Studying for an exam should be more than just a cramming session; successful studying is an ongoing process that begins with the first day of classes and involves managing your time and learning effectively from texts, lectures, and labs. It also involves developing a foundation from which to begin your pre-exam review. This section outlines several tips and strategies that students can use to enhance their studying during university.

A. Review Material Regularly

Before you can begin studying for an exam, good study habits begin much earlier in the term. To effectively study, it is essential you review regularly the material from lectures, seminars and textbooks in a consistent fashion. Get into the habit of:

I Reviewing Your Notes Daily

Edit your class notes as soon as possible after class to fill in any gaps. Read/skim for comprehension. Make sure you staple/collection all related handouts/problems so that everything is organized. Review your notes before the next class.

II Rewriting & Integrating Textbook Notes Shortly After Lecture

As soon as you have done the textbook reading, ensure it is integrated with the lecture notes in a fashion you will understand (this could mean writing the textbook content on the backside of the lecture note, the lecture note could be filled in with more detail from the text, or a new note could also be created that combines both the textbook and lecture material).

B. Identify Exam Specifics

Before you can conduct any meaningful studying, you must first define the scope of the exam. You need to determine what knowledge and skills are being evaluated. Gather as much information about the exam as you can. Although it’s not appropriate to ask specifically what will be asked on the exam, there is nothing wrong with requesting or finding out the following:

- What does the course outline say about the exam and the focus of this course
- How much is the exam worth in terms of a percentage of your final mark
- Is this a required course you need to get into vet school or teacher’s college. Is this course required to complete your program
- What mark would you like to get in this course. What results will you need on this particular test or exam to achieve that mark
- Which lectures, readings, assignments and problems could be part of the exam
- Is there a greater focus on the textbook, lectures or both
- How much of the term’s content is covered by the exam (the whole term or just since the mid-term test)
- What type of questions will there be and how many of each. Is it mainly multiple choice or is there a mixture of questions
- Is the exam open note or open book

III Reviewing Your Notes Weekly

At the end of each week, go through your notes for all of your classes to ensure you understand the content. Rewrite any lecture notes if they are too messy or disorganized. Organize your notes into binders or file folders. Ensure the notes are placed in sequence with other notes. Make summary notes on the important concepts and information. Look at how the material covered relates to the course as a whole.

IV Identifying When You Need Help (long before the exam)

Get in the habit of asking questions, going to see the professor or TA or seeking out friends to help you grasp something that isn’t making sense.
• For problem-solving classes, will formulas be provided or do they need to be memorized. Can you take in your own formula sheet to the exam
• Are there any materials you will need to bring to the exam (e.g., calculator)
• How much time will be available. Does the professor expect the exam to be easy to complete during the test period or a challenge
• Are the teaching assistants or the professor going to give a review session before the exam. When is it. Where is it
• Is there a Supported Learning Group (SLG) for this course. SLGs are study groups led by experienced senior students. Announcements will be made in your course about SLG sessions

C. Organize & Integrate Resources

Previous Tests

Be sure to review any previous tests you’ve had in the course. Analyze errors you’ve made in the past, recognizing where you lost marks.

I Making a Study Guide

A lot of students make study guides. Here is a brief overview of one method:

• Once you find out which lectures, readings and textbook pages will be covered by the exam, print out or gather up the related lecture and textbook notes
• Organize these pages into piles, separated by topics. Label each of the piles with the corresponding topic title. Staple or paper-clip all papers in each pile together.
• Read through your notes and determine if they can be condensed (i.e. see what information is not needed or not covered by the exam)

II. Creating an Outline

An outline can be thought of as a condensed study guide. Outlines attempt to condense large amounts of information you have from all your course sources into a logical system. Some professors and textbooks provide outlines of chapters which you may find helpful. Some tips for creating outlines are:

• Focus on broad subjects, key issues and concepts
• The goal is to put as much of the material on the front sides of just 1 or 2 pieces of paper
• You don’t need to be completely textual. You can use concept maps
• Don’t spend too long on preparing an outline. It is just one study aid

III. Building a Problem Set

For problem solving courses, many students adapt the study guide approach. Your assigned problem sets are key for studying.

• Start a pile for each set of problems that covers material that might appear on the exam
• Supplement each problem set with sample problems from your lecture notes
• Match the problem set with its related lecture note. Next, copy sample problems (just the questions) onto blank sheets and fasten these sheets together with the problem set. This creates a large problem set by adding extra problems drawn from your lecture notes
• Create questions based on the topic title. For every major topic covered in a particular problem set, jot down the question that asks you to explain the basics of the topic. For example: For a chemistry class you might have a problem set containing many questions that require you to draw the molecular structure of specific chemical compounds, so the question might be “Explain the general procedure for drawing a molecular structure, why this is useful and what special cases must be kept in mind.” These technical questions help you see if you understand the underlying concepts, or if you have just memorized the steps
D. Plan Your Time

When is the best time to study?

Everyone is different - choose a time you are most awake. Students find the most effective time for studying to occur between when they wake up and when they eat dinner. Yet some students work very well late into the night. Choose a time that is quiet and when your brain is ready to learn.

Where should you study?

Most students work best in isolation. Find a number of isolated study spots on or off campus and rotate through these locations when you study. Seek out those study spots so that you have choices and can change venues to prevent procrastination or avoid distractions. Studying in the dorm room or at home on your bed often just doesn’t work for everyone.

How long should you study?

Generally, no more than one hour at a time without a break. Your break needs to be only 5-10 minutes, but it’s important that you take an intellectual breather during this period. Doing something completely different on your break (e.g., reading a newspaper article, sending a few emails) will help refresh your mind. Generally, 30-60 minutes is an appropriate learning period for studying before taking a break.

What is a study plan?

Divide your workload into manageable chunks. Divide your available time and your workload into manageable chunks. Study frequently in shorter periods of time. Pay attention to how much time you are spending on specific study tasks and stay on track with your study plan. Focus your energy on studying, not playing catch up. If you are already behind, try to prioritize, concentrating on the material most likely to appear on the exam.

E. Study Actively

Active studying means you have to be engaged with the content. Most students make the mistake of relying on passive review which involves reading and re-reading their notes and assignments. They assume the more times they read the content the more they will remember it. Make the extra effort to get it into your head!

Here are some suggestions for actively getting involved with your study notes, problems and exam material.

- Review your material, explain it (without looking) in your own words and out loud (if possible) and then check to see if you are correct
- If you can close your eyes and create an argument from scratch or stare at a blank sheet of paper and reproduce a solution without a mistake, then you have fully understood the concept
- Teach the material to a classmate
- When you have to teach and explain a concept to someone else, you are actively understanding and interacting with the content. Have your classmate ask you questions for further explanation
- Construct a practice quiz for each chapter in your study guide
- Say the answers out loud, not in your head. Put a mark beside challenging problems. Go back and redo those that you did not get correct
- Go through textbooks, lab manuals and related CDs or web sites to find sample multiple choice or other types of questions
- Look for sample midterms and exams to also access practice questions. Different textbooks on the same subject may also have practice questions at the back of each chapter
- For courses with problem sets, practice solving the problems
- Upon solving the problems, try to explain an answer for each problem out loud! If you are just regurgitating memorized solutions, you aren’t prepared to handle new problems on a test. Put a mark beside those problems that gave you trouble. Review
the solutions for these questions. Follow this method until you finish a round with no marked problems.

**Study Groups**

Studying with a group of your friends can be both a fun and rewarding study method. For effective studying, it is important that you choose your group members wisely and follow a few rules.

**Study groups should:**

- Not be the sole method of study and they are not for everyone
- Be a form of ‘active learning’ – the strongest kind of learning
- Not let one member of the group dominate
- Meet no more than 2-3 times a week for no more than 60-90 minute periods
- Establish responsibilities for each group member
- Design rules dealing with respect for each member
- Provide contact information for group members
- Help you and your group members:
  - See the material from a different perspective
  - Stay motivated and commit more time to study
  - Share/compare notes and study tips
  - Engage in discussions and debates on selected topics
  - Pick up new tips and material from your peers
  - Quiz each other on factual material

**Tutorials**

For many freshman and sophomore courses, tutorials are offered both within the department and in the tutoring center. It is important not only to be aware of these, but make use of them. Don’t wait until you are in trouble. Check them out right away to see if they help.

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### F. Tips for Recalling Content

#### I Prepare Flash Cards

- All courses may require you to do some memorization for items such as formulas, chemical equations, artwork, dates, authors, definitions or chronologies
- Try using flash cards to help with memorization. Buy a stack of index cards and put the prompt on one side and the answer on the other. Create them early on in the semester, and study with the cards
- Carry your flash cards with you to study in short, spare moments, such as when you are waiting in line or riding the bus

#### II Create Diagrams to Help Summarize Information

- Draw a diagram to provide a pictorial representation of the subject
- Try a concept map with the most important idea in the centre, and then various branches showing the relationships between other ideas and their subcategories

#### III Use Strategies to Help Reduce Forgetting

- Test yourself as you study
- Over-learn the material so that you can't forget it
- Use:
  - Mnemonics (i before e except after c)
  - Acronyms (HOMES is an acronym for Great Lakes - Huron, Ontario, Michigan, Erie and Superior)
  - Acrostics (Kings Play Chess On Fairly Good Soft Velvet is an acrostic for Kingdom, Phylum, Class, Order, Family, Genus, Species, Variety)
  - Analogies (lungs = trees, pump = heart)
  - Keywords linked to other information
## G. Post-Exam Strategies

Some students simply don’t think about their exams again, other than to say, “I’ll do better next time.” Try to make an effort to review your exams thoroughly, especially if you didn’t perform as well you had wanted to. You’ll need to find out why you made mistakes so you can adjust your studying and exam-writing next time.

If your instructor doesn't return your midterms or exams, email him or her (or the TA) and request to see your exam, ideally within a few days of when marks were posted. You may not be able to take notes while reviewing your exam, but instructors are usually very willing to let you read through it. Once you have the exam in front of you, try to determine why you chose an incorrect answer by asking yourself these questions:

- Did I misread the question
- Did I make careless mistakes, such as reversing numbers
- Did I simply not know the answer because I missed a class, didn't read the chapter, or didn't have enough time to review
- Did I know the general concepts, but not at the appropriate level of detail
- Did I run out of time

These examples call for different kinds of correction strategies, rather than simply increasing the time spent studying. Examine the correction strategies below:

**ERROR:** Misreading the question or making careless errors  
**CORRECTION STRATEGY:** Slow down while writing the exam. Cover up the alternatives to ensure that you read the question stem carefully, without glancing down at the alternatives. Leave time at the end of the exam to check your answers.

**ERROR:** Running out of time  
**CORRECTION STRATEGY:** You may need to study the material in more depth so that the answers come more quickly as you are writing the exam.

**ERROR:** Not knowing details  
**CORRECTION STRATEGY:** Incorporate weekly review sessions to give yourself more time to absorb the information. Use practice exams or explain concepts aloud to your study partner to ensure mastery of the important details.

**ERROR:** Not knowing answers due to missed lectures or a lack of review time  
**CORRECTION STRATEGY:** Good time management skills are the key for improving on these types of errors. Attend all lectures and ensure you have ample review time.
**Studying Top Ten Takeaways**

1. Review your notes on a regular basis, combine your textbook notes and lecture notes, and identify what you need help with – well before the exam.
2. Identify as many details about the exam as you can: it's worth, length, content topics, it's format.
3. Make a study guide! Print or gather up lecture notes, organize into topic piles, label the piles and possibly condense your notes again by topic.
4. In problem-solving courses, gather up all the problems from your lecture notes, textbook and labs. Copy sample questions onto blank sheets and practice solving the problems on your own.
5. Make an outline of the course as a great study tool. Focus on broad subjects and key issues so that everything fits on 1-2 pages.
6. Find a good time and place to study that is free of distractions. Break up your studying into 30-60 minute chunks with 5-10 minute breaks in between.
7. When you study, don't just read your notes again and again. Instead, explain the material out loud, teach the material to a friend, do a practice quiz, and solve problems.
8. Join or create a study group for an exam.
9. To help you study, draw diagrams and concept maps to visually represent the content and show relationships.
10. Visit your professor after the exam has been marked. Ask to view the exam to see where you made mistakes and correct them the next time.

**Study Checklist**

The Student Guide presented many strategies that can help students with studying. As you study for the quiz in the 'exam' section, use the checklist of questions below to keep track of strategies that you have already tried. These questions will identify those strategies that you might still like to practise:

- Have you identified the quiz specifics (format of questions, time allowed, content to be tested)?
- Have you organized your textbook notes and lecture notes (sequenced, stapled, in piles or folders)?
- Have you integrated / cross-referenced your textbook notes with your lecture notes?
- Have you tried to draw diagrams or concept maps to explain difficult concepts?
- Have you determined if there is content that you need more help understanding?
- Have you tried to explain the content from your notes in your own words and out loud if possible?
- Have you practised solving the problem-type questions?
- Have you found sample questions (from other textbooks or websites) that could be asked on the quiz?
- Have you tried making flash cards or using mnemonics, acronyms, analogies, etc. to recall content?
- Have you tried to teach someone else the material that you are studying?
- Have you constructed a practice quiz for the content that will be studied?
- Have you determined when is your best time of day to study?
- Have you determined a good location for successful studying?
- Have you tried to review your textbook and lecture notes regularly?

See also [http://www2.le.ac.uk/offices/ld/resources/study/revision-exam](http://www2.le.ac.uk/offices/ld/resources/study/revision-exam)

Source: adapted from [http://www.uwec.edu/geography/ivogeler/multiple.htm](http://www.uwec.edu/geography/ivogeler/multiple.htm)
## Taking Multiple Choice Exams

Studying for a multiple choice exam requires a special method of preparation distinctly different from an essay exam. Multiple choice exams ask a student to recognize a correct answer among a set of options that include 3 or 4 wrong answers (called *distracters*), rather than asking the student to produce a correct answer entirely from his/her own mind.

For many reasons, students commonly consider multiple choice exams **easier than essay exams**. Perhaps the most obvious reasons are that:

- The correct answer is **guaranteed** to be among the possible responses. A student can score points with a lucky guess.
- Many multiple choice exams tend to emphasize basic definitions or simple comparisons, rather than asking students to analyze new information or apply theories to new situations.
- Because multiple choice exams usually contain many more questions than essay exams, each question has a lower point value and thus offers less risk.

Despite these factors, however, **multiple choice exams can actually be very difficult and are in this course**. Consider that:

- Because multiple choice exams contain many questions, they force students to be familiar with a much broader range of material than essay exams do.
- Multiple choice exams also usually expect students to have a greater familiarity with details such as specific dates, names, or vocabulary than most essay exams do. Students cannot easily "bluff" on a multiple choice exam.
- Finally, because it is much more difficult for a teacher to write good multiple choice questions than to design essay questions, students often face higher risks due to unintended ambiguity. To prepare for a multiple choice exam, consider the following steps:
  - **Begin studying early**  
    Multiple choice exams tend to focus on details, and you cannot retain many details effectively in short-term memory. If you learn a little bit each day and allow plenty of time for repeated reviews, you will build a much more reliable long-term memory.
  - Make sure that you identify and **understand thoroughly everything that your instructor emphasized in class**. Pay particular attention to fundamental terms and concepts that describe important events or features, or that tie related ideas and observations together. These are the items that most commonly appear on multiple choice exams.
  - As you study your class notes and your assigned readings, **make lists and tables**. Concentrate on understanding multi-step processes, and on ideas, events, or objects that form natural sequences or groupings. Look for similarities and differences that might be used to distinguish correct choices from distracters on an exam.

If your textbook highlights new vocabulary or key definitions, be sure that you understand them. Sometimes new words and concepts are collected at the end of a chapter. Check to be sure that you have not left any out by mistake.

**Do not simply memorize the book's definitions. Most instructors will rephrase things in their own words as they write exam questions, so you must be sure that you really know what the definitions mean.**

- Brainstorm possible questions with several other students who are also taking the course.
- Practice on sample questions, if you have access to a study guide or old exams.

### Answering Multiple Choice Questions

There are many strategies for maximizing your success on multiple choice exams. The best way to improve your chances, of course, is to study carefully before the exam. There is no good substitute for knowing the right answer. Even a well-prepared student can make silly mistakes on a multiple choice exam.
choice exam, however, or can fall prey to distracters that look very similar to the correct answer.

Here are a few **tips to help reduce these perils:**

- Before you begin taking the exam, enter all pieces of required information on your answer sheet.

  *If you are so eager to start that you forget to enter your name and ID number, your results may never be scored. Remember: your instructor will not be able to identify you by handwriting or similar text clues.*

- Always cover up the possible responses with a piece of paper or with your hand while you read the **stem**, or body of the question.

  *Try to anticipate the correct response before you are distracted by seeing the options that your instructor has provided. Then, uncover the responses.*

- If you see the response that you anticipated, circle it and then check to be sure that none of the other responses is better.

- If you do not see a response that you expected, then consider some of the following strategies to eliminate responses that are probably wrong.

  None of these strategies is infallible. A smart instructor will avoid writing questions for which these strategies work, but you can always hope for a lapse of attention.

  1. Responses that use absolute words, such as "always" or "never" are less likely to be correct than ones that use conditional words like "usually" or "probably."
  2. "Funny" responses are usually wrong.
  3. "All of the above" is often a correct response. If you can verify that more than one of the other responses is probably correct, then choose "all of the above."
  4. "None of the above" is usually an incorrect response, but this is less reliable than the "all of the above" rule. Be very careful not to be trapped by double negatives.

- Be sure that you have filled the appropriate bubbles carefully **IN PENCIL**.

  *Our instructor will probably never take a close look at your answer sheet, so if you fail to fill in bubbles completely or if you make stray marks, only the computer will notice, and you will be penalized. Erase any accidental marks completely.*

- Take the time to check your work before you hand in the answer sheet.

  *Unlike an essay exam, on which you may later appeal a grade on the grounds that the instructor misunderstood your response, a multiple choice exam offers you no opportunity for "partial credit." If you filled the wrong bubble, your answer is 100% wrong.*

**Source:**
adapted from Center for Teaching Excellence
https://www.uwec.edu/geography/ivogeler/multiple.htm
A Student Guide to Multiple Choice Exams
Part Two

How to Prepare for a Multiple Choice Exam

Studying for a multiple choice exam requires a special method of preparation distinctly different from an essay exam. Multiple choice exams ask a student to recognize a correct answer among a set of options that include 3 or 4 wrong answers (called distractors), rather than asking the student to produce a correct answer entirely from his/her own mind.

For many reasons, students commonly consider multiple choice exams easier than essay exams. Perhaps the most obvious reasons are that:

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Despite these factors, however, multiple choice exams can actually be very difficult. Consider that:

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➢ Finally, because it is much more difficult for a teacher to write good multiple choice questions than to design essay questions, students often face higher risks due to unintended ambiguity.

To prepare for a multiple choice exam, consider the following steps:

1. Begin studying early.

➢ Multiple choice exams tend to focus on details, and you cannot retain many details effectively in short-term memory. If you learn a little bit each day and allow plenty of time for repeated reviews, you will build a much more reliable long-term memory.

2. Make sure that you identify and understand thoroughly everything that your instructor emphasized in class.

➢ Pay particular attention to fundamental terms and concepts that describe important events or features, or that tie related ideas and observations together. These are the items that most commonly appear on multiple choice exams.

3. As you study your class notes and your assigned readings, make lists and tables.

➢ Concentrate on understanding multi-step processes, and on ideas, events, or objects that form natural sequences or groupings. Look for similarities and differences that might be used to distinguish correct choices from distractors on an exam.
If your textbook highlights new vocabulary or key definitions, be sure that you understand them. Sometimes new words and concepts are collected at the end of a chapter. Check to be sure that you have not left any out by mistake.

Do not simply memorize the book’s definitions. Most instructors will rephrase things in their own words as they write exam questions, so you must be sure that you really know what the definitions mean.

4. **Brainstorm possible questions with several other students who are also taking the course.**

5. **Practice on sample questions, if you have access to a study guide or old exams.**

   - A study guide may emphasize different ideas or use a slightly different vocabulary than your instructor prefers.

**Taking the Test**

**Look Over the Test and Pace Yourself**

When you first get the exam, don't just plunge into answering test items. Instead, thumb through the pages and get the lay of the land. How many questions are there? How many different sections? Are some questions worth more points than others? Once you've looked through the entire test, try to estimate what pace you should maintain in order to finish approximately 10 minutes before the period is over. That way, you'll have a little time at the end to check for mistakes like skipped questions or misread items.

Some of the worst problems occur when students enter a time warp and forget to check the clock, or when they spend too much time on one or two difficult items. To prevent this from happening, one trick you can use is to scribble the desired "finish time" time for each section right on the test booklet. That way, you'll be prompted to check the clock after completing each part of the exam.

**Take Short Breaks**

Try taking a few breaks during the exam by stopping for a moment, shutting your eyes, and taking some deep breaths. Periodically clearing your head in this way can help you stay fresh during the exam session. Remember, you get no points for being the first person to finish the exam, so don't feel like you have to race through all the items -- even two or three 30-second breaks can be very helpful.

**Don't Skip Around**

Skipping around the exam can waste valuable time, because at some point you will have to spend time searching for the skipped questions and re-reading them. A better approach is to answer each question in order. If you are truly baffled by a question, mark the answer you believe to be right, place a question mark next to the question, and come back to it later if you have time. Try to keep these flagged questions to a bare minimum (e.g., fewer than 10% of all items).

**Don't Be Afraid to Change Your First Answer**

Even though first answers are often correct, you shouldn't be afraid to change your original answer if, upon reflection, it seems wrong to you. Dozens of studies over the past 70 years have found that students who change dubious answers usually improve their test scores. For example, a May, 2005, study of 1,561 introductory psychology midterm exams found that when students changed their
answers, they went from wrong to right 51% of the time, right to wrong 25% of the time, and wrong to a different wrong answer 23% of the time (Journal of Personality and Social Psychology, Vol. 88, 725-735).

What To Do If More Than One Answer Seems Correct

If you're utterly stumped by a question, here are some strategies to help you narrow the field and select the correct answer:

1. Ask yourself whether the answer you're considering completely addresses the question. If the test answer is only partly true or is true only under certain narrow conditions, then it's probably not the right answer. If you have to make a significant assumption in order for the answer to be true, ask yourself whether this assumption is obvious enough that the instructor would expect everyone to make it. If not, dump the answer overboard.

2. If you think an item is a trick question, think again. Very few instructors would ever write a question intended to be deceptive. If you suspect that a question is a trick item, make sure you're not reading too much into the question, and try to avoid imagining detailed scenarios in which the answer could be true. In most cases, "trick questions" are only tricky because they're not taken at face value.

3. If, after your very best effort, you cannot choose between two alternatives, try vividly imagining each one as the correct answer. If you are like most people, you will often "feel" that one of the answers is wrong. Trust this feeling -- research suggests that feelings are frequently accessible even when recall is poor (e.g., we can still know how we feel about a person even if we can't remember the person's name). Although this tip is not infallible, many students find it useful.

Memorization Techniques

You never forget. With the exception of injury and disease, the brain never loses anything. Forgetting is either 1) the failure to store information in the first place, or 2) the inability to retrieve the information, or 3) the failure to store it in such a way that it can be found when needed. Remembering and forgetting are fairly big issues in academics. Experiments suggest that we forget all kinds of information all of the time. Although there are several theories which attempt to explain forgetting, much about the neurobiology of the brain remains unknown. What is known about memory is that it works more effectively when conscious effort is required vs. more peripheral routes to learning. Intention, motivation and interest are critical. That is also why novel information is more easily recalled.

Short term memory has a limited capacity and information disappears fast unless you can shift it into long term memory. Most of the information that we receive is not stored but quickly lost - probably at least 50% almost immediately and around 20% after 24 hours. Review quickly and repeatedly to improve your retention.

Memory has two parts: Concentration (you have to get it before you can forget it) and Recall.

It is a natural tendency to divide our attention, e.g., driving in the car while listening to the radio, but when we can focus exclusively on material we are attempting to learn, we have a better chance to complete the memory task quickly and accurately. Memory is strengthened by association, e.g., by adding new information from supplemental reading or placing the material in a hierarchal network. Memory is also reinforced when logical connections are made, e.g., while learning the bones in anatomy, visualize
the connections and see the pathways as in a computer program. Draw on information from your background for pictures or a mental image. This helps you to utilize both the left and right hemispheres of your brain, which have certain specialized functions.

**Ideal Conditions to Improve Concentration and Recall**

**In class and while studying:**

1. Pay attention to get information right the first time. It's difficult to replace wrong information with the right information.
2. Make certain that you understand a concept - it's very difficult to recall what is fuzzy. Read and then reread before class, ask questions and try to explain the concept to someone else during your review session.
3. Use chunking, there are limits to how much we can recall, but these limits expand when the material is meaningfully organized, e.g., what are the three key concepts of the chapter and how are ideas grouped under these key ideas. Cluster ideas around a heading or category. One item may serve as a cue to another during the exam.
4. Be selective - condense and summarize. This helps to make the time requirements more manageable. Remember: Memorization Secondary to Comprehension.
5. Mnemonic devices can serve as organizers for new information, either classic acronyms such as Every Good Boy Does Fine to represent the lines on the musical staff EGBDF, or individualized ones that you design for yourself. Be sure to memorize completely as a small error will create difficulty when utilizing these techniques.
6. Create a peg on which to hang the information you want to remember. It might be a rhyme, an unusual image or maybe a sequence, e.g., remember your grocery list by visualizing going through the aisles in the market.
7. Eliminate distractions:

8. Use a "cue" - e.g., when you are wearing a certain baseball hat, you are not to be disturbed. Use your desk to read, review, write letters but use your bed only to sit on for a relaxing break.
9. Remove obstacles, a sound or visual background which is unobtrusive may help to screen out distractions.
10. Have all of your equipment available before you begin, lamp, pencil, good comfortable chair, books and paper clips, etc.
11. Record stray thoughts on a note pad, but don't act upon them. Call this your worry pad, e.g., personal tasks that need to be completed. Make your to do list for the week before you start, or as a study break, to get random thoughts out of your head.
12. Check your concentration as you go - generally toward the end of every other page, but more often if the reading is dense in terms of facts, definitions, equations, etc. Test yourself on identifying the main idea, restate in your own words.
13. Use all of your senses, e.g., draw on the board, trace it over and over, look for unique visual patterns, talk it out to somebody, rehearse it in the mirror.
14. Erase to remember. Write out what you need to recall for an exam completely in pencil. Progressively erase words as you commit them to memory. (Thanks to Dr. John Tenny for this idea).

Source: [https://willamette.edu/dept/lcenter/resources/study_strategies/memorization.html](https://willamette.edu/dept/lcenter/resources/study_strategies/memorization.html)

**CONCENTRATION WHILE STUDYING**

We all have the ability to concentrate -- sometimes. Think of the times when you were "lost" in something you enjoy: a sport, playing music, a good game, a movie. Total concentration.

**But at other times,**

- Your mind wanders from one thing to another
• Your worries distract you
• Outside distractions take you away before you know it
• The material is boring, difficult, and/or not interesting to you.

These tips may help: They involve
1. What you can control in your studies
2. Best practices

Before engaging in your studies, and concentrating, try to center yourself with silence, clearing your mind of distractions that may disrupt your productivity.

What you can control in your studies:
• "Here I study"
  Get a dedicated space, chair, table, lighting and environment
  Avoid your cellphone or telephone
  Put up a sign to avoid being disturbed or interrupted
  If you like music in the background, OK, but don't let it be a distraction.
  (Research on productivity with music versus without music is inconclusive)

• Stick to a routine, efficient study schedule
  Accommodate your day/nighttime energy levels
  See our Guide on Setting goals and making a scheduling

• Focus
  Before you begin studying, take a few minutes to summarize a few objectives, gather what you will need, and think of a general strategy of accomplishment

• Incentives
  Create an incentive if necessary for successfully completing a task, such as calling a friend, a food treat, a walk, etc.

For special projects such as term papers, design projects, long book reviews, set up a special incentive

• Change topics
  Changing the subject you study every one to two hours for variety

• Vary your study activities
  Alternate reading with more active learning exercises
  If you have a lot of reading, try the SQ3R method
  Ask yourself how you could increase your activity level while studying? Perhaps a group will be best? Creating study questions?
  Ask your teacher for alternative strategies for learning.
  The more active your learning, the better.

• Take regular, scheduled breaks that fit you
  Do something different from what you've been doing (e.g., walk around if you've been sitting), and in a different area

• Rewards
  Give yourself a reward when you've completed a task

Best Practices:
• You should notice improvement in a few days
  But like any practice, there will be ups, levels, and downs:

• It will benefit other activities you do!

Be here now | Worry time | Tally Card | Energy level | Visualize

Be Here Now
This deceptively simple strategy is probably the most effective.
When you notice your thoughts wandering astray, say to
yourself "Be here now" and gently bring your attention back to where you want it.

For example:
You're studying and your attention strays to all the other homework you have, to a date, to the fact that you're hungry. Say to yourself
"Be here now"

Focus back on subject with questions, summarizing, outlining, mapping, etc. and maintain your attention there as long as possible.
When it wanders again, repeat
"Be here now" and gently bring your attention back, and continue this practice, repeatedly. It will work!

Do not try to keep particular thoughts out of your mind. For example, as you sit there, close your eyes and think about anything you want to for the next three minutes except cookies. Try not to think about cookies...When you try not to think about something, it keeps coming back. ("I'm not going to think about cookies. I'm not going to think about cookies.")

You might do this hundreds of times a week. Gradually, you'll find that the period of time between your straying thoughts gets a little longer every few days. So be patient and keep at it. You'll see some improvement!

Do not constantly judge your progress. Take it easy on yourself. Good practice is enough to say that you did it, and that you are on the road. The mind is always different and the practice unfolds over time with many ups and downs.

Worry or Think Time
Research has proven that people who use a worry time find themselves worrying 35 percent less of the time within four weeks.
1. Set aside a specific time each day to think about the things that keep entering your mind and interfering with your concentration.
2. When you become aware of a distracting thought, remind yourself that you have a special time to think about them,
3. Let the thought go, perhaps with "Be here now,"
4. Keep your appointment to worry or think about those distracting issues.
   For example, set 4:30 to 5 p.m. as your worry/think time. When your mind is side-tracked into worrying during the day, remind yourself that you have a special time for worrying. Then, let the thought go for the present, and return your focus to your immediate activity.

Tallying your mental wanderings.
Have a 3 x 5 inch card handy. Draw two lines dividing the card into three sections. Label them "morning," "afternoon," and "evening."

Each time your mind wanders, make a tally in the appropriate section. Keep a card for each day. As your skills build, you'll see the number of tallies decrease.

Maximize your energy level
When is your energy level at its highest? When are your low energy times?
Study your most difficult courses at your high energy
times. Sharpest early in the evening? Study your most difficult course then. Later in the evening? Work on your easier courses or the ones you enjoy the most.

Most students put off the tough studies until later in the evening when they become tired, and it is more difficult to concentrate. Reverse that. Study hard subjects at peak energy times; easier ones later. This alone can help to improve your concentration.

**Visualize**

As an exercise before you begin studying, think of those times when concentration is not a problem for you--no matter what situation. Now try to feel or image yourself in that situation. Recapture that experience immediately before your studies by placing yourself in that moment. Repeat before each study session.

**Portions adapted with permission from**
"Help Yourself" [http://www.k-state.edu/counseling/concentr.html](http://www.k-state.edu/counseling/concentr.html) University Counseling Services, Kansas State University, July 2004.

"Be here now" corresponds to Buddhist insight strategy [See also J. R. Hayes, *The Complete Problem Solver*. Franklin Institute Press, 1981](http://www.k-state.edu/counseling/concentr.html)

**SOURCE:** [http://www.studygs.net/concent.htm](http://www.studygs.net/concent.htm)