Christopher Martinez  
Teaching Statement

My teaching philosophy centers around helping students thrive in self-learning and expand their knowledge about electrical and computer engineering. My teaching philosophy is shaped through my experiences as a student and instructor at a research institution, a minority institution, a teaching-focused university, and through the educators I have had along the way. All of these experiences taught me that learning is complex with many components. Gaining knowledge at a university comes from well-prepared class lectures and relevant course assignments from instructors. In addition, learning does not happen only in the classroom, but also through interactions with peers and the motivation for life-long learning.

I take part in the student’s university experience by helping the students become successful professional engineers. Primarily, I guide the students by fostering their critical skills and providing motivation needed to help the students make the transition to contributing members of society.

Fostering critical skills involves teaching the fundamental theory of electrical and computer engineering, teaching the critical commercial tools needed to succeed professionally, teaching how to apply critical thinking skills to new problems and stressing the importance of self-instruction. Teaching the fundamental theory and how to use commercial tools is especially essential for undergraduates. My goal is to mold students into marketable future employees. I want the students to demonstrate the required background to start making a difference on day one in their career. I strive to make my classes interactive, involve the students in lecture, and encourage them to provide input to the topics covered. In addition, I found that evaluating the students through multiple platforms improves their understanding and retention of the material. Some of these platforms include group collaboration, individual research projects, and oral presentations. Group collaboration is a major part of learning experience. By working with peers, students coalesce their talents and skills, which reinforces lecture topics and provides a constructive competitive environment. Research projects exposes students to case studies, state-of-the-art technology and the future directions of research, which offers the students an avenue to expand learning beyond the topics cover in lectures.

The other major component of my teaching philosophy includes providing motivation to improve learning. My teaching style stresses high expectation of student achievements. Without motivation, students in general cannot meet the expectations I imposed. My teaching philosophy leads students to understand and maximize their capabilities. I gradually introduce complex and challenging problems. I feel that I will create an atmosphere where the students’ self-confidence grows and they can maximize their potential, which usually leads to higher motivation. I also strongly motivate the students to conduct research. Research projects in undergraduate elective and graduate-level courses are a perfect platform to challenge the students for the next stage of learning development, a more independent and gratifying learning experience. I also contribute to the students’ motivation by connecting the links between classroom-acquired knowledge and real-life applications and industry-leading prospects. I always stress to the students the need to closely monitor the current industrial and technological trends, and the gaps their current knowledge still have in order motivate them to catch up. I motivate my students by stressing that they can surpass my expectations, by giving them well-prepared knowledge, and by challenging them with the beyond-the-classroom training. In addition to all these, the most important assistance I can offer my students is being accessible to them as much as I can, usually having to go out of my way to accommodate students’ schedules. Motivation in education is especially critical to minority students. The one thing that I have learned from being a minority student is that successful role models are needed to show minority students the potential they have. I plan to make it a point as a professor to further improve the diversity in the field. Through various professional societies and minority-oriented career/research conferences, it is one of my career goals to help more minority students step into the engineering education and careers.