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A Collaborative Online International Senior Design Project in Industrial and Systems Engineering: The Case Study of KAIST University and Binghamton University

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Abstract: This paper discusses a senior design project wherein undergraduate students from Binghamton University's Systems Science and Industrial Engineering Department teamed with students from KAIST University's Industrial and Systems Engineering Department. The project was funded in part from the State University of New York (SUNY) Collaborative Online International Learning (COIL) program. Each university offers a course/path requiring students to demonstrate mastery of their ISE skillset through a culminating effort such as a capstone project, rigorous internship, or other. This project added an international dimension to our respective courses that enabled the participants to gain necessary cross-cultural skills and professional experience working with international counterparts. Outcomes included the development of collaboration skills required to enable good working relationships while facing 'real-world' work place challenges including widely disparate time zones (KAIST time is Binghamton University + 14 hours), virtual communication, differing technical standards, etc. This project allowed our students to experience these challenges faced everyday by multinational/multicultural businesses of the 21st century. And although this project was conducted via the internet, additional funds were located that allowed one faculty member to accompany two Binghamton University participants to visit their KAIST student and faculty counterparts during the Spring 2014 recess. This paper and presentation will discuss the origins of the project, lessons learned, and some of the challenges faced and conquered – some better than others –both prior-to and during the semester of the course.

Keywords: ISE Capstone, International Teams, Collaborative Online Learning