

Work Smarter, Not Harder

How can I get good grades...and still have a life?

Learning vs Studying

Learning is a process by which we acquire and apply information, so we can understand our world. The **key activity in learning is *thinking***. Learning involves different brain activities from *studying*, which improves retention and retrieval from memory. **The key activity of studying is *repeating or rehearsing***.

What do “good learners” do at University?

- * **Preview** lectures, labs or tutorials
- * **Do homework:** the content is complex, and there is a lot of material to be learned
- * **Keep up:** The pace is fast and constant
- * **Learn to take or modify notes:** Information is delivered through lecture or group work
- * **Summarize** notes and review them often
- * **Engage and think:** Ask for help if you don't understand

Is all “THINKING” the same? No!

One model of thinking (Bloom's Taxonomy 1956, 2006) shows different *depths of thinking* that relate to increasingly complex cognitive processes. Aim for the top!

- * **Memory** is the foundation, but may not involve good understanding.
- * **Understanding** depends on seeing the patterns and connections, but doesn't involve an efficient organizational structure.
- * **Organizing information conceptually** facilitates critical thinking (e.g. analysis, application) and builds an efficient memory strategy. Conceptual thinking is the goal by about 2nd year.
- * **Evaluating** complex and perhaps contradictory material requires a deep understanding.
- * **Creative** thinking to invent or innovate is expected in upper years and in graduate school.

Become Aware of Yourself as a Learner

- * Understand your preferred learning style, and develop in other (non-preferred) areas required by your courses
- * Recognize that learning and studying require effort and discipline.
 - What distracts you? Socializing? Gaming? Surfing? Chatting? Sleeping?
 - What do you find rewarding? Sense of confidence? Achievement? Curiosity?
- * Analyze your work habits, and do what good learners do. Set small goals and keep trying!
- * Be aware of potential pitfalls such as
 - poor physical care (diet, exercise, sleep)
 - poor use of time, where your activities don't reflect your goals
 - inaccurate estimations of specific tasks involved in completing a project
 - inaccurate estimation of time required to complete various stages of the task
 - unrealistic expectations of the amount of work that can be done well in a day
 - reduced ability to concentrate due to stress in some area of your life

What can I do “smarter”?

- * **Read course outline** or syllabus: Look for the i) overall description and refer to it if you feel lost
ii) learning objectives, to see the focus of the tests and assignments
- * **Determine what is expected** in terms of the “depth of thinking”. Ask your prof. if you’re unsure. First year courses often have a lot of memorization, but profs. may expect you to generalize & apply your knowledge in new situations...like on an exam
- * **Identify key concepts** in the course; use course outline, review questions in text, old exams. Know these concepts cold!
- * **Make a class/study/daily life plan** and adjust it until it works for you.
- * **Get enough sleep at night:** learning is a demanding brain activity
- * **Use time between classes** for school work: consider school a 9-5 (or whatever!) job
- * **Stay focused:** Work for @ 50 minutes, take a 10 minute break and repeat.
- * **Allow for consolidation time:** relax and take breaks so your brain can quietly organize and shift information from active learning to long-term memory
- * **Use the library** to reduce distractions
- * **Distribute your learning** in a course over many weeks, rather than cramming and trying to learn and study simultaneously

Develop a Plan

RE. Time - use the on-line weekly schedule at www.bewell-dowell.org/schedule

- * Learn and study when you are most alert
- * Allow 1-2 hours of homework per lecture hour
- * Schedule separate times for “keeping up” with class and “catching up” if you’re behind

RE. Learning new material... aka homework

- * Focus on courses you tend to avoid (difficult, uninteresting, new and scary). Work on this material about 1+ hour at the first of a homework session, and also at the beginning of week when you’re more motivated.
- * Break large sections into chunks and learn material in small, sequential units
- * Start sessions with a quick review of earlier material
- * Work on different courses throughout the day to reduce boredom and allow for consolidation
- * Develop a personal dictionary for unfamiliar terms and definitions.
- * Shift from memorizing to understanding by paraphrasing the key ideas
- * Shift from understanding to conceptual thinking by organizing material (mind maps, hierarchical outlines, tables, charts, quantitative concept summaries) or solving problems

RE. Reviewing

- * Make summary notes as you go, to save time and reduce stress before exams
- * Test yourself: Generate (and answer) questions based on learning objectives or key concepts
- * Form a study group to discuss ideas, and challenge each other to explain material fully