Physics 454 - Thermal and Statistical Physics
Dr. Ian Balitsky, Spring 2019

1. Information:

   - Office: OCNPS 323
   - Phone: 683-5814, 269-7383 (JLab)
   - E-mail address: IBalitsk@odu.edu
   - Office hours: Tue 12:30 - 2 p.m. in my office and Thu 1-2 p.m. in the Learning Center

2. Recommended textbook:

   - Sears & Salinger, "Thermodynamics, Kinetic Theory, and Statistical Thermodynamics", ISBN 0-201-06894-X, chapters 1-11

3. Reference textbook:

   - D. Schroeder, "An Introduction to Thermal Physics", ISBN-13: 978-0201380279

4. Grade (out of 100%):

   - Homework: 34%
   - Midterm I : 16%
   - Midterm II: 16%
   - Final (comprehensive): 34%

5. Outline of the course:

   - Fundamental concepts.
   - Equations of state.
   - The first law of thermodynamics.
   - Consequences of the first law.

- Second law of thermodynamics. Entropy.
- Combine first and second laws.
- Thermodynamic potentials.
- Applications to simple systems.
- Kinetic theory.
- Theory of transport phenomena.
- Statistical thermodynamics.