Learn Aspen Plus® in 24 Hours, 2nd Edition

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The first edition of this book, published in 2018, consisted of 12 tutorials (chapters) designed for completion in about two hours each, hence the book title. The second edition, published in 2022, contains the same 12 tutorials, though some of the material has been rearranged. In addition, there are four "bonus" tutorials on more advanced topics; therefore, it might take more than 24 hours to complete all of the tutorials. In fact, depending on the individual, two hours per tutorial might be optimistic. However, given the depth of some of the tutorials, for those really wanting to learn how to apply Aspen Plus® to solve problems, the extra time might be worth it.

As stated by the author, the purpose of the book is to pose chemical process engineering problems and to solve those problems using Aspen Plus as a tool. It is not an Aspen Plus user guide. Therefore, the book does not start with the simplest material and introduce progressively more difficult material. As such, the order of presentation might not be consistent with how Aspen Plus is typically taught in a design class to students who have never seen it before. The book is written somewhat informally, as if the author is interacting with the reader. It is essential for the reader to have Aspen Plus open and follow the tutorials step-by-step. The reader is instructed to create simulations, and the book contains screen shots of most steps in a tutorial. Each tutorial contains at least one problem and usually several sub-problems for the reader. There are questions asked periodically throughout each tutorial, and the answers/solutions are in the back of the book. There are also numerous "Tom's tips" that often include essential information for the novice. One of the excellent features of this book is that readers are taken through the steps to look at more than a numerical answer, something novice students often overlook. Readers are asked to look at the plots and other information that Aspen Plus can produce, such as reactor profiles, heat exchanger profiles, and distillation column profiles. This is important for anyone using Aspen Plus, since it provides a greater understanding than a simple numerical answer. It is also consistent with the problem-solving aspect of the book.

A key question might be who is the audience for this book? This book would be ideal for someone in industry who wants to learn Aspen Plus without going to formal training provided by Aspen Technology, Inc. Learning can be accomplished at the reader's own pace. In academia, an instructor could learn Aspen Plus the same way. Additionally, a graduate student or professor who was introduced to Aspen Plus as an undergraduate could use this book as a refresher and proceed to more complex aspects. To assist the self-learner, the author introduces most tutorials with a list of other tutorials that should have been completed previously. Additionally, chemical engineering topics required to understand a specific tutorial are listed along with copious references to on-line videos, mostly from learncheme.com, that provide the necessary background material.

As stated previously, those who teach Aspen Plus to students seeing it for the first time in a design class might find the order of presentation different from their methods. Given the complexities of Aspen Plus and the compressed time period that many design instructors have to teach it, it may be challenging for students to learn Aspen Plus only from this book within the desired time frame, given students' other time pressures. Nevertheless, this book could still be an excellent reference for those students, especially since it provides more examples to use for practice. If the instructor wants to start with simpler examples, that can be done. A hidden gem of this book might be for those programs wanting to integrate Aspen Plus throughout the curriculum. Since the book is written to allow the tutorials to be completed in almost any order, specific tutorials could be associated with specific courses, so that by the time students get to the senior year, they have learned all of the requisite material to attack a design problem.

To summarize, this book is a valuable reference for anyone learning or teaching Aspen Plus. It is an excellent tool to learn Aspen Plus under the right circumstances, though it is not necessarily the best sole reference for what is probably the largest academic audience, novices in a capstone design class. However, it can be a valuable tool for different people in different situations, from practitioners to students.❏