Survival Skills for University

University is very different from high school. Hopefully the social and academic community of CSP will help to make this a smooth transition for you. The following are some strategies and tips that have been collected over the years, intended to help make your university experience a more successful one. Please read and THINK about them. If you are serious about your education and about getting the most you can out of the CSP experience, you should read these ideas again several times throughout the year.

1. Take responsibility for your own learning!
In high school you may have gotten used to a system of passive learning, wherein the student is a container waiting to be filled with information by the teacher. In university, and especially in CSP, it is essential that you adopt a system of active learning. This means taking initiative yourself and putting in the effort required to understand your course material. It may seem easier to sit back and watch while your teachers and colleagues do the work, and then memorize their results, but you will be far better off in the long run if you work towards understanding and applying concepts independently. This is because the act of processing concepts is essential for meaningful learning and long-term retention. Keep in mind that the transition from passive to active learning may not be easy. Stick with it and don’t get frustrated or discouraged.

“Education is not the filling of a pail; it is the lighting of a fire.”
-W. B. Yeats

2. Be open-minded!
A positive attitude goes a long way. If you want to fully benefit from the CSP experience, you have to be willing to try new approaches to learning. It may not always be obvious how various activities are helping you. Many students think that something is a waste of time unless it’s directly related to an assignment or an upcoming midterm. This is a very narrow way of thinking! A wide variety of skills go into successful exam-writing, a successful university experience, and success in future careers. These skills include oral and written communication, problem-solving, critical and original thinking, and the ability to work effectively as part of a team. In CSP we will help you to develop all these abilities, rather than simply preparing you for one specific test.

“I have found that a great part of the information I have was acquired by looking for something and finding something else on the way.”
-Franklin P. Adams

3. Study smart!
Last minute cramming may have worked for you in the past, but memorization will only get you so far. A full understanding of concepts and the ability to apply them effectively require that you digest the material gradually. Don’t procrastinate and don’t let yourself get behind! Stay on top of things by reviewing daily. Even if you feel that you understood the day’s lectures, it is helpful to reinforce that understanding by rereading each new idea. Use part of your daily scheduled study time (see #4) to go over your lecture notes and to re-read pertinent textbook sections. Summarize main concepts and make a note of any questions you need to ask (see #5).

Be efficient! Make an effort to learn the lecture material DURING the lecture time, rather than mindlessly copying down every word the professor says. This is much easier if you have done the assigned pre-reading. Asking questions when they come up is another example of the difference between active and passive learning. You will spend about 15 hours each week in lectures—use this time productively.

Read your textbooks actively. Do not passively read every paragraph just to get it done. In fact, don’t waste your time reading the textbook at all unless you are actively thinking about what you are reading. You can use the summary or chapter questions to help you focus on major concepts while reading. Thinking while you read will help you to know which sections to skim over and which ones to focus on more deeply. Trade your
highlighter in for a pen or pencil and use it to write notes in the margin or to summarize ideas in your own words. This will force you out of passive mode. When you come to an equation, stop and think about its meaning. Is the function linear? What assumptions is it based upon? When you come to an example, do not read the solution immediately. Instead, use it as an opportunity to practice thinking for yourself. Similarly, do not rely on the solution manuals that sometimes accompany textbooks. Following how someone else has solved a problem will only encourage you to solve problems by memorizing standard methods rather than by thinking.

“Iron rusts from disuse…even so does inaction sap the vigour of the mind.”
- Leonardo da Vinci

Spend time discussing concepts out loud. If all you do is read and write, it’s pretty easy to miss things without realizing it. If you truly understand something, you should be able to talk about it in words, not just with formulas. Explaining a concept to someone else is one of the best ways to reinforce your own understanding.

“You do not really understand something unless you can explain it to your grandmother.”
- Albert Einstein

4. Be organized!
This cannot be overemphasized. If you can learn how to be productive and use your time effectively, you will get more done and have more time left over for other things. Different time management strategies work for different people; one of your tasks this year will be to discover what works best for you. Here are some ideas:

Set aside time for studying—Schedule specific times during the evenings and during mornings or afternoons when you don’t have a lab. Use these hours to prepare for lectures and labs, to work on assignments, and to review. Make a real effort to use this time productively. Aim for high quality rather than an excessive quantity of studying.

Plan your time visually—Get a four-month wall calendar and use it to map out the semester’s midterms and due dates for essays, projects, and formal lab reports. Decide which weekends you will devote to each of these major tasks. Use this wall calendar in tandem with a day planner that you bring with you to classes each day.

Set goals for yourself—Working towards challenging, but realistic, goals is one of the best ways to motivate yourself. People who set goals for themselves are invariably more successful and productive than those who don’t. Make a list of short-term and long-term goals and deadlines—these may be academic, personal, or career-related. Don’t get discouraged if you are unable to accomplish one of your goals by your chosen deadline. You will need to re-evaluate your list often.

“I have not failed. I’ve just found 10,000 ways that won’t work.”
- Thomas Edison

Use dead time productively—For example, if you commute to campus by bus, use the time to read and review, plan an essay, or prepare for a lab. You can also save time by becoming a bicycle commuter, combining your daily exercise with commuting time. There are several facilities on campus that cater to bicycle commuters, including bike lockers, showers, and the Bike Kitchen in the SUB. Another example of using dead time efficiently is scheduling a workout or swim during a break between lectures.

5. Ask questions!
One of the best ways to learn about science is to ask questions. Allow yourself to be curious! If you don’t understand what the professor is saying in a lecture, don’t be afraid to speak up and ask. You may not want to interrupt the flow of the lecture or you may think that you are the only one who is confused, but chances are pretty good that there are several other people in the room who have the same question. Everyone, including the professor, will appreciate the fact that you voiced your thoughts and helped to clarify things.
“Our lives begin to end the day we become silent about things that matter.”  
-Martin Luther King, Jr.

Outside the lectures, also, don’t be afraid to seek help when you have questions. This doesn’t mean waiting for someone to come along and say “I think you need some help”. You have to take the initiative yourself. In CSP you have more than the average number of options for getting help. For example, you can ask questions during professors’ and lecturers’ office hours, you can email us with questions, or you can make an appointment with one of us to ask questions. We are more than happy to help.

Something important to keep in mind is that you should not always expect simple, direct answers to your questions. This would not be the best way for us to increase your understanding of the topic. Instead, we will attempt to guide you to an answer by asking YOU questions and by challenging you to understand the fundamental concepts underlying your questions. This way, you are much more likely to retain the knowledge and be able to apply it to future questions and problems.

“Give a man a fish, feed him for a day. Teach a man to fish, feed him for a lifetime.”  
-Chinese proverb

6. Discover your own learning styles!
This is another very important task for you to undertake this year. You may need to try a variety of approaches in order to determine what works best for you. Some people learn most effectively by reading, others by listening, and still others by discussing. Usually some combination of these three is the best strategy. Other approaches to learning include performing hands-on activities that illustrate major concepts, explaining the material to another person, and solving practice problems. You may find that you prefer to study alone, with another person, or as part of a study group. Your studying environment is also important, whether it be one of the libraries, the CSP room, or your bedroom. If you find you need absolute silence, try earplugs.

If you are having trouble understanding a particular concept, seek out additional information sources. Just as everyone has their own learning style, so everyone has their own teaching style. This includes the authors of your textbooks. If a particular textbook just doesn’t seem to be working for you, supplement it with the appropriate sections from another book. Check the library and the CSP office for these.

“Do not follow where the path may lead. Go instead where there is no path and leave a trail.”  
-Ralph Waldo Emerson

7. Take care of yourself!
Everyone feels better and performs at a higher level when they are healthy and relaxed. You will certainly find it more difficult to think if you are tense or exhausted. Some of the easiest things you can do to contribute to a successful year are getting 7-8 hours of sleep each night, eating healthy meals, and exercising regularly. This may sound like old news, but it really is incredible what an enormous difference these simple things can make. It is also very important to learn how to deal with stress. This may include spending time with close friends, going for regular walks, runs, or bike rides, writing in a journal, lifting weights, spending time on a hobby such as painting or playing a musical instrument, going swimming, taking up Tai Chi or meditation, or joining a recreational sports team. Once again, you’ll have to find out which methods of relaxation work best for you.