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|  |  | **ECTS Course Description Form** |
|  | **PART I (Senate Approval)** |
|  | **Offering School**  | **Engineering** |
|  | **Offering Department** | **Computer Engineering** |
|  | **Program(s) Offered to** | **Computer Engineering** | **Compulsory** |
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|  |  |  |
|  | **Course Code**  | **CS492** |
|  | **Course Name** | **Senior Project** |
|  | **Language of Instruction** | **English** |
|  | **Type of Course** | **Compulsory/Project**  |
|  | **Level of Course** | **Undergraduate** |
|  | **Hours per Week** | **Lecture:**  | **Laboratory:**  | **Recitation:**  | **Practical: 4**  | **Studio:** | **Other:** **1** |
|  | **ECTS Credit** | **6** |
|  | **Grading Mode** | **Letter Grade** |
|  | **Pre-requisites** | **CS102 and CS491** |
|  | **Co-requisites** |  |
|  | **Registration Restriction** |  |
|  | **Educational Objective** | **The main objective of this course is to provide the students the opportunity to apply the knowledge and the skills they have gained throughout their program, in solving a real-world open computer engineering or multidisciplinary engineering problem.**  |
|  | **Course Description** | **The students apply all their knowledge and skills gained throughout their program to solving an actual engineering problem. It involves applying skills gained in project management, software design and implementation, evaluation and assessment methodology, technical writing and presentation.**  |
|  | **Learning Outcomes**  | **LO1: Analyse and implement all the stages involved in solving an open computer engineering or a multidisciplinary engineering problem**  |  |
|  | **LO2: Apply evaluation and assessment methods/tools applicable to engineering projects**  |
|  | **LO3: Write a technical report** |
|  | **LO4: Read scientific/technical literature** |
|  | **LO5: Present an engineering project** |
|  | **LO6: Apply disciplinary, multidisciplinary teamwork skills**  |
|  | **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.  |  *0 0 3 0 3 0* *3 0 1 0 1 3* *3 0 0 3 0 0* *3 3 0 0 0 1* *3 3 0 0 0 3* *3 3 3 0 0 3* *3 3 0 0 0 0* ***3 3 0 0 0 0******3 3 0 0 0 0*** ***3 3 3 0 0 3*** ***2 2 0 0 0 0*** ***3 3 0 0 0 0*** ***3 3 0 0 0 0*** |
|  | **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 behaviour. |
|  | **Faculty/ Program Specific Outcomes** | **PO7** | **Ability** to define complex engineeringproblems, develop models andimplement solutions for theseproblems |
|  | **PO8** | **Ability** to conduct lab experiments by usingcomputers and the ability of collecting, analysing and interpreting data.  |
|  | **PO9** | **Ability** to apply the knowledge ofmathematics, science and engineeringprinciples to solve problems in computerengineering. |
|  | **PO10** | An **understanding** of current contemporaryissues and impact of engineering solutionsin legal and ethical levels |
|  | **PO11** | **Ability** to understand and apply discretemathematics concepts. |
|  | **PO12** | **Ability** to use modern engineeringtechniques, tools and informationtechnologies and develop softwareequipment and software. |
|  | **PO13** | **Ability** to analyse, design and manage thehardware/software computer systemrequirements with limited resources andconditions by modern engineeringprinciples. |
| **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** | 1-14 | Project implementation | A4,5,6,7 | A4,5,6,7 | A4,5,6,7 | A4,5,6,7 | A4,5,6,7 | A4,5,6,7 |
| **S2** | 7 | Midterm report |  |  | A5 | A5 |  |  |
| **S3** | 14 | Final report and presentation |  |  | A5 |  | A5 |  |
| **Assessment Methods, Weight in Course Grade, Implementation and Make-Up Rules**  | **No.** | **Type** | **Weight** | **Implementation Rule** | **Make-Up Rule** |
| **A1** | **Exam** |  |  |  |
| **A2** | **Quiz** |  |  |  |
| **A3** | **Homework** |  |  |  |
| **A4** | **Project** | *50* | Overall project evaluation involving the overall quality of the work done, hardness of considered problems, ingenuity of provided solutions. A jury consisting of 3 faculty members will jointly evaluate.  |  |
| **A5** | **Report** | 15+10 | 10 for the midterm report and 15 for the final report. Final reports are evaluated by the jury. |  |
| **A6** | **Presentation** | 20 | Quality of the presentation. Evaluated by the jury.  |  |
| **A7** | **Attendance/ Interaction** | 5 | Attendance to the weekly meetings with the project supervisor. At least 7 hours of meeting attendance is expected to receive 5 points; otherwise no points are awarded.  |  |
| **A8** | **Class/Lab./****Field Work** |  |  |  |
| **A9** | **Other** |  |  |  |
| **TOTAL** | **100%** |
| **Evidence of Achievement of Learning Outcomes** | In order to pass, a student needs to accumulate certain percentage of points and this percentage is determined by the class mean.  |
| **Method for Determining Letter Grade** | The method on which the letter grade is based on will be announced at the beginning of the semester, andthis method may be subjected to change depending on the performance of the students. Letter grades are tentatively determined using the table below. Here “-x” means (average-3-x) and “+x” means (average+3+x), and each denotes the minimum points necessary for the corresponding letter grade.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Total points** | +25 | +20 | +15 | +10 | +5 |  Class Average ± 3 | -5 | -10 | -15 | -20 |
| **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** |  |   |
| **2** | **Interactive Lecture** | Every group will have meetings with the project advisor.  | 14 |
| **3** | **Recitation** |  |  |
| **4** | **Laboratory** |  |   |
| **5** | **Practical** |  |  |
| **6** | **Field Work** |  |  |
| ***Time expected to be allocated by student*** |
| **7** | **Project** | 14 hours for writing the proposal, 12 hours for working on the presentation, 140 hours for the project implementation itself  | 166 |
| **8** | **Homework** |   |  |
| **9** | **Pre-class Learning of Course Material**  |  |  |
| **10** | **Review of Course Material** |  |  |
| **11** | **Studio** |  |  |
| **12** | **Office Hour** |  |  |
| **TOTAL** | 180 |
| **IV. PART** |
| **Instructor** | **Name** | Cesim Erten |
| **E-mail** | cesim.erten@antalya.edu.tr |
| **Phone Number** | *+90-242-2450000* |
| **Office Number** | *A1-28* |
| **Office Hours** | *TBA* |
| **Course Materials** | **Mandatory** |  |
| **Recommended** |  |
| **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, havingunauthorized possession of examinations, submitting work of another person or workpreviously used without informing the instructor, or tampering with the academic workof other students. Any for of scholastic dishonesty is a serious academic violation andwill result in a disciplinary action. |
| **Students with Disabilities** | Reasonable accommodations will be made for students with verifiable disabilities. |
| **Safety Issues**  |  |
| **Flexibility** | Circumstances may arise during the course that prevents the instructor from fulfillingeach and every component of this syllabus; therefore, the syllabus is subject to change.Students will be notified prior to any changes. |