



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

**ENVE 4197/4198 ENGINEERING PROJECT
PROPOSAL FORM
FALL 2023-2024**

Instructor : Rosa M Flores

Project Title : Primary and Secondary Organic Carbon in Istanbul. Estimations, variations, sources, and influencing factors.

Proposal No. : RFlores1

Number of Students : (Max 4 students) 4

Requirements (from students) : Students will be required to do research on their own and give weekly reports with their progress. Students are expected to spend at least 5 hours per week working in their thesis.

Scope of the Project :

Organic carbon (OC) and elemental carbon (EC) are among the major components of fine particulate matter (PM_{2.5}). Secondary organic carbon (SOC) is formed in the atmosphere through oxidation reactions. Estimations of primary (POC) and SOC can be made based on OC and EC measurements. In this project, students will do data analysis using these estimations of SOC. The main work will include comparison with other regions in the world, understanding the variations during day and night and various seasons. The most important factors that influence these variations will be also estimated with statistical analysis.

Hardware/Software/Lab/Equipment Requirements :

Microsoft Excel for statistical analysis
Microsoft word for writing thesis
Endnote for manipulation of citations
OriginPro for elaboration of figures

Development Plan :

1. Literature review with results in other urban areas
2. Downloading necessary data for statistical analysis
3. Transferring data to proper software. Elaboration of graphs
4. Interpretation of results and data analysis
5. Writing dissertation

