



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

**ENVE 4197/4198 ENGINEERING PROJECT
PROPOSAL FORM
FALL 2023**

Instructor : Prof. Dr. Kozet YAPSAKLI

Project Title : The effect of hydrazine on Anammox biomass

Proposal No. : KozetYapsakli

Number of Students : 3

Requirements (from students) : Tubitak 2209-A project will be written by the students for this topic.

Scope of the Project :

The scope of the project is to evaluate long-term effects of hydrazine on Anammox bacteria. Lab scale continuous flow column experiments will be conducted to examine how nitrogen removal rate is affected by the presence of hydrazine.

Hardware/Software/Lab/Equipment Requirements :

Background knowledge on ammonia, nitrite and nitrate measurement will be required to conduct experiments.

Development Plan :

1. Continuous-flow Anammox reactor will be operated, and nitrogen removal will be examined. Every day, students are required to feed the system with synthetic feed. This way, enriched biomass will be used in long term exposure experiments.
2. Anammox bacteria will be contacted with varying concentrations of hydrazine to examine the effect of it on the process.