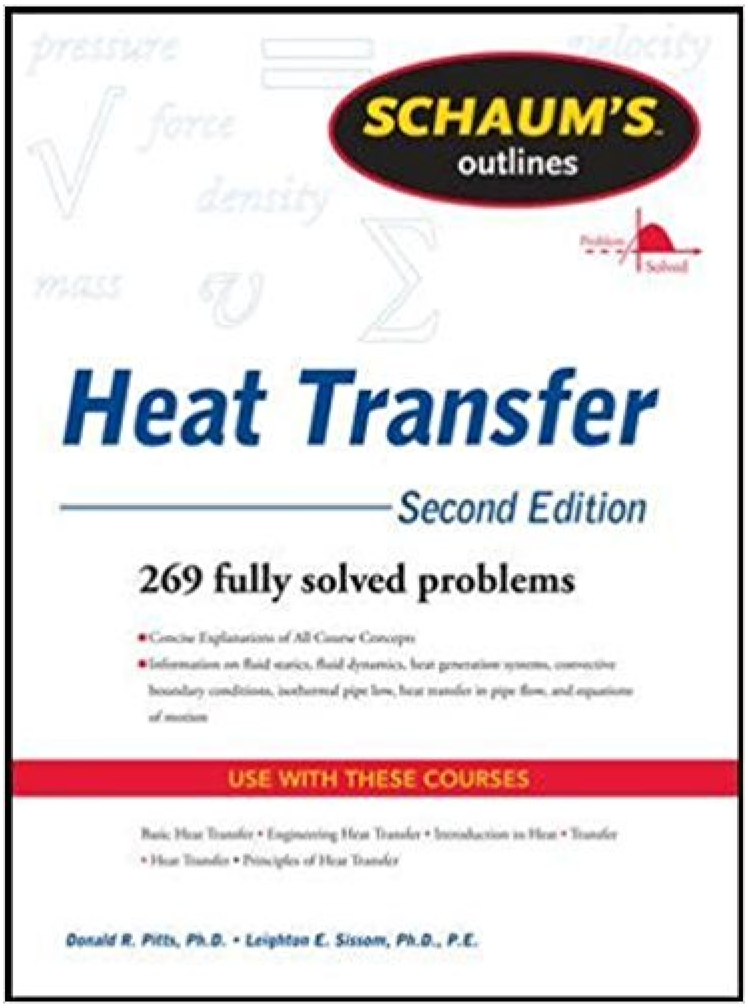
Schaum's Outline Of Heat Transfer, 2nd Edition (Schaum's Outlines)



Synopsis

The ideal review for heat transfer course More than 40 million students have trusted SchaumÃ¢â ¬â„¢s Outlines for their expert knowledge and helpful solved problems. Written by renowned experts in their respective fields, SchaumÃ¢â ¬â„¢s Outlines cover everything from math to science, nursing to language. The main feature for all these books is the solved problems. Step-by-step, authors walk readers through coming up with solutions to exercises in their topic of choice.   269 solved problems and 92 answered problems Outline format supplies a concise guide to the standard college courses in heat transfer Clear, concise explanations of all heat transfer concepts Complements and supplements the major heat transfer textbooks Appropriate for the following courses: Basic Heat Transfer, Engineering Heat Transfer, Introduction to Heat, Transfer, Heat Transfer, Principles of Heat Transfer Easily-understood review of heat transfer Supports all the major textbooks for heat transfer courses

Book Information

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Customer Reviews

--This text refers to an out of print or unavailable edition of this title.

Dr. Donald R. Pitts holds three engineering degrees Ã¢â ¬â œ the B.M.E. from Auburn University, the M.S.M.E., and Ph.D. from the Georgia Institute of Technology. His 27 years of academic experiences include appointments at Tennessee Technological University, Clemson University, and the University of Tennessee-Knoxville. Dr. Leighton E. Sissom is a registered professional engineer. He holds four degrees, including a B.S.M.E. from Tennessee Technological University and M.S.M.E. and Ph.D. from the Georgia Institute of Technology. He has served as a consultant to more than 600 organizations in 41 states and 11 foreign countries.

Preface: I bought this book out of panic that my instructor might not be too helpful. Now that the course is over, while my instructor didn’t provide a lot of clear examples, he (and his TAs) was a nice grader, so I didn’t have to rely on other external heat transfer help too much.I honestly didn’t use this book a whole lot. I’d say this book is good for supplemental help, or if you just need to do a quick study session on the go. The book offers a few example problems along with other practice problems for each topic of introductory heat transfer. Sometimes it was tricky for me to find topics I wanted to study through the index, and even then some of the explanation was not satisfactory.Ultimately, I would suggest this book as a good study material if you’re on the go and you don’t want to carry the heavy course textbook. So for example, if you’re on a camping trip but want to sneak in some studying in or if you don’t want to carry a large textbook, this could be good. Might not be the best option if you’re looking to replace an entire textbook for the whole course.---Pros:* Good supplementary material* Brief explanations of concepts* Practice problems with a few solvedCons:* Explanations for some concepts might not be satisfactory

Good Book

Don’t buy this to learn Heat Transfer, its biggest asset is that is has some crystal clear definitions but the equation aren’t detailed enough to gain a valuable understanding from and examples are somewhat easy and shallow. At least for my class.

Definitely gives you heat and mass problems.

Great

I was struggling in this class at GA Tech after the first couple of exams, but managed an A (!!!) after studying the rest of the semester with this companion book. Heat Transfer is a difficult subject, but this book made the material a lot more approachable and easier to handle.

The book is very helpful for insight into how to handle various heat transfer geometries, such as flat plate, cylinders, sphere, etc. I found no glaring technical or typographical errors in the book. However, the section on heat exchangers could have been much better developed. Specifically, on the relationship of UA, mass flow rate, specific heat capacity, and the terminal differential temperature ratio. For those interested, I offer the following derivations:For counterflow Hx’s:(T1-T2)/(T3-T4)=e^(UA*(M2Cp2-M1Cp1)/(M1Cp1*M2Cp2))For parallel flow Hx’s:(T1-T4)/(T3-T2)=e^(UA*(M2Cp2+M1Cp1)/(M1Cp1*M2Cp2))Where: T1 is the inlet temperature of the high temperature fluid, T2 is the exit temperature of the low temperature fluid, T3 is the exit temperature of the high temperature fluid, T4 is the inlet temperature of the low temperature fluid. UA is the product of the overall heat transfer coefficient and the heat transfer area, typically fixed in the heat exchanger design/construction. M1 and M2 are the mass flow rates of the the high temp (M1) and low temp (M2) fluids. Cp1 and Cp2 are the specific heat capacities of the high temperature and low temperature fluids, respectively. Of course, "e" is the base natural logarithm, 2.71828...Although, the idealized case, these formulae, which I could not gleen from this outline, will help greatly in the evaluation of terminal temperatures for a given heat exchanger given the design attributes of U, A, Cp, mass flow rates and sink and source temperatures.

One aspect of the book I found very useful is the compilation of empirical correlations for the Nusselt number, making this book an ideal **supplement** to a more theoretically oriented textbook. For upper level undergraduate and the first year graduate students in an engineering major, my recommendation in this regard would be "Fundamental Principles of Heat Transfer" by Stephen Whitaker.

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