# GEDIZ UNIVERSITY
# COMPUTER ENGINEERING DEPARTMENT

### COM 497- SENIOR DESIGN PROJECT I
*PROPOSAL FORM for INSTRUCTORS*

**Academic Year: 2015-2016**                                                **Semester: Fall**

| 1.Logistics | |
|---|---|
| **Supervisor :**  Prof. Dr. Tae-Cheon Yang<br>**Proposal No. :**  2<br>**Proposal Date :** 05/10/2015<br>**Number of Students :**  2 or 3<br>**Prerequisites :** Knowledge of data structures,  algorithms, and knowledge and ability of programming language  C++ or Java or Python etc. | **Co-supervisor:** |

| 2. Subject Classification | |
|---|---|
| Algorithm animations, Data structures and Algorithms, Visualizations. | |

| 2. Title of Project | |
|---|---|
| Algorithm animations for a specific field of algorithms. | |

| 3. Description of the Project [1] | |
|---|---|
| An algorithm animation visualizes the behavior of an algorithm by producing an abstraction of both the data and the operations of the algorithm. Initially it maps the current state of the algorithm into an image, which then is animated based on the operations between two succeeding states in the algorithm execution. Animating an algorithm allows for better understanding of the inner workings of the algorithm, furthermore it makes apparent its deficiencies and advantages thus allowing for further optimization.<br>In this project, we implement and visualize of a bunch of algorithms for a specific field of algorithms. | |

| 4.  Scope of the Project | |
|---|---|
| Implementing and Visualizing of a specific field(such as sorting or priority queue etc.) of algorithms | |

| 5. Goals of the Project : | |
|---|---|
| By the end of the project:<br>1.  Students are expected to be able to implement and visualize algorithms.<br>2.  Students are expected to learn details of advanced algorithms.<br>3.  Students are expected to learn visualize techniques using a programming language.. | |

| 4. Key techniques | |
|---|---|
| Algorithm animations,Visualizations. | |

| 5. Project outcome | |
|---|---|
| An algorithm animation software. | |

| 6. Hardware/Software/Lab/ | |
|---|---|

---

[1] If necessary please use a separate sheet

| Equipment Requirements | |
| --- | --- |
| There is no specific lab and/or software requirements for this project. | |