What Do Faculty Teach and What Do Students Learn: Studies of Teamwork in Engineering

Teamwork has long been considered a central skill for engineering professionals, and as a result, group project work has become an increasingly important component of undergraduate education. But putting students into groups alone does not inherently help students develop teamwork skills; internal team dynamics, campus culture, faculty engagement (or lack thereof), and a range of other factors affects both what students learn and who learns it. In this talk, we’ll look at findings from four different studies to consider faculty and student experiences and perceptions regarding teamwork in engineering education. The studies include a multi-case study of five different institutions using interviews with faculty and students to explore current beliefs, a phenomenological study of Africa-American students’ experiences on engineering teams at a single institution, a mixed-methods national study of teaching and learning in capstone design courses, and an observational case study of expert faculty in a first-year problem-based learning program. Each study provides a rich data set on its own, and collectively, they identify current perceptions, expert practices, and critical gaps as we seek to help prepare diverse undergraduate engineering students to succeed on workplace engineering teams.

This event is being partially sponsored/funded by the Visiting Women & Minority Lecturer/Scholar Series (VWMLS) which is funded by a grant to the Institutional Equity & Inclusion from the State of Michigan's King-Chavez-Parks Initiative.