# Exploring Engineering I

## Design Process and Measurement

**Course Curriculum**

### Power Objectives

**P.O. #1: Develop employability skills, leadership and communication (P.O. #1 Proficiency Rubric)**

**P.O. #2: Apply the elements and principles of design and compositional techniques to create works of art and visual layouts for both tactile and digital art forms (P.O. #2 Proficiency Rubric)**

**P.O. #4: Interpret drawings and documentation and perform measurements (P.O. #4 Proficiency Rubric)**

**P.O. #5: Practice personal safety (P.O. #5 Proficiency Rubric)**

### Academic Vocabulary

| | | |
|---|---|---|
| ❑ design process | ❑ English Standard system | ❑ reiteration |
| ❑ iteration | ❑ measurement | ❑ teamwork |
| ❑ technical drawing | ❑ revision | ❑ collaboration |
| ❑ scale | ❑ prototype | ❑ communication |
| ❑ metric system | ❑ model | |

### Enduring Understandings

*Students understand that...*

- The Engineering Design Process is a method that is used to solve technological challenges to change and improve products for the way we live.
- Engineering strives to design and develop useful devices or materials, defined as technologies, whose purpose is to increase the efficiency and productivity of our world and our quality of life.

## Essential Questions

- Why do engineers and designers strive to improve products used in our daily lives?
- Why do we use the engineering design process to solve design challenges?
- How can the engineering design process benefit us in solving problems in our daily live?
- To what extent has technology improved the efficiency and productivity of our society and our enjoyment of our world?