**MARMARA UNIVERSITY**

**FACULTY OF ENGINEERING**

**ENVIRONMENTAL ENGINEERING DEPARTMENT**

**ENVE 4197 ENGINEERING PROJECT**

**PROPOSAL FORM**

**FALL 2021-2022**

|  |
| --- |
| **Instructor :** Nur H. Orak  **Project Title :** Potential link between ambient air quality and transmission of SARS-CoV-2 in Turkey  **Proposal No. : NurHOrak-1**  **Number of Students :** 4 students  **Requirements (from students) :** Basic knowledge of air quality and statistics is recommended. |
| **Scope of the Project :**  Severe acute respiratory syndrome coronavirus 2, which was first reported in Wuhan, China in late 2019, caused the global infectious disease, COVID-19. Turkey has started to share the case numbers of COVID-19 in early February of 2021. There is a need to improve the understanding of air quality parameters and meteorological conditions on the transmission of SARS-CoV-2 in different regions of the world. In this project, students will investigate the potential link between air quality and COVID-19 cases in Turkey. Students will explore the data sources and different statistical methods for the analysis. |
| **Hardware/Software/Lab/Equipment Requirements :**  Hardware: A computer with internet connection  Software: MS Office or R |
| **Development Plan :**  Students will advance their environmental engineering, communication and teamwork skills through hands-on experiences by investigating the effects of ambient air quality exposure on COVID-19 cases. Students will also advance their understanding of the professional and ethical aspects of engineering projects.  A student in this course must write a proposal and submit progress reports to the advisor. The student must also make a formal presentation of the project results and submit a final report to the department by the end of semester.    1. Literature review and exploring published methods  2. Identification of data sources for air quality parameters, meteorological parameters and health outcomes in Turkey  3. Selection of the method  4. Data mining  5. Statistical analysis  6. Final thesis writing |