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Rapid advances in computational technology together with shifting teaching paradigms have inspired several efforts to reform the content and strategies used in teaching ordinary differential equations (ODE) courses. Some well-known examples include the Boston University ODE Project, the Connected Curriculum Project (Montana State University), the C\*ODE\*E Project (Harvey Mudd College), and the IDEA project (Washington State University).

A key focus of reform efforts has been to make introductory ODE courses more broadly relevant and connected to current and emerging application areas. Technology has made it possible to design an ODE course that covers the best classical methods and mathematical theory, together with elements of modeling, computer-based solution methods and related explorations.

In this presentation I will discuss my approach to reshaping a classical introductory ODE course at a liberal arts college. I will mainly focus on a series of mini projects that were designed based on real-life case studies. Collectively these case studies involved applying classical ODE techniques as well as aspects of modeling and computer-based methods. I will discuss where to find sources for case studies, and how to adapt them to topics of interest in standard ODE courses. (Received September 14, 2008)