

# Teaching Statement

Teaching has been my passion for the past thirty years, and I constantly strive to find ways to reinvent my teaching approaches to reach students more effectively in the fast-paced, technology-driven world. I believe that teachers must go beyond the traditional classroom model to engage the students and facilitate learning. My academic background, my teaching experience in a variety of courses, and my career as a Chief Information Officer have well-prepared me to take on this challenge. In addition to teaching introductory computer science and programming courses, I have taught computer organization, computer architecture, data structures and algorithms, operating systems, and databases.

My purpose as an instructor is to create an atmosphere that fosters learning and to facilitate student discovery, supporting and challenging them both inside and outside of the classroom. In order to achieve this, I follow two main principles. First, peer learning is a powerful method for sharing knowledge, ideas, and experience, and it influences student-learning outcomes in a positive, measurable way. Second, gamifying the classroom strongly increases student engagement and motivation.

In order to facilitate successful peer learning, I divide the students into small groups and assign a challenging project to each group for presentation to the entire class. Students take responsibility for reviewing, organizing, and consolidating existing knowledge and materials. As they communicate with one another, they develop problem-solving strategies, acquire conflict-management skills, and discuss and clarify concepts. These skills are relevant not only in the classroom but are also crucial in the workforce.

To assess student learning, I use a variety of methods, including less traditional approaches like clicker games. Doing clicker games for a weekly quiz or for a test review, for example, is much more interesting to the students and increases their attention and student-teacher interaction opportunities.

To engage and encourage the students, I present computer science in a manner that shows its importance and applicability to solving real-world problems. Furthermore, we have competitions in class with the material using games like Who Wants to be a Millionaire and Jeopardy, so that students can have fun with the knowledge they develop in the classroom and to push their intellectual boundaries more. I also use a reward system, giving points to students who answer questions in class or who submit projects quickly, which shows the students that being actively engaged is beneficial.

It is important to me that I help students develop critical thinking skills by ensuring that teaching assistants and I hold on our office hours; and by incorporating ideas and new principles in my assignments so that students develop and refine their thinking process with practice. In addition to assignments, students use their critical thinking skills on a more regular basis during weekly timed quizzes. One student commented “**The professor does a good job of teaching a complicated skill-based subject**”. It is vital to standardize exams levels: keeping the same format and level of exams (20 % comprehensive, 40 % short answers and 40% development), which is emphasized thorough understanding of the course material; make exams up to students’ expectations. One student commented, “**This teacher was exceptional**. Her tests were hard but doable”.

Another way I go beyond the traditional classroom is that I aim to increase student performance by delivering online materials and activities related to the course contents, especially for the most challenging modules. Tools like lecture-recording help students because they can use the tools off-campus at their own pace to improve understanding, performance, and grades.

In conclusion, I maintain a positive teacher-student relationship and a strong commitment to teaching, engaging digital learners, and reinventing my teaching strategies using new technologies and methods: My good memory helps me establishing a good and personal relationship with my students, as most of the time I call them by their names. My enthusiasm for helping students tightens my relationship with them, particularly novices who may not be attracted to the field, but they feel more comfortable and therefore more effective in learning. One student commented, “most **friendly instructor** till date for me in college”.

It is a matter of great importance to me that I utilize advantages in the classroom like peer learning and gamification in order to help the students learn more effectively. It is evident that these practices work. Thus, I have consistently received high computer science department evaluation scores, as well as 4.6 out of 5.0 on the Rate My Professor website. In addition, in 2012, I received the departmental teaching excellence award in recognition of my hard work and dedication to my students and I was awarded with a 2017 University of Houston Teaching Excellence Award for Instructional Faculty, one of the university’s highest honors. I will continue to follow my passion, teaching students and helping to introduce them into the exciting world of computer science and technology.