

# STEM/legal professionals must learn knowledge and apply it in unfamiliar situations

If you learn to perform skills 1, 2, and 4 below, you probably will not need any tutor in any class (except when overscheduling prevents textbook reading).

Skills 1 and 2 are time consuming. To reliably obtain test scores in the 70%-90% range for college-level courses, you should spend **1-2 hours correctly reading/learning** (even before homework problems) for **each subject, each day**. To reliably score in the 90%-97% range on tests in a college course, expect to spend 15+ hrs./week reading for just that one subject alone.

Our eyes can only clearly see a few characters at a time, and it is difficult for us to hold more than ~4 pieces of most kinds of information in the portion of our memory from which thoughts can be quickly brought into focal attention. Fortunately, we seem to be able to remember spatial relationships (how visual items are located relative to each other). Thus, we work around severe limitations in visual and cognitive processing in human beings by laying out on maps symbols that represent thoughts.

Essential Skill 1	Highly recommended Skill 2	Skill 3	Essential Skill 4	Skill 5	Skill 6
<p><b>Learn</b> individual pieces of knowledge.</p>	<p><b>Arrange</b> individual pieces of knowledge <b>on a map</b>.</p>	<p><b>Compare</b> your map with someone else's map.</p>	<p>Use map to find individual pieces of knowledge that can be <b>pieced together</b> to develop lines of reasoning.</p>	<p><b>Speed up</b> use of map to develop lines of reasoning on timed assessments.</p>	<p>Use memorized knowledge to develop lines of reasoning on timed assessments.</p>
<p>Refer to the handout, "Reading for STEM and legal professions."</p> <p>Read with the same attention to detail that would be needed to identify subtle fraud in an audited tax return.</p>	<p>Arrange crib sheets, representative example problems, and index cards on large presentation boards. Place boards where they will be constantly visible so that the arrangement of content on the boards becomes automatically memorized over a couple weeks.</p>	<p>Pay attention to similarities and differences between the way that the classroom instructor presents knowledge and the way that your map presents knowledge. See any differences you like? Update your map accordingly.</p> <p>Familiar opportunity: Lecture</p>	<p><b>Apply</b> knowledge <b>using</b> laws of <b>logic</b></p> <p>Refer to the handout, "For STEM and legal professions, simulate robotic reasoning."</p>	<p><b>Practice</b> skills in previous column so that mapped knowledge becomes memorized and quickly accessible and so that application of knowledge becomes quick and accurate.</p> <p>Familiar opportunity: Homework, practice quizzes</p>	<p><b>Demonstrate</b> logical application of knowledge during <b>timed</b> quizzes and tests.</p> <p>Familiar opportunity: Exams and quizzes</p>