A TEACHING PHILOSOPHY

...should discuss principles as well as specific strategies or techniques that articulate your:

A. **Values:** What are your underlying values as a professional? In other words, why do you teach? Why is what you teach important to you? Why are students important to you?

B. **Goals:** What are your goals for your students and yourself? How do those goals play out in terms of course content, skills, attitudes, values, personal growth? Why are your goals important to you?

C. **Pedagogy:** What is your pedagogy? How would you explain and/or justify your pedagogy? What techniques (lecturing, group work, etc.) do you incorporate in the classroom and why?

D. **Assessment:** A philosophy statement should include an understanding of the importance and use of assessment. Explain your principles and techniques for assessing your students.

E. **Improvement/Professional Development:** Your philosophy should also address those areas that you want to continue to work on as a teacher, researcher. What are these areas of improvement and how are they tied into A thru D above?

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**Teaching Philosophy Statement**

I am a teacher of chemistry. While I find great value in the perspectives my discipline provides, it was probably more important to my career that I ended up as a teacher. (Had I taken different courses or had different mentors, perhaps I would now be a professor of sociology instead.) This is because I find I am “filled up” by the activity of interacting with students, finding out where they are and what they need, and then using my talents, knowledge and enthusiasm to help them create their own learning process. (I really LIKE students!).

When I teach I have two principle goals. First, I want to leave my students with the ability to think like a chemist – to visualize the world at the level of atoms and molecules and to understand how we develop conceptual ideas from data. Second, I want them to develop transferable process skills that could be valuable to them outside of my class. I know that weeks and months after my course, most of the details will not be useful to them and so they will forget those details. (As a result, I have always tended to minimize memorization and plug-and-chug problem solving). However, if I have helped them to develop the ability to think like a chemist, then they may use that thinking to ask questions at a chemical level (e.g., I wonder how long it takes for the active ingredient in this sunscreen to break down so its no longer useful?) or at least to appreciate that there is a molecular-level explanation for real things. Because most students I teach will not become chemists, I also want them to be able to approach problems in other disciplinary areas (or real life!) with greater facility because they took my course.

The approaches I choose to use in my courses come from several core beliefs about students, learning, and teaching. First, I believe that all students are capable of high levels of achievement. Second, I believe that each student must construct his or her understanding of
material and any new material must be integrated with knowledge they already have. And third, for the learning students do in my class to be transferable, I must help students to think about their own learning. On the first day I tell them I am not smarter than they are, I’ve just been at it longer. Further, I tell them that I believe every one of them can succeed, it’s just that some will have to expend greater efforts for the same result. This belief system requires me to meet students where they are and to differentiate student assistance whenever possible. In my interactions with students I rarely give answers away, or spell out strategies. Instead, I pose a series of questions to determine where a student (or a group of students) is starting from, which is followed by more questions until the student has arrived at an answer he or she believes. The idea is to buoy students along the process, helping them to come up with their own answers, and thereby construct their own understanding. Sometimes, this approach frustrates students, particularly those who just want the answer. However, because I talk a lot about why I do this (and other things I do) most students come to appreciate how the approaches help them develop process skills and contribute to a deep knowledge of course material.

My engagement in my own teaching comes in part from my interest in improving the extent to which I meet my goals (above). As a result, I like trying new approaches in my classes so that I can identify which are most appropriate to the course goals. Recently, I have changed my approach in introductory chemistry so that I now do very little lecture. Most of the class time is spent in small groups, actively engaged in the process of interpreting data and handling chemical concepts. (This helps them to act, and therefore think, like a chemist). Students seem to benefit a great deal from the more actively engaged classroom, and it gives me a good read on each student’s strengths and weaknesses. (This allows me to differentiate instruction more easily.) I find that making a change in my approach also opens up new ways of thinking about the material for me.

There are several areas of my teaching ripe for improvement. First, by not lecturing in introductory chemistry, I have now reduced the opportunity to share my knowledge of the “relevance” of the material to real life, and I need to find some way to thread those ideas into class work or assessments. Second, I have not always modified my assessments to reflect the more process-oriented approach I am using, so these could be improved. (Some problems still look very plug-and-chug.) Thirdly, I have not yet converted my advanced course to a more active learning format...While I have always found lecturing on advanced inorganic material somewhat boring, I have to admit I’ve been stalled by the tyranny of “coverage”. Finally, while one of my primary goals is to help students “think like a chemist”, I don’t know how to measure this and so I don’t know how often this goal is achieved.