



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Product Design Engineering for Entrepreneurs

ISE 5682.02

Credit Hours:

3.00 - 3.00

Course Levels:

Undergraduate (1000-5000 level)

Graduate

Course Components:

Lecture

Course Description:

Fundamentals of the product design process, from concept creation to final implementation, including product architecture and design for manufacture and assembly.

Course Goals / Objectives:

- Provide the student with a thorough understanding of the entire product design process: from the initial inception of a concept based on user needs through system and detail design to product fabrication.
 - Provide the background necessary to critically analyze products and product concepts
 - Understand the role that engineered products play in our culture
 - Exposure to the local design and entrepreneurship community through guest speakers
 - Students will gain an appreciation for the roles played by disciplines other than engineering in the development of products, such as industrial design and marketing.
 - Students will understand product system architecture, and how it can enable or impede rapid product evolution and the development of flexible product portfolios.
 - Students will understand the basic tenets of design for assembly, disassembly and manufacturing.
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Course Topics:

- Introduction
 - Context & Constraints
 - Product Opportunities Discussion: Lecture 2 Articles
 - Video - IDEO
 - Distilling Information
 - Design Evolution
 - Movie: Design + Thinking and Product Benchmarking
 - Product Portfolios
 - Product architecture
 - Designing for Manufacture & Assembly
 - Processes and Materials
 - Designing for Humans
 - Design Project 2 work and prototyping
 - Several guest speakers
 - Two field trips to local design firms
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Designation:

Elective