

## 490A - Assignment 3

### Project Proposal and Preliminary Customer Needs

The most important aspect in the early design process of an engineering design project is identifying the customer needs. From these customer needs we will eventually extract a precise and well measurable specification. The goal here is that if we design a product that can achieve the same or better in all specifications then the customer will have the best product possible and we will have completed our project with the best possible outcome.

Include these 3 things:

**Project Title** – A title that describes the project/product, this will eventually turn into the team name.

**Project Proposal** – A paragraph or 2 describing what the project/product is.

**Customer Needs** – Design projects require a clear reason for solving a problem. Every possible need of the customer that need to be met should be listed.

Customer Needs fall into 3 categories (Car Example)

- Minimum Needs - Standard Features that are Necessary: Wheels, Seating, Dashboard, etc...
- Assumed Needs - Basic Operation, Safety, Reliability: Ability to Drive
- Unrecognized Needs - Things the customer didn't know he needed: Compression Ratio of Engine, Voltage Levels

These 3 categories of needs are a guide to help you think of the needs from the customer's perspective. Treat your customer needs list as a brainstorming session, don't try to force your customer need items to the previously stated 3 categories.

**Deliverables:** To properly define a complete product/project, the customer needs should result in a few pages. Grading will be based off of perceived completeness and quality of the customer needs listed.