37e A Software Program for Chemical Reactor Engineering

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An extensive, interactive software program has been developed in the area of chemical reactor engineering. Included in this program are interactive presentations of text material for the 4th edition of Elements of Chemical Reactor Engineering and self-tests for each of the important concepts covered in courses in chemical reactor engineering. Web modules and interactive computer modules are designed to educate students by incorporating different learning styles in the Felder-Solomon Learning Style Index, providing a chance for students to explore a wide range of concepts from different standpoints, enhancing the ability of the student to understand the material. Living example problems provide the opportunity for students to discover the breadth of applications of chemical reactor engineering, from snake envenomation to environmental issues. The Professional Reference Shelf extends the concepts of the textbook by providing an up-to-date collection of materials of great industrial interest and importance. By including simulations of mathematically complex problems using POLYMATH (ODE solver) and FEMLAB (PDE solver and model constructor) gives students the chance to use relevant mathematical computing tools and to solve problems that are very difficult or impossible to solve analytically. To allow for wider usage among students and faculty and an opportunity to interact with the creators of the software, these features have been made available on both a compact disc in Elements of Chemical Reactor Engineering and on the World Wide Web at http://www.engin.umich.edu/~cre.