

**PHYSICS 306, INTRODUCTION TO THERMODYNAMICS AND  
STATISTICAL MECHANICS, SPRING 2020**

**Time and place** TuThu 10:00-11:20 AM, Javitz 101

**Instructor:** Prof. Edward Shuryak email [edward.shuryak@stonybrook.edu](mailto:edward.shuryak@stonybrook.edu),

**Teaching assistant:** Colin Gordon, email [colin.gordon@stonybrook.edu](mailto:colin.gordon@stonybrook.edu)

**Textbook:** *Concepts in thermal physics, second edition*, S.J. and K.M. Blundell

**Supplementary reading:** *An Introduction to Thermal Physics*, Daniel V. Schroeder

This is an introductory course, discussing thermodynamics and statistical mechanics. It starts with kinetic and thermal theory of gases, and then introduces all concepts of classical thermodynamics and statistical mechanics. We will use microcanonical, canonical and other ensembles. We will also study systems with quantum statistics, Bose-Einstein and Fermi-Dirac ones.

The Blundell textbook is characterized by very short and concise chapters, clear content and multiple examples, which I hope will help. The lectures will follow the textbook, with about 2/3 chapters covered and few chapters given just for reading .

**Homeworks** There will be weekly homework problems, collected for grading (mostly) on Thursdays

**Grading** will be distributed between homeworks, Midterm exam and the Final in the proportion 30% - 30% -40%

**Exam policy** NO books, printed or photocopied material, no phones or calculators with memory. Short personal handwritten summary notes allowed.

**Stony Brook policies**, in respect to academic integrity, disabilities, sick days, religious observances and other issues students may have during the course are followed: please email me with any issues you may have.