

A Curriculum Model for Developing Teams, Communication Skills, and Introducing the Design Process for Engineering Programs developed by the TIDEE Project Team.

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Abstract

Faculty struggle to implement outcomes-based engineering education that is needed to satisfy ABET Engineering Criteria 2000 requirements for engineering programs. This paper describes a two-step method for developing teams and communications skills, and immediately exercising those skills in a practical introduction to the team process using a simple PET (polyethylene terephthalate) soda pop bottle developed by the TIDEE (Transferable Integrated Design in Engineering Education) NSF sponsored project. Clearly defined team roles and communication skills are introduced in a manner that allows a group of students to develop the synergy needed for a successful team activity. Then a short design exercise (using a well-defined design process as a guide) is introduced to facilitate a practical application of both the design process and team and communication skills. The TIDEE teaching/learning model links definable steps in the design process to structured team-based learning activities.

Full Text Reference

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