

Abstract Submitted
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Using Physics Applications to Teach Calculus¹ JILL MARSHALL, DAVID ALLEN, RICHARD CRAWFORD, University of Texas Austin — Engineering and mathematics faculty from the University of Texas at Austin have developed a series of design activities to be implemented in the discussion sections of an introductory calculus sequence for engineers, with funding from National Science Foundation DUE grant 0831811. These modules include determining how to maximize the power output from a network of speakers and finding the optimum position to place supports for a dam, that is, the center of pressure. In each case students use calculus to model the physics of the situation and then construct a physical model to test the mathematical model. I will report results of a pilot implementation with students who did and did not take part in the design modules.

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