



**MARMARA UNIVERSITY
FACULTY OF ENGINEERING
ENVIRONMENTAL ENGINEERING DEPARTMENT**

**ENVE 497/498 SENIOR DESIGN PROJECT
PROPOSAL FORM
FALL 2016**

Instructor : Assoc. Prof. Bilge Alpaslan Kocamemi

Project Title : Improvement strategy on enhanced biological phosphorus removal for municipal wastewater treatment: Ultrasound application

Proposal No. : *Bilge Alpaslan Kocamemi-2*

Number of Students : 2

Requirements (from students) : Courses on Enve 301, Enve 302 and Enve 303 had to be completed.

Scope of the Project :

In the scope of this project, the students will perform a series of batch experiments to evaluate the effect of ultrasound application on biological phosphorus removal.

Hardware/Software/Lab/Equipment Requirements :

Development Plan :

Experiments will be performed using mixed culture to be brought weekly from Istanbul Pasakoy wastewater treatment plant and synthetic wastewater simulating domestic wastewater.

In the experiments, different ultrasound dosages will be applied for various contact times. Biological phosphorus removal efficiency will be monitored via $PO_4\text{-P}$ and COD measurements

