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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** | **Must** |
| **Other Engineering Departments** | **Elective** |
|  |  |
| **Course Code**  | **IE 304** |
| **Course Name** | **Facility Planning and Design** |
| **Language of Instruction** | **English** |
| **Type of Course** | **Lecture/Problem Solving** |
| **Level of Course** | **Undergraduate** |
| **Hours per Week** | **Lecture: 3** | **Laboratory:**  | **Recitation: 2**  | **Practical: 1** | **Studio:** | **Other:** |
| **ECTS Credit** | **7** |
| **Grading Mode** | **Letter Grade** |
| **Pre-requisites** | **-** |
| **Co-requisites** | **-** |
| **Registration Restriction** |  |
| **Educational Objective** | This course aims to familiarize and educate the students with the principles, concepts, types, processes and terminology of Facility Planning and Design |
| **Course Description** | This course covers design techniques for solving problems in plant layout, including topics such as site location, calculation of facility requirements, production activity, non-production activity, material handling, storage systems and group technology layout. Computer aided layout design techniques and evaluation of design software are also included. |
| **Learning Outcomes**  | **LO1** | 1. Modeling skills regarding design problems in production and service systems.
2. Software experience regarding design problems in production and service systems
3. Basic concepts of designing a new facility.
4. Knowledge necessary to solve location & allocation problems.
5. Identify equipment requirements for different layouts.
6. Knowledge about various material handling and storage systems.
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| **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** | Basic terminology in facility planning |  |
| **PO2** | Models to support facility layout decisions |
| **PO3** | Fundamentals of facility layout technologies |
| **PO4** | Understanding of warehouse systems and material handling  |
| **PO5** | Understanding of layout planning procedures |
| **PO6** | Software to support facility layout and facility location decisions |
| **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 |  |  |  |  |  |  |
| **S2** | **1-2** | Factory Layout and Material Handling | **A1** |  | **A1** | **A6** |  |  |
| **S3** | **3-4** | Product Design and Process Planning | **A1** | **A4** | **A1** | **A4** |  |  |
| **S4** | **5-6** | Layout Planning Procedures | **A1** |  | **A1** |  | **A6** |  |
| **S5** | **7-8** | Location Models in Facility Planning | **A1** | **A4** | **A1** |  |  | **A6** |
| **S6** | **9** | Midterm |  |  | **A1** | **A4** |  |  |
| **S7** | **10-11** | Computerized Layout Procedures |  |  | **A1** |  | **A6** | **A6** |
| **S8** | **12-13** | Material Handling Principles, Equipment, and System Design |  | **A4** |  |  |  | **A6** |
| **S9** | **14** | Warehouse Systems |  | **A4** |  | **A4** |  | **A6** |
| **S10** |  |  |  |  | **A1** |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules**  | **No.** | **Type** | **Weight** | **Implementation Rule** | **Make-Up Rule** |
| **A1** | **Exam** | **20****30** | **1 Midterm Exam1 Final Exam** | **If a student misses an exam and provides an acceptable legitimate document, a make-up exam should be provided for at least one midterm.** |
| **A2** | **Quiz** | **-** | **-** | **-** |
| **A3** | **Homework** | **-** | **-** | **-** |
| **A4** | **Project** | **30** | **20 page project on analyzing a facilitys layout and location** | **10 points penalty for late delivery per day** |
| **A5** | **Report** | **-** | **-** | **-** |
| **A6** | **Presentation** | **20** | **Article presentations** | **-** |
| **A7** | **Attendance/ Interaction** | **-** | **-** | **-** |
| **A8** | **Class/Lab./****Field Work** | **-** | **-** | **-** |
| **A9** | **Other** | **-** | **-** | **-** |
| **TOTAL** | **100%** |
| **Evidence of Achievement of Learning Outcomes** | ***Every topic is tested with at least one exam question. In order to pass, a student needs to accumulate certain percentage of points and this percentage is determined by the class mean. Students performed Microsoft Excel studies on course material and reported their work.*** |
| **Method for Determining Letter Grade** | ***The method on which the letter grade is based on will be announced at the beginning of the semester, and this method may be subjected to change depending on the performance of the students.***

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| **Assessment** | **Midterm** | **Project** | **Final**  | **Presentation** | **TOTAL** |
| **Points** | **20** | **30** | **30** | **20** | **100** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Total points** | **100 - 95** | **94-90** | **89-85** | **84-80** | **79-75** | **74-70** | **69-65** | **64-60** | **59-55** | **54-45** |
| **Letter Grade** | **A** | **A-** | **B+** | **B** | **B-** | **C+** | **C** | **C-** | **D+** | **D** |

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| **Teaching Methods, Student Work Load** | **No** | **Method** | **Explanation** | **Hours** |
| ***Time applied by instructor*** |
| **1** | **Lecture** | **Lecturing and utilizing chalkboard/whiteboard. Sample questions and answers to strengthen learning. In class exams.** | **2hrs weekly** |
| **2** | **Interactive Lecture** | **The instructor stops and asks students questions and encourages them to answer.** | **1hr weekly** |
| **3** | **Recitation** | **Problems and solutions are demonstrated on chalkboard/whiteboard.** | **2hrs weekly** |
| **4** | **Laboratory** |  |  |
| **5** | **Practical** |  |  |
| **6** | **Field Work** |  |  |
| ***Time expected to be allocated by student*** |
| **7** | **Project** | **The problem subject of the project is researched and a report along with a Microsoft Excel file are prepared.** | **2hrs weekly** |
| **8** | **Homework** |  |  |
| **9** | **Pre-class Learning of Course Material**  | **New subjects are learned by reading course notes before class.** | **0.5hrs weekly** |
| **10** | **Review of Course Material** | **Review of the subjects before exams in order to prepare.** | **1hr weekly** |
| **11** | **Studio** | **-** | **-** |
| **12** | **Office Hour** | **Asking questions to instructor or to the teaching assistant out of class hour.** | **2hrs weekly** |
| **TOTAL** |  |
| **IV. PART** |
| **Instructor** | **Name** | Ast. Prof. Dr. :Senay Sadic |
| **E-mail** | senay.sadic@antalya.edu.tr |
| **Phone Number** |  |
| **Office Number** |  |
| **Office Hours** |  |
| **Course Materials** | **Mandatory** | **Facilities Planning by James A. Tompkins, John A. White, Yavuz A. Bozer, and J.M.A. Tanchoco, John Wiley & Sons; 4th edition (2010)** |
| **Recommended** | ***Modeling and Analysis of Manufacturing Systems by R. G. Askin and C. R. Standridge, John Wiley & Sons, 1993.*** |
| **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 for of scholastic dishonesty is a serious academic violation and will result in a disciplinary action.** |
| **Students with Disabilities** | **Reasonable accommodations are made for students with verifiable disabilities.** |
| **Safety Issues**  | **Safety of the classroom, the students and the instructor are maintained by the university policies and regulations.** |
| **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.** |