PSU INGAR – Revolutionizing Science and Engineering Education

Overview
Businesses are seeking greater integration of education with practice that can be quickly and easily tailored and customized to any industry, company, or project need. The integration of education is moving from a linear sequential model to a globally integrated model of learning and sharing. The goal of this project is to benchmark, design, prototype, and present a plan that can be shared with external sponsors to create a new Penn State/Industry partnership.

Objectives
• Identify new opportunities for enhancing integration of education and developing an interactive platform to learn and share educational professional content
• Bridge the gaps in current industry and university education integration by combining the development of transformative knowledge with innovative and practical engineering solutions to future challenges.

Approach
• Identified needs and opportunities by talking to industry contacts
• Reviewed and critiqued existing products for course content and knowledge capture
• Generated concepts and narrowed down selection to fit customer and industry needs
• Proposed online architecture using final product mock-ups with full feature set
• Conducted analytics survey with new and seasoned employees to deduce pain points and opportunities to innovate and cultivate an industry and higher education partnership
• Used the results of the survey to narrow down focus and develop a solution to be worked on
• Created deployment plan for implementing online resource in conjunction with industry
• Developed a proof of concept in the form of a website prototype to be used in advocacy
• Conducted secondary survey to gauge effectiveness of prototype to generate feedback loop for future design and implementations

Outcomes
• Laid the foundation to bridge the gap between industry and university through case studies and partnerships
• Surveying young professionals showed weaknesses in higher education
• Our sponsor is able to use prototype in advocacy with companies and industry contacts to generate content and interest
• Future studies of the effectiveness of engineering case studies coupled with agglomeration websites are recommended