

Term Project

The term project is designed to provide students with the opportunity to learn about and experience the use of an interesting electronic sensor. The project may involve characterizing the performance of a sensor or using the sensor to test a hypothesis. Sensors may be borrowed from the Department or purchased. Students are expected to write custom programs to record, analyze, and visualize the data as necessary. Comparison of measurements with other independent measurements may be required. Lab time will be available to work on the term projects, but students should be prepared to spend additional time outside of the classroom. Students may work in teams of 2 or 3. Students are charged with the task of innovating and problem solving to meet their own goals. The project must be challenging and interesting. A significant amount of digital data must be collected and analyzed. Students will give a term presentation (1 presentation per project) after Thanksgiving break. Each student must present part of the project and one set of Powerpoint slides per team must be submitted.

Examples of the types of sensors: trace gas concentration (including greenhouse gases such as water vapor, methane, and carbon dioxide), volatile organic compounds, particulate matter, wind velocity, non-contact temperature, temperature using metal resistance or thermocouple probes, and rainfall.