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## **A Non-Traditional Capstone Design Project Experience for Industrial Engineering Students**

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**Abstract:** An NSF award funded a meaningful team based design experience for senior Industrial Engineering (IE) students motivating them to create designs to support adults with disabilities. As part of the requirements of the capstone project, students developed, built, and implemented prototypes to foster independence and self-care, improved the safety and quality of life of individuals with disabilities, augmented their functional capabilities, or developed and enhanced therapeutic devices. Nine capstone students interacted with health care professionals; gained exposure on legal, intellectual property, and ethical issues related to the design process; developed technical and professional skills to be prepared for the practice of the profession; complemented the educational process with real life problem solving experience; integrated earlier course work into a problem solving situation; gained awareness, sensibility and, knowledge on the needs of adults with disabilities; and broadened their appreciation of the impact IEs can have in society and wellbeing of others.

*Keywords:* Capstone Design Projects, Engineering Education, Assessment