Physics 321: Thermal Physics
Spring 2013: Section 321001

Instructor: Witold Nazarewicz   Office: 104 South College
Phone: 974-4375 (or 574-4580 at ORNL)
E-mail: witek@utk.edu

John Cooke   Office: 209 South College
Phone: 974-0771
E-mail: jcooke1@utk.edu

Class: 12:20 - 1:10 MWF in Nielsen Physics 306
Office Hrs: 11:20 - 12:20 WF (or by appointment, if this does not work for you)

Text: *An Introduction to Thermal Physics*, by Daniel V. Schroeder

Tests and Grades:Attendance  10%
Quizzes       10%
Mid-term exam  20%
Final Exam    35%
Homework      25%

• **Class preparation and protocol:** It is extremely important to keep up with the work in the class, since the material builds on itself. Each day, you should preview the topics for the next class; after the class, you then study the topics in detail, working the assigned exercises and problems, etc. You can help make the class more productive by thoughtful questions and careful attention. Please check immediately that you understand all credits earned on exams, homework, etc.

• **Disabilities:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructors privately to discuss your specific needs. Contact the Office of Disability Services at 974-6087 in Hoskins Library to coordinate reasonable accommodations for students with documented disabilities.

• **Cheating:** Cheating will not be tolerated – every person should have an equal chance to do well. No outside materials are permitted on any test or exam, except as stated explicitly by the instructor.

Tests:   **Mid-term Exam:** March 1, 2013
         **Final Exam:** May 7, 2013 (Tuesday) at 12:30 - 14:30

Ch: § Topic Exercises and Problems Due

1 Energy set 1: # 5, 11, 16, 22, 33, 38, 41, 62  Jan. 18
2 2nd Law set 2: # 6, 8, 17, 26, 29, 32, 34, 42  Feb. 1
3 Interactions set 3: # 5, 7, 14, 20, 28, 34, 36, 38  Feb. 11
4 Engines set 4: # 2, 5, 8, 13, 16, 20, 22, 32  Feb. 20
5 Free Energy set 5: # 12, 23, 43, 51, 55, 69, 76, 80  Mar. 4
6 Boltzmann Statistics set 6: # 13, 22, 29, 32, 35, 43, 47, 52  Mar. 18
7 Quantum Statistics set 7: # 8, 22, 24, 26, 31, 36, 39, 43  Apr. 8
        set 8: # 49, 53, 54, 58, 63, 67, 72  Apr. 17
8 Interacting Particles set 9:  # 3, 9, 13, 16, 19, 22, 24  Apr. 30

Grading scale: A = 100-90; B = 80-90; C = 70-80; D = 60-70; F < 60
OUR OBJECTIVES in this COURSE

• Gain deeper understanding of thermodynamics and statistical mechanics.

• Apply general principles to specific physical and chemical problems.

• Advance your skills and capability for formulating and solving problems.

• Hone your math skills.

• Expand and exercise your physical intuition and instincts.