Teaching Philosophy

My overarching goal in teaching is to distill in students an enthusiasm and passion for learning.

For the student: My goal is to help you achieve your goals. Hopefully, these align with the goals of the course. I will do my best to communicate knowledge in a way that (1) you understand and (2) allows you to build on your previous knowledge. You will attain a deep understanding of the course material and understand the larger picture of how this knowledge fits into your discipline and can help you in your career.

It's hard to build a philosophy about teaching students without a particular student in mind, as we all are different and learn in different ways. An ideal pedagogy of individually-tailored instruction for each student is tough to attain but can be a guiding light. I build my teaching philosophy on pillars of active learning, goal-driven & enthusiastic learning, and effective assessments.

(1) Active learning: An active learning approach lets me instruct groups and students individually instead of talking to a blackboard. It forces continual learning in the student's mind, not my own, building upon a unique body of knowledge that each student possesses. General "umbrella" lectures can discriminate against intellectual diversity and dampen creative thinking that is critical on the research frontier.

(2) Goal-driven, enthusiastic learning: I always make an effort to emphasize how course material relates to the students' goals to create individual incentives for learning. This helps build motivation, increases knowledge retention, and creates a more diverse environment that allows myself and other students to learn from each other. I try to communicate a passion for learning through example, demonstrating interest in both the subject material as well as the success of each student.

(3) Effective assessments: Most modern forms of assessment test a very limited type of knowledge. Creative thinking, scientific communication, perseverance, and other critical traits of scientists are too often overlooked. When perfection is top priority, it can encourage academic dishonesty. Assessments should be designed with learning, retention, and progress as top priorities. Concretely, traditional tests can be supplemented with projects to assess work ethic, time management, and creativity. Group projects and presentations can develop and assess scientific communication. Making students aware of open and outstanding problems can put students on the research frontier, prepare them for future research, instill confidence, and even lead to solutions.

For the student, again: Please ask me questions, teach me your thought process, and let me know how I can help you learn better and/or create a more effective learning environment. I'm here to help.