

Engineering Design II

Lecture 3. Five Stage Model

BME 494

Engineering Design Concepts

- Design Process
- Introduction to Systematic Design
- Technical Systems
- Planning and Design Procedure
- Conceptual Design
- Embodiment Design
- Aiming for Quality and Minimum Cost

Five Stage Model

- Problem Definition
- Conceptual Design
- Preliminary Design
- Detailed Design
- Design Communication

Problem Definition

- Problem Definition
 - Understanding and exploring customer requirements

Conceptual Design

- Conceptual Design
 - After understanding customer requirements, transforming them to engineering specifications.

Preliminary Design

- Preliminary Design
 - Modelling and exploring the design
 - Evaluating the design (qualitative and quantitative parameters.)

Detailed Design

- Detailed Design
 - Tuning the parameters of the design
 - Specifying the design details

Design Communication

- Design Communication

Documentation of the final design

Engineering Design

- Process of Planning and Designing
- Heuristics
- Planning and Clarifying the Task
- Conceptual Design
- Embodiment Design

Design Project

- Concept and Development
- Determining Customer Needs

Questions?
