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| antalya bilim Ã¼niversitesi ile ilgili gÃ¶rsel sonucu | **ECTS Course Description Form** |
| **PART I ( Senate Approval)** |
| **Offering School**  | **Engineering** |
| **Offering Department** | **Industrial Engineering** |
| **Program(s) Offered to** | **Industrial Engineering** |  |
|  | **Elective** |
|  |  |
| **Course Code**  | **IE 467** |
| **Course Name** | **Industrial Engineering Techniques and Practices in Health Management** |
| **Language of Instruction** | **English** |
| **Type of Course** | **Elective** |
| **Level of Course** | **Undergraduate** |
| **Hours per Week** | **Lecture: 3** | **Laboratory:** | **Recitation:**  | **Practical:**  | **Studio:** | **Other:** |
| **ECTS Credit** | **6** |
| **Grading Mode** | **Letter grade** |
| **Pre-requisites** | **-** |
| **Co-requisites** | **-** |
| **Registration Restriction** | ***-*** |
| **Course Description** | **Semester course; 3 lecture hours. 6 ECTS/ 3 credits. Prerequisite: undergraduate course in statistics. Applications of analytics and decision support to health services institutions. Applications of operations research and industrial engineering techniques using large institutional data for health care planning, control and decision making including deterministic, and stochastic decision analysis models and their use in health services administration**.  |
|  |  |
| **Learning Outcomes**  | **LO1** | 1. **Develop analytical skills in decision making and problem solving by using quantitative and non-quantitative analytical tools and rational models.**
2. **Develop proficiency in selecting and applying various quantitative techniques which may be useful in administration of various health care services providers.**
3. **Identify the concept of decision making from operational to strategic levels in various health organizations.**
4. **Review and critique the strengths and weaknesses of the above decision support techniques in relation to their applications in the health industry.**
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| **LO2** |
| **LO3** |
| **LO4** |
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|  |  |
| **Basic Outcomes (University-wide)** | **No.** |
| **Basic Outcomes (University-wide)****Faculty Specific Outcomes** | **PO1** | **Program Outcomes** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **LO6** |
| **PO2** | **Ability** to communicate effectively and write and present a report in Turkish and English.  | 🗸 🗸 🗸 🗸 🗸 🗸🗸 🗸 🗸 🗸 🗸 🗸🗸 🗸 🗸 🗸 🗸 🗸🗸 🗸 🗸 🗸 🗸 🗸🗸 🗸 🗸 🗸 🗸 🗸🗸 🗸 🗸 🗸 🗸 🗸 |
| **PO3** | **Ability** to work individually, and in intra-disciplinary and multi-disciplinary teams. |
| **PO4** | **Recognition** of the need for life-long learning and **ability** to access information , follow developments in science and technology, and continually reinvent oneself. |
| **PO5** | **Knowledge** of project management, risk management, innovation and change management, entrepreneurship, and sustainable development. |
| **PO6** | **Awareness** of sectors and **ability** to prepare a business plan. |
| **PO7** | **Understanding** of professional and ethical responsibility and **demonstrating** ethical behavior. |
| **Faculty Specific Outcomes****Discipline Specific Outcomes (program)** | **PO8** |  |
| **PO9** |  |
| **PO10** |  |
| **PO11** |  |
| **PO12** |  |
| **PO13** |  |
| **Discipline Specific Outcomes (program)****PART III ( Department Board Approval)** | **PO14** |  |
| **PO15** |  |
| **PO16** |  |
| **PO17** |  |
| **PO18** |  |
|  |  |
| **Course Subjects, Contribution of Course Subjects to Learning Outcomes, and Methods for Assessing Learning of Course Subjects** | **Subjects** |
| **Course Subjects, Contribution of Course Subjects to Learning Outcomes, and Methods for Assessing Learning of Course Subjects****Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules**  | **S1** | **Week** |  | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **LO6** |
| **S2** | **1** | **Recognize the quantitative techniques are for decisions about delivering healthcare of high quality.** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S3** | **2** | **Describe the need for forecasting in healthcare operations** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S4** | **3** | **Evaluate the decision making framework in health service organizations** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S5** | **4** | **Recognize the alternative location methods and their application to healthcare facilities** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S6** | **5** | **Describe the scope of reengineering applications in healthcare** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S7** | **6** | **Describe workload management systems: the relationship between staffing and scheduling with respect to human resource capacity planning** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S8** | **7** | **Assignments** | ***A1-A2-A3*** | ***A1-A2-A3***  | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S9** | **8** | **Describe the queuing systems, and their use in healthcare services** | ***A1*** | ***A1*** | ***A1*** | ***A1*** | ***A1*** |  |
| **S10** | **9** | **Describe the meaning of productivity in health care organizations** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S11** | **10** | **Describe the relationships of providers with the companies at the upstream source of medical supplies** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S12** | **11** | **Describe the meaning of quality and quality control in healthcare** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S13** | **12** | **Describe the need for project management, and its use for administrative and clinical operations** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **S14** | **13** | **The aim of the experiential group project is to use the quantitative skills acquired in this course and cumulatively from other courses in the curriculum to solve an operational and/or a strategic issue that might be interest to a health care provider.**  | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **No.** | **14** | **Project presentation** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** | ***A1-A2-A3*** |  |
| **Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules** **Evidence of Achievement of Learning Outcomes** |  | **Type** | **Weight** | **Implementation Rule** | **Make-Up Rule** |
| **A1** | **Midterm Exam** |  |  |  |
| **A2** | **Final exam** |  |  |  |
| **A3** | **Project** |  |  |  |
| **A4** | **Assignment** | ***100%*** | ***Assignments are given by announcing deadline. Homework that are submitted after the deadline are not accepted.*** | **There is no compensation for the assignments.** |
| **A5** | **Report** |  | - | - |
| **A6** | **Presentation** |  | - | - |
| **A7** | **Attendance/ Interaction** |  | - | - |
| **A8** | **Class/Lab./****Field Work** |  | - | - |
| **TOTAL** | **Other** |  |  |  |
| **Letter grades determined by weighting on the specified percentages on the grades that are taken from exams, quizzes and homework by the students. The teaching staff can make changes in the student's grades.** | **100%** |
| **Method for Determining Letter Grade** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activities** | **Assignment** |  |  |  |
| **Quantity** | **10** |  |  |  |
| **Effects on Grading, %)** | **10%** |  |  |  |

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| **Teaching Methods, Student Work Load** | **No** |
| **Teaching Methods, Student Work Load****IV. PART** | ***Time applied by instructor*** | **Method** | **Explanation** | **Hours** |
| **1** |
| **2** | **Lecture** | **Lecturing and utilizing chalkboard/whiteboard. Sample questions and answers to strengthen learning. In class exams.** | **3x14** |
| **3** | **Interactive Lecture** |  |  |
| **4** | **Recitation** |  | **-** |
| **5** | **Laboratory** |  | **-** |
| **6** | **Practical** |  | **-** |
| ***Time expected to be allocated by student*** | **Field Work** |  |  |
| **7** |
| **8** | **Project** |  |  |
| **9** | **Homework** |  | ***65*** |
| **10** | **Pre-class Learning of Course Material**  | **New subjects are learned by watching videos or reading course notes before class.** | **42** |
| **11** | **Review of Course Material** |  |  |
| **12** | **Studio** |  | **-** |
| **TOTAL** | **Office Hour** |  | **-** |
|  |  ***149*** |
|  **Instructor Semail Ülgen** |
| **Instructor****Course Materials** | **E-mail** | **sulgen@antalya.edu.tr** |
| **Phone Number** | **0553 387 81 09**  |
| **Office Number** | **A1-33** |
| **Office Hours** | **It will be determined during the semester.** |
| **Mandatory** |  |
| **Course Materials****Other** | **Recommended** | 1. **‘Yasar A. Ozcan (2017), Analytics and Decision Support in Health Care Operations Management, 3rd edition, Jossey-Bass/Wiley (will be referred as Ozcan).**
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| **Scholastic Honesty** |  |
| **Other** | **Students with Disabilities** | **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.** |
| **Safety Issues**  | **Reasonable accommodations will be made for students with verifiable disabilities.** |
| **Flexibility** | **The course does not require any special safety precautions.** |
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