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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* | *Elective* |
| *Computer Engineering* | *Elective* |
| *Civil Engineering / Electrical Engineering* | *Elective* |
| **Course Code**  | *IE 411* |
| **Course Name** | *Decision Support Systems in Engineering* |
| **Language of Instruction** | *English* |
| **Type of Course** | **Departmental Area Elective** |
| **Level of Course** | *Undergraduate* |
| **Hours per Week** | **Lecture:** *3 hrs* | **Laboratory:** *1 hr* | **Recitation:**  | **Practical:**  | **Studio:** | **Other:** |
| **ECTS Credit** | *6* |
| **Grading Mode** | *Letter Grade* |
| **Pre-requisites** | *CS 101 - Introduction to Programming I* |
| **Co-requisites** |  |
| **Registration Restriction** |  |
| **Educational Objective** | *The objective of this course is to develop students’ ability to formulate, design, and implement decision support systems for the operation of manufacturing and service industries using computer technology. To achieve this objective, students will learn new concepts on spreadsheet modeling, computer programming, statistical data analysis, and optimization through lectures and course project.* |
| **Course Description** | *Introduction to Decision Support Systems, Fundamentals of spreadsheet modeling, Working with Data and Models, Visual Basic Application, Implementing Optimization through VBA* |
| **Learning Outcomes**  | **LO1** | * *Create spreadsheet tools to increase productivity*
* *Contribute to development process of information systems in organizations*
* *Develop prototype decision support systems to establish systems proof-of-concept*
* *Develop data analysis tools to improve the business*
* *Build decision tools catering to the modeling and optimization needs of manufacturing and service industries*
 |
| **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 | *Introduction to Decision Support Systems* | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 |  |
| **S2** | 2-5 | *Fundamentals of spreadsheet modeling* | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 |  |
| **S3** | 6-8 | *Working with Data and Models* | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 |  |
| **S4** | 9-12 | *Visual Basic Application* | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 |  |
| **S5** | 13-14 | *Optimization* | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 | A1, A4, A6 |  |
| **S6** |  |  |  |
| **S7** |  |  |
| **S8** |  |  |
| **S9** |  |  |
| **S10** |  |  |
| **S11** |  |  |
|  |  |  |
|  |  |  |
| **Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules**  | **No.** | **Type** | **Weight** | **Implementation Rule** | **Make-Up Rule** |
| **A1** | **Exam** | 60% | *Notes, Excel solutions, and electronic devices are prohibited in the examinations.* | *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** |  |  |  |
| **A4** | **Project** | 20% | *final work to be submitted at pre-specified time* | *No compensation, no makeup* |
| **A5** | **Report** |  | *-* | *-* |
| **A6** | **Presentation** | 15% | *Three presentations required (proposal, progress, and final)* | *No compensation, no makeup* |
| **A7** | **Attendance/ Interaction** | 5% |  | *No compensation, no makeup* |
| **A8** | **Class/Lab./****Field Work** |  | - | - |
| **A9** | **Other** |  |  |  |
| **TOTAL** | **100%** |
| **Evidence of Achievement of Learning Outcomes** | *%70 course attendance and gaining 70% or more on taken exams, project, and presentations.*  |
| **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** | *Proposal 3 hrs**Development (14 weeks) × (1 hr per week)**Presentations 3 × 3 hrs* | *26* |
| **8** | **Homework** |  |  |
| **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** | *180* |
| **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** | *Developing Spreadsheet-Based Decision Support Systems*, Sandra D. Eksioglu, Michelle M.H. Seref, Ravindra K. Ahuja, and Wayne L. Winston |
| **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.* |