1. I SY E 552, Human Factors Engineering Design and Evaluation
2. Credits : 3   Contact Hours : 2.5

a. Other Supplemental Materials : N/A

- Specific Course Information :

a. Brief description of the content of the course (Course Catalog Description) :

b. Pre-requisites or Co-requisites : Ind Engr 349 & EPD 397, or cons inst
c. This is a Elective course.

- Specific Goals for the Course :

a. Course Outcomes :

1. Develop observation and interview skills to understand customer needs and system interactions.
2. Develop skills to translate observation and interview data into models of customer requirements and system constraints.
3. Develop communication skills to relate model content to the customer and to marketing, engineering, management, and other members of the design team.
4. Translate work models into aesthetically appealing and functional design concepts and
5. Evaluate and iterate prototype designs into a system that satisfies customer requirements.

- **ABET Student Learning Outcomes:**
  
  (a) Ability to apply mathematics, science and engineering principles.
  (b) Ability to design and conduct experiments, analyze and interpret data.
  (c) Ability to design a system, component, or process to meet desired needs.
  (d) Ability to function on multidisciplinary teams.
  (e) Ability to identify, formulate and solve engineering problems.
  (f) Understanding of professional and ethical responsibility.
  (g) Ability to communicate effectively.
  (h) The broad education necessary to understand the impact of engineering solutions in a global and societal context.
  (i) Recognition of the need for and an ability to engage in life-long learning.
  (j) Knowledge of contemporary issues.
  (k) Ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

- **Brief List of Topics to be Covered:**
  
  Methods to understand customer needs, contextual inquiry, work model development and interpretation, consolidating work models, communicating customer needs, prototyping and interface structure.