

The purpose of these assignments is to help you develop the learning skills that will help you study and learn effectively (learning the right stuff) and efficiently (doing it in less time). This will serve you throughout your college and exam experiences as well as when you need to learn new things in your career.

It may not seem necessary in your early math classes, but as you progress you will find that these skills become more crucial.

DUE BY CLASS TIME EACH WEEK

Regular good habits are essential. While good study techniques are invaluable, mastery of material requires time and practice. Learning to be a good student is developed by

- documentation (to ensure our perceptions of what we are doing are accurate),
- reflection and self-evaluation (to determine if we're meeting our goals), and
- making changes as necessary.

To help you build these processes, you are required to keep a study log (see provided Excel file) for your math class(es), and your study will be evaluated using the following criteria for your weekly averages:

- Quality time spent in study for their math course (computed as quality time = time in # of hrs * quality rating/4; where quality rating is given on a scale of 1 to 4) – 20 pts
(average for a 3-credit course 8 hrs = A-, 7 hrs = B-, 6 hrs = C-;
average for a 4-credit course 11 hrs = A-, 9 hrs = B-, 7 hrs = C-)
- Time spent reviewing previous material in their math course – 5 pts
(average 0.75 hr = A-, 0.65 hr = B-, 0.5 hr = C-)
- Number of practice problems completed during study for their math course – 20 pts
(average for a 3-credit course 35 = A-, 30 = B-, 21 = C-;
average for a 4-credit course 45 = A-, 40 = B-, 28 = C-)
- Accuracy of practice problems completed during study for their math course – 10 pts
(average for a 3-credit course 14 = A-, 12 = B-, 9 = C-;
average for a 4-credit course 18 = A-, 15 = B-, 12 = C-)

Your study log should be stored and updated in your private teams channel in the Ma 199/296/396/496 Teams. Your professor will periodically update your grade in these categories based on your current log, so update the log file after each study session.

Each of the following assignments are worth 5 pts each, yielding just over 100 points in the course.

1 DUE BY CLASS TIME WEEK 2, 1/22

Reading: Read Ch 1, 2, and Part I introduction

Assignment 1. Consider the math class you are taking this semester: create a tree (see pg 10 of the book) for this course. Use the Table of Contents of the textbook, the intro paragraphs for each chapter, section headings and intros within sections ... invest 30-90 minutes of concentrated effort on this assignment.

Your tree should have the following characteristics:

- describe ideas in about 1-5 words
- have a base/trunk that encompasses everything in the course (but should generally not be the course name)
- have branches that describe the big ideas/units in the course and how they can connect to the trunk
- have leaves that identify the different nuances of the branch that are covered related to the big idea/unit

Your goal with this assignment is to build an organizational structure to which you add new information and ideas as the semester progresses so that you don't have to rely on memorization and can retain material longer. You are working to address the concerns addressed on pg 11.

2 DUE BY CLASS TIME WEEK 3, 1/29

Reading: Read Part III Introduction (pgs 57-58) and Chapter 3 (read to change the way you act NOT to say you read it).

Assignment 2. Look at at least one section you covered this week. Write "study notes" for that section focusing on the big ideas and the fundamental concepts of the section. Your study notes should exhibit the following characteristics:

- have as little white/empty space as possible (copy paper may be more effective than lined)
- use formatting techniques (such as different colors, boxed/bubbled sections, lines/arrows connecting ideas, etc.) to connect and relate ideas to each other
- state pertinent definitions/theorems in precise mathematical language
- translate this mathematical language in easier to remember English vernacular
- at least one computational example of the definition/theorem (and/or an example of where it fails)
- present a geometric/graphical understanding of the problem as well as the algebraic process needed to compute a numeric solution for your example if possible
- how will questions that use this idea be framed? what information will you have to be provided?
- create and solve at least two possible test questions that your professor could use to assess your understanding of this topic

Meeting these characteristics should have helped you developed the deeper understanding discussed on pg 15. Keep the pg 15 note in mind as you develop your study notes.

3 DUE BY CLASS TIME WEEK 4, 2/5

Self-Evaluation: Figure out how to improve your study methods. You may or may not have been happy with your first test score, but generally we all have areas in which we could improve our learning methods.

Assignment 3. *Either make notes on the following when your professor hands the test back or ask to review your test in your professors office. Do not take notes on the specific problems on the test (this is not generally considered acceptable).*

Identify which of the following was a reason why you lost points on the test (thoughtfully select any that apply):

- *did not know a definition/theorem/formula well enough to write and/or prove it correctly*
- *did not understand a definition/theorem/formula well enough to apply it to solve a problem*
- *did not anticipate that this kind of problem would appear*
- *did not read carefully enough or pay enough attention to details*
- *did not practice good presentation enough during homework*
- *did not study each day enough to master the material during the unit*

Give at least two concrete measurable things you are going to do differently going forward.

4 DUE BY CLASS TIME WEEK 5, 2/12

Self-Evaluation: Learn to evaluate your own mastery during your study. If you can't explain an idea effectively to someone else, you don't know it well enough.

Assignment 4. *Create a 5-10 min video of yourself reteaching a significant idea from the current unit.*

The video does not need to be a polished presentation. Start cold, go as far as you can, then pause and figure it out, continuing or creating a followup video clarifying the ideas.

Sending me a link through Teams to your video stored in OneDrive is probably the easiest option for submitting your video.

5 DUE BY CLASS TIME WEEK 6, 2/26

Reading: Read chapter 4 (read to change the way you act NOT to say you read it).

Assignment 5. *Articulate the difference between a strategic and a tactical plan. Write a tactical plan ($\frac{1}{2} - 1$ page) to improve and/or evaluate your review. Your plan should include:*

- *specifically when review will take place*
- *how long you will spend on the review material*
- *what you will be reviewing - you should review previous material in the unit as well as previous units*
- *how you will accomplish the review (there are four methods identified in chapter 4 - rereading your notes/s-tudy notes is NOT one of them)*

6 DUE BY CLASS TIME WEEK 7, 3/5

Reading: Read chapter 5 (read to change the way you act NOT to say you read it).

Assignment 6. *Evaluate your study sessions and create a tactical plan to improve the efficiency of your study based on the reading. Your plan should include:*

- *what is mostly likely to distract you and how you will mitigate the temptation*
- *when during the day you will study*
- *for how long you will study before taking a break - you should include your current max study time under your usual study conditions (be realistic) and a stretch goal (this should push you but be achievable)*
- *what you will do during a study break to make sure you can get back to studying as soon as it's over*
- *how you will make use of small periods of time to study (include a plan for using a 5-minute window and a 15-minute window)*

7 DUE BY CLASS TIME WEEK 8, 3/12

Reading: Read chapter 6 (read to change the way you act NOT to say you read it).

Assignment 7. *Identify at least one idea from the chapter that you think could help you improve the efficiency of your study (aka, learn more in less time). Give your tactical plan for using that idea during your study this week.*

8 DUE BY CLASS TIME WEEK 9, 3/19

Assignment 8. *Consider your recent study and what you need to learn this week in your math class. Identify one learning behavior addressed this semester that you want to improve or start doing this week, set a goal for the week, and indicate how you will know if you've accomplished your goal.*

9 DUE BY CLASS TIME WEEK 11, 4/9

Assignment 9. *Consider your recent study and what you need to learn this week in your math class. Identify one learning behavior addressed this semester that you want to improve or start doing this week, set a goal for the week, and indicate how you will know if you've accomplished your goal.*

10 DUE BY CLASS TIME WEEK 13, 4/23

Assignment 10. *Consider your recent study and what you need to learn this week in your math class. Identify one learning behavior addressed this semester that you want to improve or start doing this week, set a goal for the week, and indicate how you will know if you've accomplished your goal.*