STUDY STRATEGIES FOR SUCCESS

Success in Biology, Chemistry, and other Dartmouth courses requires more than just acquaintance with the material. Rather, you need to demonstrate an ability to recall concepts, recognize patterns, and problem-solve through application. Therefore, simply reading, highlighting/underlining, and making flashcards is insufficient to develop a solid understanding. Effective and long-term learning requires effort beyond repetition alone and should be challenging. Joe and Isabella have compiled the following study strategies based on educational research and personal experiences.

Test yourself
- Do problem sets closed-book
- Practice retrieval and gauge your level of understanding
- Make up questions
  - Check your own understanding of concepts
  - Anticipate potential exam questions

Read actively
- Pause and look up
  - Test yourself on the key concepts and vocabulary to ensure understanding before moving on
- Create a roadmap
  - Look ahead at section headings to understand where you are headed and how the material connects

Mix it up
- Vary type of practice problem
  - Learn to identify the type of problem presented and what approach to take beyond just doing the problem
- Interleave topics
  - Study distinct but related topics together to draw connections between them and strengthen retention

Put it in your own words
- Explain to others or an imaginary audience
  - Gauge your understanding and note what may be challenging to summarize
- Write out or verbalize your entire answer
  - Find the gaps in your understanding

Space it out
- Over several weeks, rather than cramming
  - Consolidate your understanding and save time by reviewing some each day rather than hours immediately before the exam
- Review after some forgetting
  - This will actually improve long-term retention

Map it out
- Consciously integrate new material into existing mental models
  - Draw connections and reexamine what you have already learned
- Use diagrams and flowcharts
  - Visually represent concepts and material

Utilize the resources
- Office hours, review sessions, study groups, online tools...
  - People want to help you; you just need to take the initiative!
- Maintain a list of problem areas while studying
  - Bring thoughtful questions to the professor or TSF

Utilize ALL resources
- Study with others
  - And test each other! Use lecture slides and summaries to devise questions
- Thoroughly review graded materials
  - Use feedback to clarify your misunderstandings and discuss lingering questions with the professor or TSF