

Statement of Teaching Philosophy

I would like to describe my teaching style as Traditional. However, it is important that my teaching philosophy is a balanced blend of various popular teaching styles including the Traditional approach, the Classical approach, the Unit Study approach, the Principle approach, the Unschooling approach, and the Technology approach.

I use lecture notes and textbooks; I give tests (quizzes and exams), assignments, and projects in a very traditional way. Even though the Traditional approaches (such as 10:2 and 3-2-1 methods) are the most popular, most practiced, and most effective approaches, it is acknowledged that this approach does not take into account individual learning styles, strengths, and/or weaknesses. For that reason, I use various tools and techniques as appropriate that makes my teaching style a Classical one. I divide the course materials into smaller subjects and integrate some subjects into one study around a common theme which is a Unit Study approach. Every time I teach a course/class, I use the Principle approach – I make sure that I have enough knowledge to deliver, my students understand the materials, and they are capable of practicing what they have learned. I believe that students are to study at home to make sure they grasp the materials covered in the class and prepare themselves for the next class. As needed, I use the Unschooling approach – assign the students homework and/or take-home exams so that they spent time to understand the theoretical concepts and practice the theoretical knowledge while solving the problems at home in a relaxed environment. Another approach I apply in my classes, I call it Technology approach – acknowledging the blessings of modern technologies like Laptop/Tablet, Wireless, and Internet; I let the students make the best use of technology.

When I prepare a lecture, I spend most of the time making sure the material will be presented clearly. Because I believe that the best way to make a topic interesting is to explain it well. I use the popular “example sandwich” method – first I present a simple example and solve it; then I cover the course materials; and finally I present a more difficult example and give students a chance to solve before I solve it. I find this method very effective.

I have earned the elementary, high school, and undergraduate level education abroad, in a highly competitive environment. Competition works! I feel that it is important to engage the classroom in a challenging way to keep the student interested. I always carry the enrollment-sheet in the class; while lecturing, suddenly I pick up a name randomly and ask a related question. This technique offers several advantages – the classroom becomes a good show (that helps students to take the pressure off), everyone gets involved, and I can gauge the students' understanding. In order to engage students and ensure that they are grasping the covered materials, I have introduced a “learner-centered team-practice” session, where students form groups and try to solve a problem first before I solve it. Sometimes I speak in a syncopated manner in the class to keep my lecture from becoming too monotone. I take a humble and friendly approach to lecturing which I find makes the students feel comfortable asking me questions.

For learning and teaching, I experience that repetition is an important tool. I notice that at the beginning of the class all my favorite teachers review the materials they covered in the previous class. I find this technique elegant, because it allows the teacher a chance to spend two days lecturing about each topic (and gives the students a chance to come up with questions for the second day) while still only spending one day's worth of time on each topic. This technique particularly helped me teaching the Introduction to Microprocessor Systems in a summer semester where I had only ten weeks to teach. At the beginning, I started covering more materials than I used to cover in a fall or spring class. My students requested me to slow down to review what I had covered, but I felt an obligation to teach all of the materials that the course would normally cover in a fall or spring semester. I applied the staggering trick of repetition; the students liked the fact that I was reviewing old materials and I was happy because we were keeping the same rigorous pace as before.

Teaching is an art. Teaching is a quality that should be developed by watching other people's teaching, grasping the effective techniques, and practicing the selected techniques over and over. I notice that the same good technique does not work for all. I believe that the most effective way of communicating information is having students' confidence in the teacher, something that mostly depends on the teacher's knowledge, attitude, and style.

In order to provide real-world experience to my students, I bring industry experts into my classes as guest speakers and take my students to industries for field-trip.

I have a number of popular teaching styles in my collection that I have observed in my favorite teachers teaching and I have found them effective when I teach classes. I am always trying to improve my teaching by learning from other's teaching and incorporating what I find to be effective into my own teaching.

Teaching History

I have over 15 years of experience in professional teaching in Computer Engineering, Computer Science, Information Technology, Database Systems, and General Science (mathematics, physics, and chemistry) at various levels.

As an Assistant Professor at Wichita State University (fall 2010 – spring 2016), I typically teach one undergraduate (UG) and one graduate (GR) courses. I have developed and taught the following courses: High Performance Computing Systems (GR/UG), Multicore Architectures Programming (GR/UG), and Alternative Computing Paradigms (GR). I have significantly improved and taught the following: Introduction to Computer Architecture (UG, classroom and online), Microprocessor Based System Design (UG/GR), and Embedded Systems Programming (GR/UG). I also improved and taught Introduction to Digital Design (UG) and Algorithm Design Methodologies (UG) courses.

In the USA, I got my first teaching job at Florida Atlantic University (FAU) in 1996, where I was a MS student in the Department of Computer Science and Engineering. As a paid Teaching Assistant, I taught Introduction to Microprocessors Lab as my first assignment. I taught two sections, each section had about 35 students. I met with each section twice every week, each class was one hour and 20 minutes long. In every two weeks, students were asked by their course instructor to complete and submit one lab assignment. At the beginning of each class, I gave the students a 30 minutes lecture explaining the assignment (including what are expected to be done and how the assignment should be graded), shared the course instructors' special notes, and helped them by answering their questions. In the following semester, I taught Programming in C (Lecture and Lab) as a full Instructor. Later (as a PhD student), I taught Introduction to Microprocessor Systems (Lecture and Lab), Introduction to Logic Design (Lecture and Lab), FPGA Based System Design (Lecture and Lab), and Foundation of Computer Science (Lecture and Lab) as a full Instructor. As a graduate assistant, I helped the course instructors with several courses including Structured Computer Architecture, Data Structures and Algorithm Analysis, Introduction to Database Structures (Lecture), and VLSI Design. As a PhD student at FAU, I offered a new course on Programming Microcontrollers in C (Lecture and Lab) in my department. I taught how HC11/12 Microcontrollers can be programmed effectively using C (instead of Assembly) language. It was a total success – the students and my department were very pleased with my efforts. I also worked as a volunteer tutor for the minority students at FAU Office of Multicultural Affairs, where I tutored various programming related courses.

I am offering a hybrid (one online session and one classroom session per week) course in spring 2016 semester. I plan to offer online courses in the future to help students who work during the normal business hours. In order to assist students to “think outside the box,” I have been working with professors from other departments to develop interdisciplinary courses.