ME 505
Intermediate Heat Transfer
List of References – Fall 2002

This extensive list of references is provided as a source of information, and not all the books in this list are needed for this course. Those with an asterisk are the most relevant for this course.

General

Bird, R.B. Stewart, W.E. and E.N. Lightfoot, *Transport Phenomena*, John Wiley (1960). A comprehensive treatment of momentum, heat and mass transfer and a classic. Extensive treatment of conservation equations.

Eckert, E.R.G. and R.M. Drake, Jr., *Analysis of Heat and Mass Transfer*, McGraw-Hill (1972). Comprehensive treatment of heat transfer by conduction, convection and radiation. Considers some interesting special cases.

Mills, A.F., *Heat and Mass Transfer*, Irwin (1995). A comprehensive treatment of heat and especially mass transfer at an introductory level.

Conduction/Diffusion

*Ozisik, M.N., *Heat Conduction*, John Wiley (1984). Extensive discussion of analytical methods suitable for conduction problems. Many applications to different geometries and thermal conditions.

Myers, G.E., *Analytical Methods in Conduction Heat Transfer*, Genium (1987). Classical and clear treatment of analytical methods for conduction.

Arpaci, V.S., *Conduction Heat Transfer*, Addison-Wesley (1966). Contains many good examples and problems.

Carslaw, H.S. and J.C. Jaeger, *Conduction of Heat in Solids*, Oxford University Press (1959). For many years, the definitive work on conduction heat transfer analysis. Mathematical developments terse, but results presented for many geometries and conditions.

Convection

Arpaci, V.S. and P.S. Larsen, *Convection Heat Transfer*, Prentice-Hall (1984). Covers a wide variety of topics. Many good examples.

Bejan, A., *Convection Heat Transfer*, John Wiley (1984). Emphasis on appropriate scaling parameters and natural convection.

Burmeister, L.C., *Convective Heat Transfer*, John Wiley (1984).

Kays, W.M. and M.E. Crawford, *Convective Heat and Mass Transfer*, McGraw-Hill (1993). Excellent treatment of laminar and turbulent single phase forced convection.

*Kakac S. and Y. Yener, *Convective Heat Transfer*, CRC Press (1995), 2nd Ed. A more accessible treatment of the subject.

Radiation

Siegel, R. and J.R. Howell, *Thermal Radiation Heat Transfer*, Hemisphere (1992). A very detailed and excellent treatment of radiation – a classic.

Brewster, M.Q., *Thermal Radiative Transfer & Properties*, John Wiley (1992). A comprehensive and readable treatment of radiative heat transfer.

Modest, M. F., *Radiative Heat Transfer*, Mc-Graw Hill (1993).

Special Topics

Abramowitz, M. and Stegun, I. A., *Handbook of Mathematical Functions*, NBS, 1964. Encyclopedic reference for mathematical functions.

*E. Kreyszig, *Advanced Engineering Mathematics*, Wiley, 1988. Excellent general reference for most mathematical analysis methods.

Kakac, S., Shah, R. K. and Aung, W. (Eds.), *Handbook of Single-Phase Convective Heat Transfer*, Wiley-Interscience (1987). An excellent compendium of information on convection.

Carey, V.P., Liquid-Vapor Phase-Change Phenomena, Hemisphere (1992). Good treatment of boiling and condensation.

Minkowycz, W.J., Sparrow, E.M., Schneider, G.E., Pletcher, P.H. (Eds.), *Handbook of Numerical Heat Transfer*, John Wiley (1998). Reference source for numerical methods.

Press, W.H., Flannery, B.P., Teukolsky, S.A. and Vetterling, W.T., *Numerical Recipes*, Cambridge (1989). Self-explanatory name – useful book.

Kim, S.J and Lee, (eds.), *Air Cooling Technolgy for Electronic Equipment*, CRC Press (1996). A reference for articles on electronics cooling.

Azar, K. (ed.), *Thermal Measurements in Electronics Cooling*, CRC Press (1997). A reference for practical details on thermal measurements.

Kurz, W. and Fisher, K., *Fundamentals of Solidification*, Transtech Publications (1989). An excellent resource for analysis of solid-liquid phase change.

Tien, C. L., Majumdar, A. and Gerner, F., *Microscale Energy Transport*, Taylor and Francis (1998).

Wheeler, A. J. and Ganji, A. R., *Introduction to Engineering Experimentation*, Prentice Hall (1996).