LIST OF SUPPLEMENTARY REFERENCES

I. CLASSICAL THERMODYNAMICS

1. Bett, Rowlinson, and Saville, *Thermodynamics for Chemical Engineers*, MIT Press, 1975. [General text from a Chemical Engineering perspective].

2. Callen, *Thermodynamics and an Introduction to Thermostatistics*, Wiley, 1985. [Physics approach, recommended section on Legendre transformations].

3. Denbigh, *Principles of Chemical Equilibrium*, 4th Edition, Cambridge University Press (London), 1981. [Well-written, alternative intermediate text from a Chemistry perspective].

4. Gibbs, *Collected Works, I*: *Thermodynamics*, Yale University Press, 1963. [Historical reference].

5. Hatsopoulous and Keenan, *Principles of General Thermodynamics*, Wiley, 1964. [Detailed theoretical, postulatory approach].

6. Hougen and Watson, *Chemical Process Principles, I: Thermodynamics*, 2nd Edition, Wiley, 1959. [Corresponding-states principle, a classic Chemical Engineering Thermodynamics text].

7. Keenan, et al., *Steam Tables: Thermodynamic Properties of Water Including Vapor, Liquid, and Solid Phases*, International System of Units," Wiley, 1978. [Good reference].

8. Lewis and Randall (revised by Pitzer and Brewer), *Thermodynamics*, 2nd Edition, McGraw-Hill, 1961. [Well-written, treats electrolytes].

9. Milora and Tester, *Geothermal Energy as a Source of Electric Power*, MIT Press, 1976. {Thermodynamic treatment of low-temperature power cycles].

10. Prausnitz, Lichtenthaler, and Azevedo, *Molecular Thermodynamics of Fluid Phase Equilibria*, 3rd Edition, Prentice-Hall, 1999. [Intermolecular forces, bridges the gap between Classical and Statistical Thermodynamics, presents many practical models for non-ideal behavior].

11. Prigogine and Defay, *Chemical Thermodynamics*, Longmans (London), 1954. [Detailed, theoretical, good on mixtures and phase equilibria].

12. Reid, Prausnitz, and Poling, *The Properties of Gases and Liquids*, 4th Edition, McGraw-Hill, 1987. [Essential for estimating thermodynamic properties].

13. Sandler, *Chemical and Engineering Thermodynamics*, Wiley, 1999. [Introductory, well-organized].

14. Smith and van Ness, *Introduction to Chemical Engineering Thermodynamics*, 4th Edition, McGraw-Hill, 1987. [Introductory, well-organized].

15. Tisza, *Generalized Thermodynamics*, MIT Press, 1966. [Theoretical, detailed discussion of Legendre transformations].

16. Walas, *Phase Equilibria in Chemical Engineering*, Buttersworth, 1985. [Excellent, practical treatment of VLE and LLE].

17. Weber and Meissner, *Thermodynamics for Chemical Engineers*, 2nd Edition, Wiley, 1957. [Well-written, introductory text].

II. STATISTICAL MECHANICS

1. Chandler, *Modern Statistical Mechanics*, Oxford, New York, 1982. [Concepts and modern theory, particularly helpful for phase transitions.]

2. Callen, *Thermodynamics and an Introduction to Thermostatistics*, 2nd Edition, Wiley, 1985. [Critical-point scaling theories.]

3. Debenedetti, *Metastable Liquids*, Princeton University Press, 1996. [Modern treatment of experimental data and theories regarding stability and criticality.]

4. Hill, *An Introduction to Statistical Thermodynamics*, Dover, 1987. [A thorough introduction, but less mathematically sophisticated than his earlier work, listed below..]

5. Hill, *Statistical Mechanics – Principles and Selected Applications*, Dover, 1987. [Advanced text covering basic aspects of liquid state theory.]

6. Hirshfelder, Curtiss, and Bird, *Molecular Theory of Gases and Liquids*, Wiley, 1954. [Excellent comprehensive treatment of theory and early work.]

7. Huang, *Statistical Mechanics*, Wiley, 1987. [Advanced text with extensive discussion of Ising models.]

8. McQuarrie, *Statistical Mechanics*, Harper Row, 1976. [Good detailed treatment of classical statistical mechanics.]

9. Pathria, *Statistical Mechanics*, 2nd Edition, Butterworth-Heinemann, 1996. [Intermediate text, with a thorough coverage of phase transitions and condensed matter theory.]

10. Reed and Gubbins, *Introduction to Applied Statistical Mechanics*, Butterworth-Heinemann, 1973. [Intermediate level text with a solid treatment of intermolecular potentials and some liquid state theory.]

11. Reif, *Fundamentals of Statistical and Thermal Physics*, McGraw-Hill, 1965. [Introductory text with clear explanations of basic concepts of statistical mechanics, motivated from probability theory.]

12. Rowley, *Statistical Mechanics for Thermophysical Property Calculations*, Prentice-Hall, Upper Saddle River, 1994. [Clear basic treatment, including simulation methods, written by a Chemical Engineer.]

13. Stanley, *Introduction to Phase Transitions and Critical Phenomena*, Clarendon Press-Oxford, 1971. [A classic text in its field, with clear discussions of scaling relations and critical exponents.]

14. Yeomans, *Statistical Mechanics of Phase Transitions*, Clarendon Press-Oxford, 1992. [An introductory text, simpler than Stanley, with discussions of a number of techniques commonly used in studying the behavior of many-body systems.]

III. MOLECULAR SIMULATIONS

1. Allen and Tildesley, *Computer Simulation of Liquids*, Oxford, 1987. [Classic treatment.]

2. Frenkel and Smit, *Understanding Molecular Simulation*, Academic Press, 1996. [Good overview with more recent advances than Allen and Tildesley.]

NOTE: All the references above are on reserve at the Hayden Library.