Physics 603  Spring 2013  REFERENCES


**Strongly Recommended:**


Donald A. McQuarrie, Statistical Mechanics, Univ. Science Books, 2000 [1891389157], esp. for chemists.


**Other Statistical Physics Texts:**


Silvio Salinas, Introduction to Statistical Physics, Springer, 2010 bp [978-1441928849], seemingly pb version of 2001 hardback


J.D. Walecka, Introduction to Statistical Mechanics, World Scientific, 2011 pb [978-9814366218]


Shang-Keng Ma, Statistical Mechanics, World Scientific, 1985; pb [9771966077].

D. Goodstein, States of Matter, Dover reprint, 2002; pb [978-0486495064].

Brian Cowan, Topics in Statistical Mechanics, World Scientific, 2005; pb [978-1860945694].

G.H. Wannier, Statistical Physics, Dover, 2010 [reprint of classic text, seemingly out of print]: pb [978-0486654010]


P.M. Morse, Thermal Physics, 2nd ed., 1969; [978-0805372021]

**Thermodynamics Texts:**


E. Fermi, Thermodynamics, 1936, Dover, 1956; pb [486-60361-X]


**Numerical Techniques:**


D.C. Rapaport, The Art of Molecular Dynamics Simulation, Cambridge, 1997; pb [0521599423].

J.M. Thijssen, Computational Physics, Cambridge, 1999; pb [052157588]; lots of physics, presented in a format useful for computations, but over 1/3 on electronic aspects.


**Less-Advanced Texts:**


**Undergraduate Texts:**


Harvey Gould and Jan Tobochnik, Thermal and Statistical Physics: With Computer Applications, Princeton U
Press, 2010 [978-0691137445]
http://stp.clarku.edu/notes/

Daniel V. Schroeder, Thermal Physics, Addison Wesley Longman, 2000 [0-201-38027-7]

Ralph Baierlein, Thermal Physics, Cambridge University Press, 2000; pb [0 -521-65838-1]

F. Mandl, Statistical Physics, 2nd ed., Wiley, 1988; pb [978-0471915331]

M. D. Sturge, Statistical and Thermal Physics, A K Peters, 2003 [156881196-1], lots of typos

C. Kittel and H. Kroemer, Thermal Physics, 2nd ed., Freeman, San Francisco, 1980 [0-7167-1088-9], unpopular but often used as PHYS404 course text.


Don S. Lemons, Mere Thermodynamics, Johns Hopkins University Press, 2009; pb [0-8018-9015-2]


F. Reif, Fundamentals of Statistical and Thermal Physics, Waveland Press, 2008 [978-1577666127].

More-Advanced Texts (most from Phys. 704):


Outstanding series: Phase Transitions and Critical Phenomena, C. Domb and J.L. Lebowitz (formerly M.S. Green), Academic; no longer pub.

Other Noteworthy Advanced Texts:
Radu Balescu, Equilibrium and Nonequilibrium Statistical Mechanics, Wiley, 1975; out of print [0471046000]; esp. chap. 11 on non-equilibrium.


R.P. Feynman, Statistical Mechanics, W.A. Benjamin, 1972; pb [0805325093].


G. F. Mazenko, Fluctuations, Order, and Defects, Wiley, 2002 [978-0471328407].

G. F. Mazenko, Nonequilibrium Statistical Mechanics, Wiley, 2006 bp [978-3527406487].


Advanced Specialized Texts:
Radu Balescu, Statistical Dynamics: Matter out of Equilibrium, Imperial College Press, 1997; pb [1860940463] unavailable; [1860940455].


John Cardy, Scaling and Renormalization in Statistical Physics, Cambridge, 1996; pb [0521499593].


Nigel Goldenfeld, Lectures on Phase Transitions and the Renormalization Group, Addison-Wesley, 1992; pb [0201554097].


Extensive compilation of texts, inc. most of the above:
http://stp.clarku.edu/books/#grad/; see also a commented list at http://crab.rutgers.edu/~cowley/thermal1/textbooks.htm

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