

**PHYSICS 306, INTRODUCTION TO THERMODYNAMICS AND  
STATISTICAL MECHANICS, SPRING 2019**

**Time and place** TBD

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

**Teaching assistant:** TBD

**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 statistical mechanics such as entropy, microcanonical and canonical 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 some chapters of secondary importance omitted. I am using this textbook for the first time, and so we will see how far into the book we will be able to go in available time.

**Homeworks** There will be homework problems, distributed and graded weakly.

**Grading** will be distributed between homeworks, Midterm exam and the Final in the proportion 35% - 30% - 35%

**Exam policy** NO books, printed or photocopied material, no phones. Personal handwritten 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.