Teaching Philosophy

Today’s society demands that good citizens make good decisions. The Internet has opened a new arena for information gathering and it is imperative that as good citizens we understand that there is good information and bad information. No longer are we as a society dependent upon one source for our information and we are rapidly becoming a society that questions authorities, be the doctors, lawyers, journalists or politicians. This new society that is emerging needs to think for themselves and question what they read and become true critical thinkers. It is my philosophy to help create critical thinkers in any class I have the privilege of teaching.

Make them think. That simple statement sums up what my courses strive for and what I strive for as an instructor. There is a time and place for memorization and it is certainly the underlayment of a solid education in the sciences but we must also make sure our students understand. One way to do this is by putting the facts in front of the students then asking them, “how can we understand this?” Interactive lectures are my trademark, no matter how large or small the class. I like to hear that the class is thinking with me and that although the “right” answer may appear elusive, we can come to it through many different routes. I often pause in the delivery of materials to have students work problems in small groups, often I have found that their peers are better teachers than I for certain concepts. I have learned to listen to what the students say to each other in these moments and use these comments or tips in future classes.

Inquiry based labs are another way of making theory come alive for a student and to ensure that they get a chance to use what they learn in lecture in the laboratory. From doing their own stoichiometry to developing their own approach to the experiment, they are utilizing the memorized theory and applying it to see first hand what happens. The utilization of case studies where the student must become the expert and write an opinion is empowering. While these kinds of labs require more of the instructor, student satisfaction is a definite driving force.

Finally, without good communication skills students are simply not marketable either to medical schools, graduate schools or industry. In all my classes I have a writing and oral communication assignment. In General Chemistry the written assignments are formal laboratory reports where the students not only are expected to present the results of their labs but also to include opinions about the found results. I have them write in the context that they are the experts and are giving advice to a client. They are instructed to include outside research and to comment on the available information on the Internet. Their oral communication project is a year-end poster session, where they present their research on a chemical topic of interest to them. These projects have gotten better and better over the past several years with many students taking the cue from lab and wanting to carryout experiments based on their research. Everyone benefits from this type of oral work not just those that have done the research. My latest adventure has been the introduction of proposal writing to my Advanced Inorganic Chemistry class, which is a mix of undergraduate and graduate students. The jury is still out, but I am already finding this to be
a worthwhile activity as it has made them realize that chemistry doesn’t just happen it needs to be planned, researched and executed. And probably most importantly, it requires MONEY!

Overall, I believe I am a patient, demanding and fair instructor. I try to engage my students in lecture and present them with life skills in addition to chemistry facts. If I can give them a solid foundation in the subject I am teaching and teach them one thing that transcends the sciences, then I have been successful. I love to teach and am always looking for new and more advanced ways of challenging my students to think outside the box and become good citizens.