A general rule of thumb for college classes is that you should expect to study about two to three hours per week outside class for each unit of credit. Based on this rule of thumb, a student taking 15 credit hours should expect to spend 30 to 45 hours each week studying outside of class. Combined with time in class, this works out to a total of 45 to 60 hours spent on academic work - not much more than the time required of a typical job, and you get to choose your own hours. Of course, if you are working while you attend school, you will need to budget your time carefully. As a rough guideline, your studying time might be divided as follows.

<table>
<thead>
<tr>
<th>If your course is</th>
<th>Time for reading the assigned text</th>
<th>Time for homework assignments</th>
<th>Time for review and test preparation</th>
<th>Total study time</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 credits</td>
<td>1-2 hours per week</td>
<td>3-5 hours per week</td>
<td>2 hours per week average</td>
<td>6-9 hours per week</td>
</tr>
<tr>
<td>4 credits</td>
<td>2-3 hours per week</td>
<td>3-6 hours per week</td>
<td>3 hours per week average</td>
<td>8-12 hours per week</td>
</tr>
<tr>
<td>5 credits</td>
<td>2-4 hours per week</td>
<td>4-7 hours per week</td>
<td>4 hours per week average</td>
<td>12-15 hours per week</td>
</tr>
</tbody>
</table>

If you find that you are spending fewer hours than these guidelines suggest, you can probably improve your grade by studying more. If you are spending more hours than these guidelines suggest, you may be studying inefficently; in that case, you should talk to your instructor about how to study more effectively.

**General strategies for studying**

- **Don't miss class.** Listening to lectures and participating in discussions is much more effective than reading someone else’s notes. Active participation will help you retain what you are learning.
- **Budget your time effectively.** An hour or two each day is more effective, and far less painful, than studying all night before homework is due or before exams.
- **If a concept gives you trouble, do additional reading or problem solving beyond what has been assigned.** And if you still have trouble, ask for help: you surely can find friends, colleagues, or teachers who will be glad to help you learn.
- **Working together with friends can be valuable in helping you to solve difficult problems.** However, be sure that you learn with your friends and do not become dependent on them.
- **When studying your text:** Don't highlight - underline! Using a pen or pencil to underline material requires greater care than highlighting, and therefore helps you to keep you alert as you study.

**Preparing for exams**

- **Rework problems and other assignments; try additional problems to be sure you understand the concepts.** Study your performance on assignments, quizzes, or exams from earlier in the semester.
- **Study your notes from lectures and discussions.** Pay attention to what your instructor expects you to know for an exam.
- Reread the relevant sections in the textbook, paying special attention to notes you have made in the margins.
- Study individually before joining a study group with friends. Study groups are effective only if every individual comes prepared to contribute.
- Don't stay up too late before an exam. Don't eat a big meal within an hour of the exam (thinking is more difficult when blood is being diverted to the digestive system).
- Try to relax before and during the exam. If you have studied effectively, you are capable of doing well. Staying relaxed will help you think clearly.

**Presenting Homework and Writing Assignments**

All work that you turn-in should be of *collegiate quality*: neat and easy to read, well-organized, and demonstrating mastery of the subject matter. Future employers and teachers will expect this quality of work. Moreover, although submitting homework of collegiate quality requires "extra" effort, it serves two important purposes directly related to learning.

The effort you expend in clearly explaining your work solidifies your learning. In particular, research has shown that writing and speaking trigger different areas of your brain. By writing something down - even when you think you already understand it - your learning is reinforced by involving other areas of your brain.

By making your work clear and self-contained (that is, making it a document that you can read without referring to the questions in the text), it will be a much more useful study guide when you review for a quiz or exam.

**Ensuring that your assignments meet the standards of collegiate quality**

- Always use proper grammar, proper sentence and paragraph structure, and proper spelling.
- All answers and other writing should be fully self-contained. A good test is to imagine that a friend is reading your work, and ask yourself whether the friend would understand exactly what you are trying to say. It is also helpful to read your work out loud to yourself, making sure that it sounds clear and coherent.
- In problems that require calculation:
  - Be sure to show your work clearly. By doing so, both you and your instructor can follow the process you used to obtain an answer.
  - Word problems should have word answers. That is, after you have completed any necessary calculations, any problem stated in words should be answered with one or more complete sentences that describe the point of problem and the meaning of your solution.
  - Express your word answers in a way that would be meaningful to most people. For example, most people would find it more meaningful if you express a result of 720 hours as 1 month. Similarly, if a precise calculation yields an answer of 9,745,600 years, it may be more meaningful in words as "nearly 10 million years."
- Pay attention to details that will make your assignments look good. For example:
  - Use standard-sized white paper with clean edges (e.g., do not tear paper out of notebooks because it will have ragged edges).
  - Staple all pages together; don't use paper clips or folded corners because they tend to get caught with other students' papers.
  - Use a ruler to make straight lines in sketches or graphs.
  - Include illustrations whenever they help to explain your answer.
  - Ideally, make your work look professional by using a word processor for text and equations and by creating graphs or illustrations with a spreadsheet or other software.
  - If you study with friends, be sure that you turn in your own work stated in your own words - it is important that you avoid any possible appearance of academic dishonesty.