**Avoid Cramming**

Your short-term memory does not have enough space for all you need to know. Cramming stupefies long-term memory (where well-learned material is stored), and it can set you up for panic and "blanking" on your test.

**Organize and Plan Ahead**

* *Develop and Follow a Plan* for getting yourself through the material by breaking it up into chunks, starting (if possible) with your most challenging sections.
* At the beginning of each study period, do a 10-minute review of the previous period's material.
* *Study from the Top - Down.* Start with a good grasp of the course's main ideas and then follow with the sub-topics and supporting details.
* Regularly updating an outline of main topics and sub-topics is a good way to build a study guide over time, which can help you avoid procrastination as you prepare for your exams.

 **Have a Strategy**

* *Jog your Memory*: Exams require you to draw information out of your memory. So, this should be the focus of studying: answer questions, solve problems, write essays, define, explain and apply terms, and work through past exams.
* *Make Connections*: Exams require you to demonstrate that you have accumulated a large amount of knowledge over time. Therefore, in order to build and maintain a solid information network in your long-term memory, focus on how the ideas you are learning relate to each other or concepts you already know.
* *Multi-Modal Learning:* To store information in your long-term memory, challenge different parts of your brain to use it. Try converting material from one form to another: take notes as you read, convert text to a concept map, read highlighted text aloud, write a paragraph about a diagram, and explain the steps to a practice problem aloud as you solve it.
* *Study with a partner/group*: Practice solving problems and explaining concepts to each other. Challenge one another and ask questions just as your professor will on the exam.
* *Simulate Exam Conditions*: Generate a practice test similar in the number and type of questions that might be on your exam. Budget your time for each question, problem or section as you would on an exam. This will show you what areas you might need to study more closely and will ultimately help you feel more comfortable during the exam.

**Mapping** is a great way to organize and demonstrate relationships between pieces of information. See the examples below for ideas on how to create your own maps.

Figure 1 - Demonstrates how sub ideas relate to a main idea.

Figure 2 - Demonstrates the stages of a cycle.

Figure 3 - Demonstrates the phases in a process, ie: the Birth of a Star.



Figure 2

Figure 1



Figure 3

**Keys to Effective Mapping**

* *Give it time:* The act of generating a well-organized map is just one part of the process. Giving yourself time to actually study your map will make it a useful tool.
* *Multi-modal learning*: Most of your course content will require more complex versions of the maps above. Taking a multi-modal approach to studying your maps by explaining the connections aloud by yourself or with a partner and writing about them will help you learn the material and store it in your long-term memory.

*These maps and many more are easily created in Microsoft Word using SmartArt and can be modified to reflect any variety of connections.*