

What is Design and How Do We Let Non-Engineers in on the Secret That its Fun?

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Abstract

Engineering design is often one of the most interesting and exciting aspects of engineering. Yet few outside the profession ever get a sense of the experience. At Widener University, an innovative course has been offered to in service high school teachers that allows them to participate in the design of a Virtual Laboratory that simulates science experiments. Programming is performed by one of the authors, while the class participated in design, experiencing the iterative nature of the process and learning basics of software evaluation and web programming. This novel approach was aimed at stimulating educators' interest in engineering by giving them an opportunity to experience what is often called "the romance of engineering". The results of this NSDF funded project were extremely encouraging. Both the in service teachers who participated in the design process and the high school students who tested the resulting simulations reported positive experiences. The finished website, "The Online Science Project" is in use and undergoing further refinement.