

ME 1801 - Rapid Prototyping for Product Design

Pre-requisites: Sophomore, Junior or Senior Standing

Description

The course presents basics of prototyping as a means to validate design solutions. Students will be introduced to additive manufacturing (AM) processes and common makerspace tools and equipment. The course will involve hands-on activities wherein students will be required to gain and demonstrate competencies utilizing various fabrication equipment. The course will briefly introduce the concept of hybrid manufacturing in the context of rapid prototyping scoped around tools available within academic makerspaces.

Topics

- Overview of design & prototyping
 - Phases of design
 - Need for prototyping/design validation
 - Types of prototyping
- Overview of Additive Manufacturing processes and makerspace tools
 - Tour of Invention Studio
 - Process capability evaluation/comparison
 - Hands-on training and demonstration of competency on equipment
- Mini-design project
 - Prototyping strategy and process planning

