MECH 729 Product Development and Design
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This course is intended for graduate students with some engineering professional experience and interest in the product design process. We will explore modern techniques used to facilitate reduced development time along with high quality product delivery. As an online course, we will develop a sense of community by utilizing current web based communication and social networking tools. Students will be expected to share insights and processes they have observed in their various employment experiences, such that all will benefit from our combined experience.

Catalog Description:
Theory and application of the product development and design process. Principles of efficient engineering processes and management structures that support product design. Emphasis on structured approaches that insure constraints are properly defined and met. Includes major project.

A. Objectives. Successful completion of the course will enable the students to:

1. Describe the structured and disciplined process used for successful product development.
2. Understand and apply various aspects involved in successful product design including: Product definition, concept generation, concept selection, design analysis, design for X, economic analysis, prototype development and design verification, and continuous improvement.
3. Explain principles and procedures used in design for X (X = cost, manufacture, assembly, quality, reliability, maintainability, liability, environment, disassembly, life cycle analysis, etc.).
4. Critically review and examine methodologies and results obtained in the product design process to foster continuously improved processes.