Course Overview [1]

Pankaj Mehta

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[1] I would like Jim Sethna for sharing all his course materials with me and giving me insights from his experience teaching this course

This will give an overview of the course including basic structure of the class. Importantly, we will be employing a flipped classroom. This requires more of you – the student – but also is more rewarding.

Welcome to PY 541 Statistical Physics. This is a graduate course that assumes you have taken an undergrad course on these topics (e.g. Thermal Physics, Statistical Physics, etc.). It also assume some basic familiarity with core mathematical areas: probability, linear algebra, vector calculus as well rudimentary programming skills (Python, Mathematica, etc). If you do not feel comfortable with these concepts, please come talk to me.

Structure of the Class

We will be employing a flipped classroom model. You will be expected to have *read the chapter ahead of time* and *answer a short pre-class question* on Blackboard . The pre-class problem will be due at midnight before T/Th lectures and before 2pm on Wed. class discussions on days there is no problem set. In addition, there will be weekly HW assignments, a take-home Midterm, and take-home Final.

During class, we will discuss the reading, followed by working in small groups to solve problems. Along the way, we will discuss interesting concepts and clarify confusions that arise.

Book

We will be closely following the second edition of Jim Sethna's wonderful book. It is available online at:
https://www.lassp.cornell.edu/sethna/StatMech/index.html.
There are also hints and code for computational exercises at this website.

Website and Blackboard

The website for the class is https//physics.bu.edu/ pankajm/PY541.html. There will weekly assignments and readings posted on this. Please use the corresponding Blackboard site to submit all pre-class questions and any electronic HW assignments.

Grading

The grading of the class will be: 15% pre-class quizes, 50% Homeworks, 15% Midterm, 20% Final Exam. I may slightly shift these percentages based on how the class is going. The grading scale is as follows (rounded to nearest whole percentage):

Grade	Percentage
A	93-100
A-	90-93
B+	87-90
B	83-87
B-	80-83
C+	77-80
C	73-77
C-	70-73
D	65-70
F	≤ 65

Honor Code

All students are expected to follow the BU Honor Code. While collaboration is allowed and encouraged on HWs, each student should write up their own solutions. Copying HW is strictly forbidden. The students are allowed to consult all resources and books. However, students are NOT allowed to consult problem solutions from previous years or as found on the web.