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Tasks to Do

Week: _____

Classes:	**Assigned Work**		**Unassigned Work**
	Homework, quizzes, tests, lab reports, papers, projects, etc.	*Reading, optional problem sets,etc.*	*Re-making notes, self-quizzing, etc.*
	Due this week / **Due later**	**Ungraded**	
_____			
_____			
_____			
_____			
_____			

Other:

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Critical Reading

Critical reading is really critical thinking. It's about bringing a healthy skepticism to any reading which is open to interpretation and evaluation. This handout offers guidance on this process.

Many of your reading assignments are not open to debate (i.e. periodic table of elements). But other texts, frequently in the liberal and social sciences, will represent a particular author's point of view at a particular point in time. While respecting the author, you should push back on assumptions if you feel they are problematic or demand additional support if you are not convinced by their arguments. All authors welcome that kind of engagement with the reader. By reading critically, you are really saying that these ideas are worth thinking about. Posing some of the following questions may help you unpack the assumptions, biases and context implicit in the authors you read.

Consider the source

What kind of publication is this? What is the author's background in the subject? To whom is the author writing? Why is s/he writing? (This kind of information is frequently available in the preface of the book or the introduction.)

Recognize assumptions & implications

What prior knowledge does the reader need? What assumptions does the author make? Are they justified? Is there adequate support for the author's arguments? Does the author pursue the logical implications of his argument?

Recognize intent, attitude, tone & bias

What attitude does the author adopt towards the material? Is the tone matter of fact, respectful, sarcastic, dismissive, etc.? How does the author use language? Objectively, or in an emotionally charged manner? Does the author appeal to the reader's emotions, prejudices or biases?

Analyze arguments

Which of the author's statements does he support? Which does he leave unsupported? What conclusions does the author reach? Of the author's conclusions, which are justified? Which ones are not justified?

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Scanning & Skimming

Scanning and skimming are NOT equivalent to reading. You will want to read most of your course material closely in order to understand it in depth, but sometimes you just need to get the main ideas from a text or pull out a few select facts. In these situations, scanning and skimming come in handy.

Scanning

This is a method of covering pages and paragraphs quickly in search of the answer to one question, i.e. one detail or one fact. Use the following steps to scan a text:

- Before reading, decide what you're looking for and in what form it will most likely appear in print: a name, a statistic, a concept, etc.
- Scan for appropriate clues: capital letters to locate names, numbers to pinpoint statistics, related words to indicate concepts.
- Scan only for what you're seeking; don't be distracted by other words, pictures, etc.
- If reading an electronic text, use the "find" function to locate relevant passages.

Skimming

This is a method of reading only selected portions of material in order to obtain knowledge of the general ideas and major supporting details. Many people think skimming is a casual, haphazard process, but it actually requires intense focus. Use the following steps to skim a chapter from a textbook:

- Before reading the chapter, read the title, introductory remarks, and Table of Contents of the textbook. This will give you the context for the chapter.
- Read the first paragraph that really introduces the chapter. Don't be distracted by attention-getting anecdotes.
- Read the first sentence of each paragraph, and then anticipate what clues it gives you about the rest of the paragraph.
- Scan to pick up the key words essential to completing the main idea and key details of each paragraph.
- Read the last sentence of each paragraph if necessary.
- Read the concluding paragraphs. These often summarize previously introduced information, allowing you to reinforce what you have just learned from scanning.
- Be flexible. Read a whole paragraph if it really seems to be "meaty;" skip a whole paragraph if it is superfluous, repetitious, or just an anecdote.

Practice

Use the techniques on this page to complete the activity.

1. **Scan** the passage on the next page to answer the following questions:

   a. Who discovered X-rays?

   b. What are four characteristics of X-rays?

   c. Where did the name "X-ray" come from?

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PRR: Preview, read, review

Reading assignments can feel tedious or unhelpful at times. With this handout, you can take a strategic approach to your reading so you get the most out of it.

PREVIEW

Before you tackle the reading, get a general framework of main ideas to better comprehend and retain details you'll encounter later. Spend about 10 minutes familiarizing yourself with the text as a whole.

- Scan for title, table of contents, introduction or preface, index, and glossary, and any end of chapter questions. How does this topic relate to other things you've learned?
- When you preview individual chapters, take note of the introduction, subheadings, first sentence of each section, diagrams, charts, figures, and the conclusion.
- Make some concrete projections. Ask yourself, what's the main idea? How is the text organized?

READ

Being an active reader helps you understand the material, combats boredom, and increases retention.

- Set realistic goals for how long, and how many pages, you'll be able to read.
- Don't try to read the entire chapter non-stop. Instead, divide it into small sections, such as a half-page, or a column, and read them individually.
- Ask yourself a question before each paragraph or section, and then try to answer it as you read. Choose questions that reflect the level of difficulty in that course.
- Take short breaks when you find your mind wandering.

REVIEW

Research shows that we forget about 40-50% of what we read within about 15 minutes unless we take measures to recall it immediately.

- Recall mentally or recite orally the highlights of what you've read.
- Summarize what you've read. If the material is difficult, consider doing this for every page to ensure you're engaging with the content. Then, write questions over the material and answer them in your own words. These questions can be the same as those you asked before each section.
- Write notes and lingering questions in your margins. Both will help you decide what you need to remember or look up. See if you can recast the material as a story or narrative; then imagine yourself retelling or explaining it to a friend.

(More tips on back)

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Using Your Notes to Study

Do you find yourself taking careful notes in class, but never really looking at them again? Do you re-read your notes before a test but find that they don't help you learn very much? Notes from class can be a valuable study tool if used effectively. Try the steps below to study with your notes after class. An example of what this strategy looks like is on the back of this handout.

Leave Room

When taking notes in class, leave space on the **left**, on the **right**, and at the **bottom** of each page. You will use this space to turn your notes into a study tool later.

Review

After class, go back through your notes to fill in any gaps in knowledge or understanding. Did your professor note an important fact that you didn't quite catch? Did he or she introduce a concept that you don't understand? Use resources such as classmates, the textbook, and TA office hours to fill in these gaps, and write your new insights on the **right** side of the page.

Self-Quiz

One of the most effective ways to prepare for an exam is to quiz yourself over the material. On the **left** side of each page of your notes, write two or three self-quizzing questions over the concepts covered in class. Use these questions to test your knowledge and practice for upcoming exams.

Summarize

At the **bottom** of each page of notes, write a brief summary of the concepts covered in class. Summarizing will help you zero in on the most important ideas, and it is a good way to prepare for exams.

Practice!
On the back of this handout, you will see a sample set of notes over the agricultural revolution. Follow the steps outlined above to practice using these notes to study.

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Cornell Note-Taking System

By using this method when taking notes, you will be creating a study guide as you go, instead of waiting until a few days before the exam and cramming.

To get started, draw a horizontal line across and about 2 inches from the bottom of the page to create a section where you can summarize your notes. Then, draw a vertical line 2.5 inches from the left margin of the page to create a cue column, per the model below. On the right of the cue column is where you will take notes.

Cues column (left)

What to do:

- Review your notes as soon as possible after the lecture, and in the cue column, write key words, phrase-like questions, or draw diagrams to be used as cues for self-quizzing.
- If you notice gaps in the information in your notes, or if something wasn't clear to you from the lecture, consult your textbook, TA, professor, or fellow students to help figure it out.
- Write down any other questions that remain in your mind after the lecture (make sure to get these questions answered within the next 1-2 days).
- Write down questions you think your professor might ask on an exam (you can use them later in practice exams).

When to do it: after class, within 24 hours.

How to use it: when studying for a quiz or exam, look at these cues to help you recall the information from the lecture. Cover up the notes section and use the cues to jog your memory and rebuild the factual narrative in your mind, or try to recreate the cues section on another piece of paper, see how much you remember.

Notes column (right)

What to do: Record the lecture here during class using short sentences and fragments that transcribe the facts you'll need.

- Use bulleted lists for easy skimming.
- Eliminate all unnecessary words.
- Use indentation or concept maps to indicate the relationship between main ideas and supporting details.
- Use as much shorthand as possible (without sacrificing readability.)
- Develop a vocabulary of abbreviations you always use, like "ex" for "for example," "v." for "very," "tho" for "though," "1st" and "2nd" for "first and second."
- Leave lots of whitespace between points and paragraphs so you can go back and fill in information later.

When to do it: during class

How to use it: use it to generate the Cues and Summary sections

Summary area (bottom)

What to do: Sum up the notes on each page in one or two sentences that encapsulate the main ideas. Make sure you understand the significance of the information and how it connects to other information from the the rest of the lecture, from other lectures, and to the class theme as a whole (if you're not sure, find out!).

When to do it: After class, within 24 hours of the lecture, while you are creating your cues section.

How to use it: Use this section to quickly skim through your notes to find information later when doing your homework, writing a paper, or studying for a quiz or exam.

Options: You can layout the different sections used in this method on a single sheet of paper, as shown above, or you can use the left facing page of a spiral notebook for the Cues and Summary sections, and the right facing page for the Notes section (or vice versa).

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How to Prepare for Exams

BEFORE THE EXAM

Determine remaining tasks and establish a study schedule

- Figure out what you need to accomplish, and estimate the time you need for each new task.
- Decide how you're going to divide your time between completing unfinished reading, reviewing reading and notes, identifying major themes and issues, etc.
- Next, sketch out a rough calendar of the time remaining before the test, and make note of the amount of time you **actually have to do the work.**
- Fit your tasks into the available timeslots.

Create Hierarchies

- Allow longer periods of study time for dealing with large relationships and concepts, and use shorter time intervals for review and reinforcements.
- Focus on difficult tasks first, and then reward yourself with easier ones.
- Take brief breaks every 45 minutes or 1 hour.
- Vary tasks and topics during long study sessions.

Use good study habits

- Find a place where you're productive; a residence hall or bedroom is rarely the best choice.
- Stick to a regular study schedule.

Manage unread material effectively

- First, gather all the necessary material together and establish your course of action. Then, decide what you must read.
- Before you tackle a huge pile of reading, spend time previewing it first. Divide it into manageable units to familiarize yourself with the material. Estimate how much time you'll need to read each unit.
- Once you're actually reading, try to stick to the time limits you've established. Sometimes you may have to skim material – but that's better than nothing.
- When you're finished reading, take time to review the material immediately, even for 10 or 15 minutes. Your chances of retaining the information will be much greater.

Use active reviewing techniques

- Try to integrate your notes and reading material.
- Concentrate on the "forest" first, i.e. large themes and big ideas. Then move on to the "trees," i.e. details.
- Don't waste time passively re-reading material. Instead, concentrate on key points of the text such as the author's thesis and topics of subheadings. Reinforce this information in your mind by reciting it out loud, repeating it to yourself, or writing it down.
- Anticipate potential questions, and then answer them. Pretend you're writing the exam, and select questions you'd be likely to ask. Review old exams to be as familiar as possible with the format.

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Levels of Learning

On college exams, you will be asked questions at varying levels of complexity. Self-quiz at multiple levels of learning when you are preparing for an exam.

increasing complexity ↓

	Level	Typical Words Used	Examples
1	**Remember:** Recall fundamental knowledge: concrete facts, dates, definitions, etc.	Name, identify, label, define, match, recall, recognize, sort	**History:** When was the 4th Amendment ratified? **Biology:** What does DNA stand for? **Math:** Define derivative in terms of the difference-quotient.
2	**Comprehend/ Understand:** Give the meaning and/ or significance of facts and events. Be able to explain or summarize ideas.	Explain, discuss, generalize, give examples, interpret, restate, summarize	**History:** Explain the meaning of the 4th Amendment. **Biology:** Discuss the role of DNA in protein synthesis. **Math:** What does the derivative represent with respect to the graph of the original function?
3	**Apply:** Use your understanding of a subject to address a new situation.	What if, apply, demonstrate, hypothesize, imitate, predict, relate, show, solve, use	**Biology:** What if a single base pair were deleted from the coding region of a gene? **History:** What sorts of realities may have gone into drafting the 4th Amendment? **Math:** Find the equation of the tangent line to the graph of $f(x) = x^2$, at the point $(1, f(1))$
4	**Analyze:** Compare one subject's parts, characteristics, overall meaning, with another.	Analyze, break down, contrast, discriminate, outline	**History:** Analyze some common issues between Amendments 3, 4, and 5. **Biology:** What is the significance of DNA strands being antiparallel? **Math:** What does each term in the difference-quotient definition of the derivative represent graphically?
5	**Evaluate:** Critique or judge a subject, based on its own attributes, and on the ways in which it compares with other subjects.	Argue, assess, compare, decide, evaluate, persuade, rate, support, verify	**History:** Argue which Amendment is most relevant to modern society. **Biology:** Develop an argument against splicing insecticidal genes into the corn genome. **Math:** Why is the derivative also said to represent "instantaneous rate of change" and how does this definition compare with the "slope of a tangent line" definition?
6	**Create:** Design or invent a new model, scenario, or project based on the subject you've learned.	Adapt, combine, compose, design, imagine, plan, synthesize, transform	**History:** Argue for or against warrantless wiretapping, based on the 4th Amendment. **Biology:** Imagine a single-gene splice that would create an interesting fish for the pet trade. **Math:** The commonly used difference-quotient definition is not unique. Give another representation for the notion of the derivative and sketch a graph labeling the parts of this representation.

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Concentration: Internal and External Distractions

Think of concentration improvement as a three-step process:

- Learn the causes of poor concentration and decide which apply to you
- Understand what you can do to control these factors
- Make control a habit

External Distractions: Learn the Causes	External Distractions: Control the Causes
Environmental distractions TV, chairs that are too comfortable, snacks, other people, etc.	Train yourself to study away from others and in silence.
Noise Music with words, conversations	Leave or rearrange a distracting environment. Go to a library or a classroom when you seriously intend to study.

Internal Distractions: Learn the Causes	Internal Distractions: Control the Causes
Physical distractions: hunger, drowsiness	Plan to study when you're most alert. Eat a high-protein snack. Do five minutes of light exercise to wake up.
Boredom, dislike, disinterest	Find a good reason for taking the class; talk with other students and the professor.
Anxiety about studies	Make sure you know how to study effectively. Put the course in perspective.
Intimidating study tasks	Break up large tasks into achievable subtasks. Do the most intimidating task first. Give yourself rewards for progress and punishments for avoidance.
Daydreaming	Separate daydreams from studying. When your mind starts to wander, write down the interrupting thought and continue studying. Or recall important points and then turn away from your book and continue to daydream. When you're ready to read again, do so. The trick is not to daydream and read at the same time.
Personal Worries	Identify and define the problem and develop a concrete, specific plan to resolve personal worries. Talk with someone who can help: a friend, a counselor, a specialist.

Develop the Habit of Focusing -+

Even if you lapse into old patterns of feeling distracted, keep requiring yourself to concentrate (using the controls outlined above) until you can routinely focus for fifty minutes of every hour when you study. You may also want to start a mindfulness practice (the practice of being in the moment), which can be applied to other situations, including studying. The worksheet on the back can be used to help you determining your distractions and plan for the future.

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Setting SMART goals

SMART goals not only help you experience less anxiety, but also concentrate and remember more effectively, feel greater self-confidence, perform better and achieve more, as well as be happier and more satisfied. SMART is an acronym for the traits that make a goal effective: specific, measurable, action-oriented, realistic and time-bound.

What makes a goal SMART?
You do! Some goals are straightforward to achieve, while others can be complex and difficult to define. By thinking carefully about what you want to accomplish and determining a clear course of action, you'll have a better understanding of what your goals really are and how you can reach them.

Specific
State exactly what you want to achieve. Depending on your goal, you may have to outline others that will be involved, places you need to go, or constraints to getting things done. If your goal is large or complex, break it up into smaller items so that each item corresponds with a specific action or step.

Measurable
Establish clear definitions to help you measure if you're reaching your goal. How will you know if you're making progress toward achieving your goal? How can you check that you're staying on track? For example, an academic goal you could measure progress towards an academic goal with grades.

Action-Oriented
Describe your goals using action verbs. This will ensure that your tasks are clear, which can help you accomplish your goal more easily. Check this for each specific item you outline.

Realistic
Set goals you believe you can actually accomplish. If your goals are so ambitious that they impossible to reach, you deny yourself the opportunity to succeed. At the same time, you don't want set the bar so low that achieving your goal won't be satisfying. Consider obstacles you may need to overcome and make an appropriately challenging goal

Time-Bound
How much time do you have to complete the task? Decide exactly when you'll start and finish your goal. A complex goal might require more approximate time limits at first, then develop specific deadlines as time goes on. For example, someone preparing for a career in public health might plan to do an internship in the fall and start applying for graduate schools the following spring. As time goes on, the dates for completing these tasks would become more concrete.

Example 1:
I'm going to read Chapter 5 and answer the ten practice questions at the end of the chapter. This assignment is due on Thursday, so I'll preview and read the chapter by Wednesday. This will give me enough time to work on the homework from 7-9 p.m. so I can watch a movie with my friends at 10 p.m.

Example 2:
I'm going to take care of myself by getting more sleep, so I'm going to make a point of going to bed by 10 p.m. I'm going to make a plan to spread my work out over the week, so I can finish my tasks by 9 p.m. This plan will give me an hour to wind down, so I can get quality sleep, which will help me be better rested for class each day.

Now take a goal of your own and make it SMART:

_____

_____

_____

_____

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Find Your Motivation & Translate it Into Action

What does it mean to be motivated, and how can you positively impact your own motivation?

What do you want
First, think about what you want. To learn more about the subject? To get a good grade? You might want both. And, face it – you may just want to get through the class. What you want is also influenced by your specific expectations for success. If you believe that you're just not very good at math, for example, you may focus on just getting through the class rather than excelling in it.

Why do you want it
Next, think about why you want that something. If the course is part of your major, you might want to learn about it because you know it will enhance your future career plans. If the course is just a requirement that seems meaningless or purposeless right now, then focus on just getting through it with a good grade. A clear purpose is important because it gives you a motivational anchor point that you can refer to again and again. For more information on developing a clear purpose, see our "SMART goals" handout.

Now it's your turn. Take a moment to write down your own "what" and "why," and check out the exercises below to help you stay motivated.

What:

What:

Getting (and staying) motivated
Use this for any of your classes, for your academic or career goals in general, or even for a personal goal. Some tasks or goals will require more reinforcers than others. So, for example, you might want to reward yourself after doing 10 calculus problems rather than after finishing the entire homework set.

What outcome do I hope for?

Other than getting a good grade, are there other ways to measure my success?

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Be Strategic With Your Time

How much time do you actually have to manage? It's not really a full 24 hours, since certain activities happen every day, such as eating, sleeping, and going to class. Use this handout to find out how much time you really have and approach it with a plan.

Think about time strategically

activity	per day	total per week
sleeping	8 hrs	56 hrs
eating	3 hrs	21 hrs
attending class/lab	4 hrs	20 hrs

Your total available hours each week: 24 hrs/day x 7 days = 168 hrs. Now you know that you are busy each week for: sleeping + eating + class = 97 hrs. So the number of hours left to manage each week: 168 available hrs – 97 fixed hrs = 71 hrs. In other words, it's up to you to manage about 10 hours a day. Often those 10 hours are broken up throughout the day, which makes it more challenging.

Observe how you're spending your time

Use the chart on the other side of this page to record what you do over the course of a week. Then tally activities in the categories of class, studying, eating, sleeping, recreation/social, working, and other.
Are you happy with what you were able to accomplish this week? If it seems that there's just not enough time to get everying done, it may be that you're not spending your time on what really matters to you.

Make a plan that works for you

Schedule your week at a regular time. Spend 5 or 10 minutes at the beginning of the week to lay out a plan and then follow up on the plan each day. Modify or add activities through the week as needed.

When you make a schedule, first record activities that remain the same for each week (e.g., classes, regular meetings). Then schedule activities that are subject to change each week (e.g., assignments).

Reserve large blocks of time—such as an hour or more—for working with new material or learning complex concepts.

Figure out how long you're able to concentrate, and divide large blocks of time into smaller blocks of that length. Be sure to give yourself breaks.

Use short periods of time—15 to 30 minutes—for preview and review.

Don't overdo it; leave some blank space on your schedule for spontaneity and the unexpected.