



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

**ENVE 4197/4198 ENGINEERING PROJECT
PROPOSAL FORM
FALL 2019**

Instructor : Assoc. Prof. Neslihan Semerci

Project Title : Use of engineered nanoparticles in phosphate removal and recovery

Proposal No. : (NeslihanSemerci_1)

Number of Students : (Max 3 students)

Requirements (from students) : Environmental Engineering Unit Processes (ENVE 302) course

Scope of the Project :

This study aims to achieve phosphorus recovery with using engineered nanoparticles. Different types of nanoparticles will be used to remove and recovery of phosphorus from wastewater.

Hardware/Software/Lab/Equipment Requirements : Reactor, spectrophotometer, ,
Portable Multimeter, Shaker, ultrasonic bath

Development Plan :

Literature review

Production of nanaoparticles

Characterization of adsorption materials

Adsorption and desorption experiments