ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418500 | **COURSE NAME** | STATISTICAL ANALYSIS WITH SOFTWARES II |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | | | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | | **ECTS** | | | **TYPE** | | | | | | | | **LANGUAGE** | |
| 8 | 2 | 2 | | 0 | | 3 | | | 5 | | | COMPULSORY ( X ) ELECTIVE (X) | | | | | | | | Turkish | |
| **COURSE CATAGORY** | | | | | | | | | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | | **Computer** | | | | | | | | **Social Sciences** | | | | | |
| X | | | X | | | | | X | | | | | | | | X | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | | | | | | | | | |
| **MID-TERM** | | | | **Evaluation Type** | | | | | | | | | **Quantity** | | | | | **%** | | | |
| 1st Mid-Term | | | | | | | | | 1 | | | | | 25 | | | |
| 2nd Mid-Term | | | | | | | | |  | | | | |  | | | |
| Quiz | | | | | | | | |  | | | | |  | | | |
| Homework | | | | | | | | | 1 | | | | | 25 | | | |
| Project | | | | | | | | |  | | | | |  | | | |
| Report | | | | | | | | |  | | | | |  | | | |
| Others (………) | | | | | | | | |  | | | | |  | | | |
| **FINAL EXAM** | | | |  | | | | | | | | | 1 | | | | | 50 | | | |
| **PREREQUISITE(S)** | | | |  | | | | | | | | | | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | After compiling the data posed a problem, implementation of  advanced statistical analysis package in the statistical software or programming language. | | | | | | | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | | | How to put out the problem and put forward a statistical problem of programming languages​​, and package programs through advanced statistical methods to teach how to perform. | | | | | | | | | | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | To use software package for statistical analysis of data, ability to interpret the results. | | | | | | | | | | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | 1.Gain the ability to conduct a scientific research.  2. Solve a problem with a statistical approach.  3. Gain ability to analyze statistical techniques in computer environment.  4. Gain the ability to use various statistical programs and programming languages.  5. Gain the ability to bring a real problem solution in the working environment. | | | | | | | | | | | | | | | | | |
| **TEACHING METHODS AND TECHNICS** | | | | Project/Homework, Team work. | | | | | | | | | | | | | | | | | |
| **MAIN TEXTBOOK** | | | | Özdamar, K., Paket Programlar ile İstatistiksel veri Analizi I, 5. Basım, Kaan Kitabevi, ESKİŞEHİR, 2004.  Özdamar, K., Paket Programlar ile İstatistiksel veri Analizi II Çok Değişkenli Analizler, 5. Basım, Kaan Kitabevi, ESKİŞEHİR, 2004. | | | | | | | | | | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | Tekin, V. N., SPSS Uygulamalı İstatistik Teknikleri, Seçkin Yayınevi, 2. Baskı, Ankara, 2009.  EROL, H., SPSS Paket Programı ile İstatistiksel Veri Analizi, Nobel Kitabevi, ADANA, 2010.  Gürsakal, N., (1997), Bilgisayar Uygulamalı İstatistik I, Marmara Yayınları, Bursa.  Gürsakal, N., (1997), Bilgisayar Uygulamalı İstatistik II, Marmara Yayınları, Bursa.  Gamgam, H., Altunkaynak, B., (2008), Parametrik Olmayan Yöntemler SPSS Uygulamalı, Gazi Kitabevi, Ankara.  Akgül, A., Çevik, O., (2005), İstatistiksel Analiz Teknikleri - SPSS'de İşletme Yönetimi Uygulamaları, Emek Ofset  SAS User’s Guide.  SPSS User’s Guide  Minitab User’s Guide | | | | | | | | | | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | |  | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  | |  | | |  |  | | |  |  | |  | |  | |  | |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Time series analysis |
| 2 | Application of time series analysis in statistical softwares |
| 3 | Discrete distribution fitting and practices in statistical softwares |
| 4 | Continuous distribution fitting and practices in statistical softwares |
| 5 | Cluster analysis |
| 6 | Application of cluster analysis in statistical softwares (MIDTERM EXAM) |
| 7 | Diskriminant analysis (MIDTERM EXAM) |
| 8 | Application of diskriminant analysis in statistical softwares |
| 9 | Multidimensional scaling |
| 10 | Application of multidimensional sacling in statistical softwares |
| 11 | Log-Linear models |
| 12 | Application of Log-Linear Models in statistical softwares |
| 13 | Qulity control |
| 14 | Application of quality control in statistical softwares |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  | **X** |  |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English |  | **X** |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  | **X** |  |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  |  | **X** |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  |  | **X** |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):** Assist. Prof. Dr. Özer ÖZAYDIN

**Signature: Date:**



**ESOGÜ STATISTICS DEPARTMENT**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **SEMESTER** | SPRING |

|  |  |  |  |
| --- | --- | --- | --- |
| **COURSE CODE** | 121418503 | **COURSE NAME** | KNOWLEDGE DISCOVERY 2 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | | | | | |
| **Theory** | **Practice** | | **Labratory** | | **Credit** | | **ECTS** | **TYPE** | | | | **LANGUAGE** |
| 8 | 2 | 2 | | 0 | | 3 | | 5 | COMPULSORY ( X ) ELECTIVE ( X) | | | | TURKISH |
| **COURSE CATAGORY** | | | | | | | | | | | | | |
| **Statistics** | | | **Mathematics** | | | | **Computer** | | | | **Social Sciences** | | |
| X | | |  | | | | X | | | |  | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | | |
| **MID-TERM** | | | | | **Evaluation Type** | | | | | **Quantity** | | **%** | |
| 1st Mid-Term | | | | |  | |  | |
| 2nd Mid-Term | | | | |  | |  | |
| Quiz | | | | |  | |  | |
| Homework | | | | |  | |  | |
| Project | | | | | 3 | | 45 | |
| Report | | | | |  | |  | |
| Others (………) | | | | |  | |  | |
| **FINAL EXAM** | | | | | Written /Report | | | | | 1 | | 55 | |
| **PREREQUISITE(S)** | | | | | None | | | | | | | | |
| **BRIEF COURSE CONTENT** | | | | | Machine Learning, review of Machine Learning systems and applications, paper presentation, questions to think, problems to solve, Project creation and presentation | | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To independently think over research and development issues, to pro-actively relate what we learn to the real problems in practice, to stimulate and brain-storm new ideas, to intelligently solve pressing problems in various phases of knowledge discovery, | | | | | | | | |
| **CONTRIBUTION OF THE COURSE TO THE PROFESSIONAL EDUATION** | | | | | Accurately determine the problems encountered in real life, and by bringing to produce modeling and solution approaches. | | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | * set up a well-deﬁned learning problem for a given task * select and deﬁne a representation for data to be used as input to a machine learning algorithm * select and deﬁne a representation for the model to be output by a machine learning algorithm * compare different algorithms according to the properties of their inputs and outputs | | | | | | | | |
| **TEACHİNG METHODS AND TECHNİCS** | | | | | Application/Practice, Question-Answer, Project/Homework, Team work, Case study etc. | | | | | | | | |
| **MAIN TEXTBOOK** | | | | | 1. Data Mining: Concepts and Techniques. J. Han and M. Kamber. Morgan Kaufmann, 2000. | | | | | | | | |
| **SUPPORTING REFERENCES** | | | | | 1. Knowledge Discovery in Databases. G. Piatetsky-Shapiro and W. J. Frawley. AAAI/MIT Press, 1991. 2. Data Mining Techniques: for Marketing, Sales and Customer Support. M. Berry, G. Linoff (Wiley) 3. Advances in Knowledge Discovery and Data Mining. U.S. Fayyad, G. Piatetsky-Shapiro, P. Smyth, R. Uthurusamy, AAAI/MIT Press, | | | | | | | | |
| **NECESSARY COURSE MATERIALS** | | | | | Book, article, software, computer, R and MatLAb Software, projection etc. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **COURSE SCHEDULE** | |
| **WEEK** | **SUBJECTS** |
| 1 | Introduction to Machine learning |
| 2 | Machine Learning Algorithms |
| 3 | Unsupervised Machine Learning Algorithms |
| 4 | Literature review and applications |
| 5 | Literature review and applications |
| 6 | Software implementation (MIDTERM EXAM) |
| 7 | Project 1 presentation (MIDTERM EXAM) |
| 8 | Supervised Learning Algorithms |
| 9 | Literature review and applications |
| 10 | Literature review and applications |
| 11 | Software implementation |
| 12 | Project 2 presentation |
| 13 | Software implementation |
| 14 | Project 3 presentation |
| 15,16 | Final Exam |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | | | |
| **No** | **PROGRAM OUTCOMES** | **1** | **2** | **3** | **4** |
| 1 | The ability to use both theoretical and applied knowledge in statistics |  |  |  | **X** |
| 2 | The ability to define the problem, collecting data, modelling and analyzing with appropriate statistical methods |  |  |  | **X** |
| 3 | The ability to analyze data with the help of up-to-date software, interpret the results and use them in statistical decision making process |  |  |  | **X** |
| 4 | The ability to use suitable algorithms in order to solve the problem of interest |  |  |  | **X** |
| 5 | The ability to conduct research as part of a team and on his/her own in statistics and other areas |  |  |  | **X** |
| 6 | The ability to use fundamental concepts and principles in probability, statistics and mathematics |  |  |  | **X** |
| 7 | The awareness of professional ethics |  |  |  | **X** |
| 8 | The ability or motivation to use statistical concepts and understand it in English | **X** |  |  |  |
| 9 | The ability to interpret the fundamental concepts of social sciences and humanities analyze them. |  |  |  | **X** |
| 10 | The ability to use statistical methods for the knowledge of quality process and management |  | **X** |  |  |
| 11 | The ability to use statistical methods to develop his profession and applied statistical techniques. |  |  | **X** |  |

**1**: No Contribution **2**:Low Contribution **3**:Somewhat High Contribution **4:** High Contribution

**Instructor(s):**

Dr. Öğr. Üyesi Sevgi ABDALLA

**Signature: Date:20.04.2018**