

Study Skills and the Textbook

In most college courses, there are some skills that are rarely taught but often rewarded: time management, self discipline, effective note-taking, and active engagement study methods are among the most useful. In an effort to encourage development of these skills, our homework is designed to be challenging but not arduous if you work on it regularly as you study the material for the course.

We recommend getting familiar with reading the textbook early on in the semester. Like any other study strategy, reading the textbook is a skill, and it may take some time to practice. Importantly, engaging with the textbook is a form of *active participation*—it takes effort to read and understand the examples in the textbook, just like it takes effort to work through the homework assignments. Students often report a reluctance to use the textbook as a study tool because it can be time consuming and frustrating, and prefer instead resources that allow them to *passively* interact with the course material (e.g. YouTube tutorials). In almost all cases, students who rely primarily on passive engagement methods perform less well in the course than students who primarily use active engagement methods.

Online Homework (WebWork)

These assignments are designed to check for basic mastery of the material covered in the class. Most students score very highly on the WebWork, so a “good score” on the WebWork is indicative of a basic understanding of the material (and is not necessarily indicative of a high grade in the course overall).

Generally speaking, the WebWork assignments will be open for two weeks—this is to allow flexibility to your schedule. The WebWork assignments open early enough that you can use the WebWork as a study tool: if you start the WebWork right when it opens, you will be discussing the relevant topics in the class while you work on the assignment. For example, WebWork 1, which is released on the first day of class but is not due until January 20, primarily covers material taught in week 1. If you begin WebWork 1 on the first day of class, you may not yet know how to do all of the problems, but as the week progresses you will learn all of the skills needed for the assignment.

You should use this as an opportunity to incorporate these assignments into your study habits. When learning material for the first time, it is generally regarded as good practice to read the relevant sections of the textbook, review class notes, ask questions, and importantly, *work practice problems*. When you are struggling with a particular topic, working through examples and practice problems from the book and your notes is a good way to check your understanding, find gaps in your knowledge, and identify mistakes you are likely to make. The WebWork problems are of roughly comparable difficulty to most of the textbook problems, and because the WebWork system provides instant feedback, they are ideal problems to use during your practice.

Written Homework

In contrast to the WebWork, the written homework will be assigned only after you have completed a significant portion of your class discussion of a particular topic. For example, Homework 1, which will be released in the second week, primarily covers material taught in week 1. In principle, you will have seen everything needed to complete Homework 1 by the time it is released.

The written homework is substantially more difficult than the WebWork, and is designed to push your thinking beyond basic mastery. Each week, there will be 6 homework problems and one extra credit problem. We **strongly** suggest that you work on the assignment throughout the week (for example, one problem each day). Attempting to complete the written homework in a single day is usually intractable, and correlates strongly with decreased student learning.

It is also important to note that completing homework assignments and preparing for exams are two different skills: the way in which you complete the homework has an impact on your learning and subsequent performance in the course. Students who complete the homework in a rush, who rely on hints and online resources, and who only attempt the homework in the Math Lab may receive high homework scores but have poor retention and understanding, and high homework scores may not be reflected in exam scores. In contrast, students who work

with peers on the homework regularly, come to office hours with questions and attempted solutions, and who work to develop their problem solving skills will likely see high homework scores reflected in exam scores.

Late Assignments

We do not accept late homework in this class. It is pedagogically inequitable to allow late assignments for only those students that speak up and not the students that attempt to complete the homework on time. Similarly, it is administratively intractable to allow extensions for some subsets of students and not others. *Please make every attempt to complete and submit your homework assignments by the deadline.*

To compensate for our relative inflexibility, we have a few policies in place:

- The homework is due at 11:59PM each day it is due.
 - For WebWork, it is not possible to submit after the deadline. However, the WebWork assignments are all open for two weeks, providing ample time to complete the assignment before the deadline.
 - For written homework, the Gradescope submission window will remain open until 1am to allow for the possibility of technical errors. We drop the lowest two written homework scores from among homeworks 0 through 10, so if you miss an assignment due to illness or unforeseen circumstance, it will not affect your grade. If you are missing more than two homework assignments due to outside factors, it is likely that you would benefit from talking with your instructor about your ability to fully participate in the class.
- Solutions to the written homework are typically posted at 8am the morning following the due date. Absolutely no submissions can be accepted after the solutions are posted, for any reason.
 - In the case of truly extreme circumstances, if the course coordinator has physical custody of the assignment *before 8am*, he can upload the assignment for you at his discretion. If a large number of students attempt to email their homework submissions directly to the course coordinator every week, then the situation is clearly not an extreme circumstance, and no exceptions will be made.