

An instructor must be enthusiastic about the material, and even about the act of teaching. The best instructors are masters of the fundamentals, yet they also embrace new technologies and methodologies. To that end, I work to stay current in my fields of interests by reading the literature, by attending local, state, and even international conferences, and by participating in various workshops and continuing education sessions. An instructor should be versatile and adaptable, enabling them to hold the attention of their students. Engineers and scientists as instructors in the modern era must be multifaceted.

Students must be able to function independently, yet also be able to work well in a cooperative group. They should be confident of their knowledge, and be aware of the unknown. Students should be given plenty of opportunities to practice their critical thinking skills. Instruction does not have to take the form of standard classroom coursework. By example, experiential learning can better engage students, allowing them to see how instruction can be applied to real-life situations. Generally, successful instruction can be accomplished through many different avenues, the key being maintaining a motivated and receptive audience. When possible, I try to incorporate an experiential approach and use guided Socratic questions in my lectures to aid classroom discussions.

In the classroom, I believe that reasonably set and achievable goals can compel and motivate students to learn the required material. All students should receive encouragement, and as long as it's not a deterrent to the class, lagging students should receive extra attention, and high achieving students should be given added challenges. All students must be provided sufficient challenges by their instructors. I believe students should be granted respect, but they also will be levied an equal measure of responsibility. Students can and do live up to high expectations. I have found that if a competitive atmosphere can be fostered between students, classmates are the best inspiration for each other, enabling all to reach higher.

The evolution of the engineering and scientific fields of study has resulted in an increase in the amount of knowledge students need at even the basic level. Communication between colleagues is important to minimize redundancy and to expose students to as wide a breadth of information as possible, while at the same time making sure the fundamentals are covered and built upon. Communication is also important between the academic program and potential employers. An open dialogue should always be maintained to bring to light problems in the program, or to focus on what employers are looking for in our recent graduates. Maintaining good relations with potential employers is also important in maintaining the identity and visibility of the program and the profession.

An important aspect in teaching is the assessment of learning by students. Because of the different and varied courses and topics I teach, I use a wide array of assessment tools. As an example, students: prepare engineering reports; are evaluated by external experts for presentations; build spreadsheet design tools and practice programming skills; are also challenged to individually innovate those tools while describing their rationale; write up executive summaries for guest speakers, or for field trips, to express what they experienced. So, in general, I try to be flexible and match the assessment with a particular desired goal or course objective.

The world is big, and ultimately it is my duty as an Engineer to see that it becomes a better, more sustainable, more fruitful, a more just place. Without embracing the differences in thoughts, cultures, values, lifestyles, abilities, knowledge, and people, that future cannot itself be embraced. This goes for the engineers, managers, and scientist that make up and contribute to the Agricultural & Biological

Engineering Profession. We need to embrace the diversity of our own breadth. We provide those services necessary to efficiently produce food, fiber, fuel; to manage dwindling resources for an ever-growing population; to effectively manage the boundaries between the habitable and the natural; and to design and improve all the tools necessary to achieve those ends.

In my teaching, I always strive to do the best for the students, and for the department. I strive to incorporate the best attributes of all the teachers I have admired in the past into my teachings, and it is from these experiences I hope my students are exposed to a beneficial learning environment. My ultimate goal is simple, and is to help train the best engineers, scientist, and managers for the future. This is not just a statement of banalities, but is my path to upholding the Engineers Creed: “to give the utmost of performance; to participate in none but honest enterprise; to live and work according to the laws of man and the highest standards of professional conduct; to place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations,” all for the betterment of mankind (NCEES, 1954). In the end, I support diversity, because I support the goals of the Engineer, and will help build a more diverse Profession.