**Advice to UCI ICS Students**

**Raymond Klefstad Ph.D.**

* **Learning is very difficult to do without motivation.** It is a bit like being offered more food when you are already full - you can eat a little more, but it is difficult to do. By selecting courses that are interesting to you, you may have some motivation. Ideally, students build their own motivation for their courses. Good teachers help students build motivation for their courses. Homeworks, Projects, and Exams create motivation for most students.
* **You are paying for a chance at an education, not a degree.** Learning is investing in yourself to make yourself more enlightened and valuable. What makes you valuable in the job marketplace are: **Knowledge** (what you know), **skills** (what you can do), **connections** (who you know and how they view you), and **accomplishments** (what you have done of value). Focus on building these four attributes and record them on your resume. Always keep an up-to-date resume and add to it as you develop yourself.
* **You can get a great education at this university.** You can also get a poor education at any university. No one can teach you. Only you can teach yourself. It is mostly up to you what you get out of the opportunity. You chose your major, the courses you take, and the level of effort you apply. Just like physical exercise, you get out of it what you put into it. Select courses that will build the four attributes listed above. Focus on learning as much as you can - not only on passing the course. You also want to give yourself time to build **connections** which may mean joining student organizations, playing sports, and socializing with other students.
* **Take a light load your first term at the univeristy.** A light load might be three “real” courses. You have a lot to adjust to - a new living situation, making new friends, learning your way around, developing good habits - so adding too heavy of a course workload your first term could overwhelm you. After that first term, you have a better idea of how much workload you can handle. You can add another course and see how it goes. Also remember, ICS does not allow dropping classes after the second week, so you are “stuck” once you pass that week. Note this applies to transfer students as well as to Freshman.
* **Always go to lecture and pay attention.** It is the main thing you are paying for when you go to a university. No one can multi-task their attention. If you are looking at your phone or computer, you can’t be paying attention to lecture. Showing up and not paying attention is little better than not showing up at all. Here are just a few relevant quotes found with a simple Google search:
  + “80 percent of success is just showing up” Woodie Allen from Love & Death.
  + “Most of life is showing up. You do the best you can, which varies from day to day.” Regina Brett
  + “Showing up every day isn't enough. There are a lot of guys who show up every day who shouldn't have showed up at all.” James Caan
  + “Showing up is not all of life - but it counts for a lot.” Hillary Clinton
  + “I feel strongly about showing up and being prepared and not taking the opportunity for granted and being conscientious about my fellow co-workers.” Paul Schneider
* **Never study for an exam during lecture.** This means you are not learning the new material which will be on a future exam. It is short sighted to miss the lecture only to try to study which probably is too little too late anyway. Your time to study is before the lecture.
* **Take notes on paper with pencil/pen.** Even if you never refer to them again, the proces of writing is an active form of learning. Read [this article](https://www.scientificamerican.com/article/a-learning-secret-don-t-take-notes-with-a-laptop/) or [this](http://www.psychologicalscience.org/news/releases/take-notes-by-hand-for-better-long-term-comprehension.html#.WGfwdtArLC0). Lecture is not like watching a video. It is an interactive learning session: the instructor is the guide and each student should be actively understanding and integrating the knowledge.
* **Stow your electronic devices.** Many research studies show that having a laptop or cellphone in lecture dramatically reduces your learning. [Here is one article](https://www.washingtonexaminer.com/red-alert-politics/research-shows-detrimental-effects-of-laptop-use-in-classrooms) but there are many more. Just having the phone on your desk reduces learning - even if you are not actively using it.
* **Read everything with understanding - your textbook, the lecture notes, your homework assignments, and your test questions.** The more advanced you get, the more you must learn by reading. Develop good reading habits early rather than later. Too often, I see students get zero for their answer by mis-reading or mis-understanding a written question. I also see many students ask questions on the discussion forum that are answered directly in the syllabus or homework assignment. Either they did not read it or they did not understand it.
* **Knowledge and skill must be in your brain to be yours.** Content on the Internet or in a textbook is not your knowledge until you make it yours. Knowledge must be in your working memory for you to be able to use it.
* **The Internet is just one resource and it is not your brain.** The Internet is full of good information, but there is far more useless information than helpful/useful. Developing a good foundation is valuable to help you wade through the garbage to find the valuable stuff. When you do work, you need a certain amount of knowledge and skills in your brain to work with. To some extent, you must also know “what you don’t know” so you can do further research to find out the details that you may have forgotten.
* **When you start to learn something new, start with Wikipedia.** If it involves doing something, look on YouTube to see if there are any good videos. I find reading much faster for learning than videos, but it may be different for you. If I must watch a video, I bump the speed to 2X and that works well for most videos. Expect to spend a big part of your time reading whenever you are working on a project. Most of what you will learn after school will be through reading and doing.
* **Learn to manage your time.** Construct a 7-day weekly schedule for each term with everything on it - including sleep, work time, commute time, lectures, labs, discussions, study time, eating time, and play time. You will be surprised how little “free” time you have. Here is a good place to start [**https://en.wikipedia.org/wiki/Time\_management**](https://en.wikipedia.org/wiki/Time_management). I use Google calendar. I have one red calendar for required meetings (like lectures, office hours, and work-related meetings with others), another yellow calendar for planned work (like prepare lecture or writing a specific programs), another green calendar for optional activities which includes seminars, social activities, and play time (these are things I could miss if something more important arises). I also keep a separate blue calendar for personal/family activities that I share with my family. This also allows me to show/hide each calendar as time permits.
* **Start early on any programming assignment.** They always take more time than you expect. Get used to it. It is the nature of software/hardware/system development. Also, a few large blocks of contiguous time are better than many small blocks. I like 4 hour blocks of time for programming. Take breaks when you run into a tough problem or when you get tired. Try to schedule your homework time slots at the time of day your brain works best.
* **When doing group (pair) work, be sure you understand and contribute.** Coasting on the coat-tails of partners will catch up with you and you will get too far behind in knowledge/skill to ever catch up. Also don’t let your partner rob you of your chance to learn and contribute. Finally, don’t divide up the work so you do what you’re good at and your partner does what they are good at. You are just avoiding strengthening your weaknesses. Instead, focus on eliminating your weaknesses. Remember to make connections while you are in school. Partners from class are a good place to start.
* **Attempt and complete each homework assignment.** You mostly learn by doing, not by listening or watching. Each homework problem is your chance to learn a lesson your teacher believes is important for your development. Seeing the solution is not the same as learning. You must attempt and complete the homework to learn the material covered by that homework assignment. If you see a solution before solving it yourself, I believe you must then solve a similar problem yourself to learn the lesson. Sadly, teachers often can’t provide you with multiple versions of each homework assignment.
* **If you do poorly on a homework or a test, change how you are working on it.** Some students keep doing the same thing even if it is not working well for them. Come on, be smarter than that. If it isn’t working, think about making positive changes which makes a noticeable improvement.
* **Quick tips to success in University courses.**
* attend lecture faithfully and on time, read assigned reading before lecture,
* pay attention in lecture and take written notes on things you don't already know,
* ask questions (in lecture, class forum, or office hours) when you don’t understand,
* start early on homework & other assignments and ensure they are completed early,
* study more effectively before exams (like asking yourself hypothetical questions),
* read exam questions very carefully and give clear, correct answers,
* review graded homeworks and exams and understand and learn anything you missed.

Other excellent advice from wise University faculty I’ve worked with:

Frank Vahid UCR

* <http://www.cs.ucr.edu/~vahid/college_time.html>

David Kay UCI

* <http://www.ics.uci.edu//~kay/college.html>
* <http://www.ics.uci.edu/~kay/college-advice/>
* <http://www.ics.uci.edu/~kay/courses/31/nowwhat.html>