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| antalya bilim Ã¼niversitesi ile ilgili gÃ¶rsel sonucu | **ECTS Course Description Form** |
| **PART I ( Senate Approval)** |
| **Offering School**  | *College of Engineering* |
| **Offering Department** | *Industrial Engineering*  |
| **Program(s) Offered to** | *Industrial Engineering*  | ***Compulsory*** |
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|  |  |
| **Course Code**  | *IE 212* |
| **Course Name** | *Statistical Models* |
| **Language of Instruction** | ***English*** |
| **Type of Course** | ***Lecture*** |
| **Level of Course** | *Undergraduate* |
| **Hours per Week** | **Lecture:** 3 | **Laboratory:** | **Recitation:** 1 | **Practical:**  | **Studio:** | **Other:** |
| **ECTS Credit** | *5* |
| **Grading Mode** | *Letter Grade* |
| **Pre-requisites** | *MATH 211* |
| **Co-requisites** |  |
| **Registration Restriction** |  |
| **Educational Objective** | *The objective of this course is to develop students’ ability to analytically study the data and apply statistical techniques on which modern statistical decision making often rests. Students will learn the outcomes of simple inferential statistics such as confidence intervals and hypothesis testing, the concept of mathematical modeling and how to interpret the results of regression models.* |
| **Course Description** | *Introduction to Statistical Models, Point Estimation, Statistical Intervals, Tests of Hypotheses, Simple Linear Regression and Correlation, Analysis of Variance, Introduction to Multiple Linear Regression, Introduction to Design of Experiments* |
| **Learning Outcomes**  | **LO1** | * *Find confidence intervals for parameter estimates*
* *Use null hypothesis significance testing to test the significance of results*
* *Use specific significance tests including z-test, t-test, chi-squared test*
* *Compute and interpret simple linear regression between two variables*
* *Interpret the results of statistical analyses*
* *Use a statistical software for data analysis, particularly regression analysis and analysis of variance*
 |
| **LO2** |
| **LO3** |
| **LO4** |
| **LO5** |
| **LO6** |
| **n..** |
| **PART II ( Faculty Board Approval)** |
| **Basic Outcomes (University-wide)** | **No.** | **Program Outcomes** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **LO6** |
| **PO1** | **Ability** to communicate effectively and write and present a report in Turkish and English.  | 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸 🗸  |
| **PO2** | **Ability** to work individually, and in intra-disciplinary and multi-disciplinary teams. |
| **PO3** | **Recognition** of the need for life-long learning and **ability** to access information , follow developments in science and technology, and continually reinvent oneself. |
| **PO4** | **Knowledge** of project management, risk management, innovation and change management, entrepreneurship, and sustainable development. |
| **PO5** | **Awareness** of sectors and **ability** to prepare a business plan. |
| **PO6** | **Understanding** of professional and ethical responsibility and **demonstrating** ethical behavior. |
| **Faculty Specific Outcomes** | **PO7** |  |
| **PO8** |  |
| **PO9** |  |
| **PO10** |  |
| **PO11** |  |
| **PO12** |  |
| **Discipline Specific Outcomes (program)** | **PO13** |  |
| **PO14** |  |
| **PO15** |  |
| **PO16** |  |
| **PO17** |  |
| **PO18** |  |
| **Specialization Specific Outcomes** | **PO N….** |  |
| **PART III (Department Board Approval)** |
| **Course Subjects, Contribution of Course Subjects to Learning Outcomes, and Methods for Assessing Learning of Course Subjects** | **Subjects** | **Week** |  | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **LO6** |
| **S1** | 1 | *Review of Statistics and Introduction to Statistical Models* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **S2** | 2 | *Point Estimation* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **S3** | 3 | *Statistical Intervals for a Single Sample* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **S4** | 4-7 | *Tests of Hypotheses for a Single Sample* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **S5** | 8-9 | *Statistical Inference for Two Samples* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **S6** | 10-12 | *Simple Linear Regression and Correlation* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **S7** | 13-14 | *Multiple Linear Regression and Design of Experiments* | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 | A1, A3 |
| **Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules**  | **No.** | **Type** | **Weight** | **Implementation Rule** | **Make-Up Rule** |
| **A1** | **Exam** | 65% | *Electronic devices are prohibited in the examinations except for calculators.* | *If an exam is missed, a make-up exam may be granted if student’ absence from the exam is because of a valid and documented excuse.* |
| **A2** | **Quiz** |  |  |  |
| **A3** | **Homework** | 30% | *Submission by the deadline* | *Late homework is penalized by a percentage* |
| **A4** | **Project** |  |  |  |
| **A5** | **Report** |  | *-* | *-* |
| **A6** | **Presentation** |  |  |  |
| **A7** | **Attendance/ Interaction** | 5% |  | *No compensation, no makeup* |
| **A8** | **Class/Lab./****Field Work** | - | - | - |
| **TOTAL** | **100%** |
| **Evidence of Achievement of Learning Outcomes** | *%70 course attendance and gaining 70% or more on taken exams and homework.*  |
| **Method for Determining Letter Grade** | *The %70 total attendance is required otherwise student will fail the course due to absenteeism. Letter grades are determined by applying catalogue system on student’s total weighted grade. Following is an example:*≥ 97% A+[93 97) A[90 93) A-[87 90) B+[83 87) B[80 83) B-[77 80) C+[73 77) C[70 73) C-[67 70) D+[60 67) D< 60 F |
| **Teaching Methods, Student Work Load** | **No** | **Method** | **Explanation** | **Hours** |
| ***Time applied by instructor*** |
| **1** | **Lecture** | *(14 weeks) × (3 hrs per week)* | *42* |
| **2** | **Interactive Lecture** |  |  |
| **3** | **Recitation** | *(14 weeks) × (1 hr per week)* | *14* |
| **4** | **Laboratory** |  |  |
| **5** | **Practical** |  |  |
| **6** | **Field Work** |  |  |
| ***Time expected to be allocated by student*** |
| **7** | **Project** |  |  |
| **8** | **Homework** | *(14 weeks) × (1 hrs per week)* | *14* |
| **9** | **Pre-class Learning of Course Material**  | *(14 weeks) × (1 hr per week)* | *14* |
| **10** | **Review of Course Material** | *(14 weeks) × (3 hrs per week)* | *42* |
| **11** | **Studio** |  |  |
| **12** | **Office Hour** | *(14 weeks) × (3 hrs per week)* | *42* |
| **TOTAL** | *168* |
| **IV. PART** |
| **Instructor** | **Name** | Dr. Masood JABARNEJAD |
| **E-mail** | masood.jabarnejad@antalya.edu.tr |
| **Phone Number** | *05539153010* |
| **Office Number** | *A1-69* |
| **Office Hours** | *3 hrs per week* |
| **Course Materials** | **Mandatory** |  |
| **Recommended** | *Applied Statistics and Probability for Engineers*, Montgomery, Douglas C. and Runger, George C |
| **Other** | **Scholastic Honesty** | *Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Any form of scholastic dishonesty is a serious academic violation and will result in a disciplinary action.* |
| **Students with Disabilities** | *Reasonable accommodations will be made for students with verifiable disabilities.* |
| **Safety Issues**  | *The course does not require any special safety precautions.* |
| **Flexibility** | *Circumstances may arise during the course that prevents the instructor from fulfilling each and every component of this syllabus; therefore, the syllabus is subject to change.  Students will be notified prior to any changes.* |