

# Lecture #20: Random Variables and Expectation

## What Will Happen During the Lecture

### Remember... You Had Homework!

Students were asked to work through the following set of lecture notes before this lecture.

- Lecture Notes — “Random Variables and Expectation”.

As always, you may attend the lecture presentation if you have not worked through this material ahead of time — but it will not be repeated for you, and you might get a little bit lost, during the presentation, if you haven’t worked through this.

While some students (in previous sections of this course) have indicated that most of this material is review, other students stated that they had seen almost none of it before this.

### Problems To Be Solved

In order to get started, a problem concerning random variables and expectation that might be found in a textbook on probability and statistics — and that students might have been asked in a prerequisite for this course — will be discussed.

A simple problem concerning the expected value of a random variable, associated with **hash tables** with chaining, will be considered.

If time permits then the proof of one of the results in the preparatory reading will also be discussed.