TEACHING STATEMENT

Mershack Okoe

Teaching Philosophy

My teaching philosophy centers around a strong belief that every student is capable of learning and achieving academic success. I approach computer science teaching with three goals in mind. My first goal is to stimulate the interest and curiosity of students. I believe curiosity is very essential to the learning process and teaching is more effective when students can see the importance and applicability of the concepts they learn. As such, for every new concept I teach, I provide relevant examples of how the concepts are used in technologies that students are familiar with, and how students can apply that knowledge to solve real-life issues.

My second goal is to develop the critical thinking skills of my students. I make students active participants of the learning process and provide them opportunities to analyze the strengths and weaknesses of scientific information. I use homework and group discussions to challenge students to creatively apply course content to solve real-life problems using their own examples. I have found that this approach stimulate intellectual curiosity and helps my students internalize concepts with metaphors they are familiar with.

My third goal is to cultivate the spirit of teamwork among students. Teamwork is essential, especially in the computer science discipline. For example when I teach programming related courses, I find opportunities to pair students on projects and homeworks. I have found that students that work in pairs are more engaged in class, ask useful questions and perform better.

Teaching Experience

I have been continuously teaching and interacting with undergraduate students for the past 8 years. I was a teaching assistant for one year at Kwame Nkrumah University of Science and Technology (KNUST), a lecturer for two years at Garden City University College (GCUC), a graduate teaching assistant for 5 years at Florida International University (FIU), and currently an adjunct instructor at Miami Dade College (MDC).

At KNUST, I assisted professors to teach and grade four courses (*Programming in Java*, *Programming in Visual Basic.Net*, *Software Engineering*, and *Databases*), and helped mentor the final projects of senior students. I gained significant teaching experience as a lecturer at GCUC, where I developed and taught four courses (*Programming in Java*, *Programming in C++*, *Data Structures*, and *Human Computer Interaction*). More importantly, I gained experience in developing curriculums, mentoring undergraduate students and providing academic advisement to students.

At FIU, I taught *Programming I* and *Programming in Java* for 10 semesters. I helped instruct and grade the class, and was in charge of managing lab sessions. I held office hours and tutorial sessions, and mentored students. I also served as a teaching assistant for *Computer Data Analysis* for 4 semesters where I helped instruct non computer science students introduction to Microsoft Excel and Microsoft Word. At MDC, I currently teach *Programming in C* and *Databases*, and provide mentoring and career advisement to students.

Research Mentoring

I had several opportunities to mentor final year undergraduate research projects when I was lecturer at GCUC. Additionally, during my PhD, I had the opportunity to mentor two undergraduate students and

one masters student who were participating in research in our research group. I met these students twice a week to help them understand the research process, guide their research to avoid pitfalls and guide them to present their results formally. Through this mentoring experiences, I learned to appreciate the uniqueness of each student and how to motivate students to achieve better success based on their unique strengths and interests.

Teaching Interest

At the undergraduate level, I am interested in teaching courses related to my research area such as Data Visualization, Human Computer Interaction, and Computer Graphics. I am also interested in teaching core courses in programming and data structures which I have previous teaching experience. At the graduate level, I am interested in developing and teaching courses on current research topics in Data Visualization, Visual Analytics, and Human Computer Interaction.