Teaching philosophy:

My training via the Graduate Teacher Program at CU (http://www.colorado.edu/gtp/index.htm) and its explorations of current research on learning theory strongly influenced my teaching philosophy. In particular, I am an advocate of an approach that operates under the assumption that three contrasting learning "modes" exist. The first is a contrast between students who prefer to learn by "doing" and those who prefer to learn by contemplating or thinking about the material in a more abstract fashion. The second is a contrast between students who prefer to examine open-ended material and unanswered questions and those who wish to learn within an infrastructure of clear boundaries and answers. The third is a contrast between students who prefer to be presented with information in a linear fashion and those who prefer a broad-based view and possibly the opportunity to skip focus from one area to the next. My goal in any teaching situation is therefore to employ various techniques so that I reach a broad student audience and as a consequence, provide a richer learning experience for all students.

Strategies for effective teaching:

I have three primary teaching objectives. The first is to train students to be critical thinkers. The second is to define my role as a teacher and the role of students in the classroom. The third is to diversify my teaching to reach an equally diverse student audience. Students must be able to think critically, meaning that they must be capable of thorough and logical analysis of information and ideas from multiple perspectives. This applies not only to their academic experiences, but also to their daily lives as citizens. Scientific awareness has a dramatic effect on the decisions of scientists and health professionals, but also future businesspeople, educators, writers, philosophers, civil servants and artists. Approaching a problem from different points of view helps students bolster their creativity and problem-solving skills; this in turn helps them gain a greater depth of understanding in any subject.

In order to help students become critical thinkers, my role as a teacher, and their role as a student must be well-defined. I see my role in the classroom more as that of a facilitator than instructor. Yes, students need to be able to rely on my ability to bring them accurate and well-researched information, but they also need to learn to accept the fact that I am not the ultimate source of knowledge and that I am going to challenge them to learn on their own as well as with me.

I want students to learn that the bulk of the responsibility for their learning lies with them and that they are expected to be self-directed in their education. This sometimes creates anxiety for students, particularly those just beginning their higher academic careers. However, I feel that by providing a safe and structured environment for learning, students become empowered and are able to gain the confidence to embrace uncertainty and ambiguity and find their own answers.

To create a classroom environment that is conducive to effective learning, I feel that it is critical for both my students and I to understand their "modes" of learning (described above). Consequently, on the first day of every course I teach, my students and I all take the Kolb Learning Styles Inventory (1985). This questionnaire helps students understand their learning modes, and it helps me know how best to reach my student audience.

Once students learn and understand their learning styles, I encourage them to use that information to maximize their learning experience by creating effective learning strategies. This ranges from how to get the most out of lectures, lab and assignments, to making good choices when choosing study partners. For my part, I use information on the learning style diversity of my students to deliver material in multiple formats. These include, using class "lecture" periods to combine classic lecture-style information delivery with demonstrations, videos and feedback exercises, to creating web-based materials that complement lab and lecture topics and serve as useful study guides.

Writing as a teaching tool:

One additional area where I place a strong emphasis in my teaching is in the use of writing assignments. Well-structured writing assignments that go beyond the "term paper" can be a tremendously effective learning tool because they engage students in a multidimensional fashion. They simultaneously engage their topical knowledge, their understanding of the concepts underlying that knowledge and alert them to what they don't yet know or understand. Concurrently, these assignments must also be designed so that they don't place an excessive grading burden on the instructor (a major reason why assigning them is avoided). To achieve these goals, I draw a lot of information both from my training as a graduate student under the tutelage of an exceptional writing instructor and the materials available via WAC (Writing Across the Curriculum), see for example:

<u>http://mendota.english.wisc.edu/~WAC/category.jsp?id=2</u> and <u>http://wac.colostate.edu/network/</u>. The key is to provide relevant assignments that are carefully tailored to the content of the course in both format and length and most importantly, provide students with a clear delineation of the goals of the assignment, the expected content and a clear explanation of the evaluation criteria.

In my teaching, I have used writing assignments in many formats to suit the courses I teach. For example, in a course such as Human Biology, a lower division course for non-majors, I asked students to do reviews of articles on relevant course topics in publications like Scientific American or Science News one week and a traditional laboratory report the next. For a course such as Human Anatomy and Physiology, I had students read clinical case studies and their assignment was to answer targeted questions that were meant to integrate information on the various systems we had studied and required them to find and cite additional sources. Finally, I have also shared my course materials and information with other instructors and faculty to help them integrate writing into their courses.

Evidence of Teaching Effectiveness:

Awards:

During my graduate training in the department of Ecology and Evolutionary Biology at the University of Colorado at Boulder, I received three teaching awards from 2003 to 2006. Two teaching awards are given out by the department every year. Graduate students are nominated by faculty and the department uses the faculty course questionnaires and undergraduate student input to make their choices regarding recipients. Nominated three times, by three different faculty, I received an award each time. At the time of my completion of the PhD program, this had never been accomplished by another graduate student.

Instructor Evaluations:

All courses taught at the University of Colorado at Boulder were taught as a graduate teaching assistant. For the course in Anatomy and Physiology at Truckee Meadows Community College, I was the instructor of record. Summaries of instructor evaluations for most of the courses I have taught can be found at: <u>http://faculty.ucr.edu/~heidisc/TEACHING_EVALUATIONS.pdf</u>.