

ADVANCED STATISTICAL MECHANICS

PHYS 5365 (CRN: 11034; FALL 2020)

Lectures: CCSB 1.0204; 10:30 – 11:50 AM Monday

Term: Fall 2020, Aug 24 – Dec 03

Grading: Standard letter

Prerequisite courses: PHYS 3331

Instructor: Hari Nair (hnair@utep.edu #PSCI 223 C, Ph: 7544)

Office hours: upon request.

Grader:

Office hours: upon request

Date of final exam: Friday, 11 December 2020, 10:00 AM – 12:45 PM

This class will be delivered in a hybrid format. When possible, the class will meet face-to-face on Mondays (Aug 24-Dec 03) 10:30-11:50 AM at CCSB 1.0204. Otherwise, lectures will be online.

After Thanksgiving holiday, Nov 13th, the course will be purely online.

Please note that safety measures, masks and social distancing are mandatory during face-to-face sessions.

Advanced Statistical Mechanics: Classical and quantum statistics of systems in equilibrium. Treatment of fluctuations and transport phenomena. Introduction to many body problems. Prerequisite: PHYS 3331 with a grade of "C" or better.

Textbooks: *Thermodynamics and Statistical Mechanics* by Walter Greiner

Statistical mechanics by Donald McQuarrie

Statistical mechanics by R. K. Pathria

And some web-based documents that I will share with the class if we cover those topics.

Grading policy: This is a 3-credits course with letter grading based on the total score from a midterm exam (30%), a final exam (50%), and in-class performance (20%). The final exam will cover all the chapters discussed in the class. An 80% total score leads to the letter grade A, a score in the range 70-80% is B, 60-70% is C.

Disability and military statements: If you have a disability please contact Center for Accommodations and Support Services (CASS) *ph:* 747-5148, *email:* cass@utep.edu. *Office:* Union East Building, Room 106. Without CASS documentation, no accommodations can be made. Please take care of this before the first exam. If you are a military student with the potential of being called to military service and/or training during the semester, you are encouraged to contact the instructor at the beginning of the semester.

Academic Integrity policy

<https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>