Teaching Statement
Idris S. El-Feghi

Since I first began to tutor in high school, teaching has been an important part of my life. I would be delighted to have the opportunity to teach and mentor students at undergraduate and graduate level.

I have extensive teaching experience in a range of environment. While I was at the university of Windosr, I worked as a graduate assistant and sessional instructor in the Electrical & Computer Engineering Department. I have had the opportunity to develop a clear vision in regard to the needs of students at both the undergraduate and graduate levels. In addition to my academic background, my extensive work experience in industry has given me a clear understanding of the demands and expectations industry requires from engineering graduates. Both my studies and experience in industry have given me the opportunity to envision what skills and experience one requires for effective teaching to help develop students as professionals capable of pursuing careers in industry and to help further their studies at higher academic levels.

I believe an essential part of every lecture is to deliver adequate and precise information to students so that it enables the students to tackle different problems and further develop the proper problem solving techniques. This would require the students to grasp the concepts being given in the lectures. I feel for this to happen, the lecturer has to organize and prepare each lecture ahead of time and deliver the material with enthusiasm and knowledge of the topic. In addition to lectures, laboratory assignments, problem solving tutorials, and out of class assistance, play an important role in enhancing the knowledge of the students and helping them develop an interest in their field of studies. Given the fact that many employers today expect their employees to carry out projects not only independently, but also as a member of a team, I believe it is vital that projects are implemented within the course work at both the undergraduate and graduate levels. These will give the students the opportunity to develop the skills in solving new problems using the tools made available to them, as well as developing new methods and techniques in exploring and solving more challenging problems.

I am also interested in bringing new approaches to the teaching of existing courses. My goal in teaching will be to empower students to become leaders within their chosen field. I will try to emphasize critical thinking, creativity, collaboration and communication skills in addition to the problem-solving skills that will make them experts in a subject. Finally, because student/professor relationships are extremely important to student development, I would like to create opportunities for undergraduates to participate in research as early as the second year.

As a professor, I always classify my research and teaching as the software side of engineering. I wish to teach special topics of electrical and computer engineering from software engineering approach. This approach incorporates both a solid theoretical foundation, with hands-on experience in leading students into thinking about the problem, and formulating hypothesis, before engaging in their solution.

The proper teaching of special topics in engineering such as computer vision, machine learning, pattern recognition cannot be limited to the presentation of techniques and notations. Instead, it must focus on the understanding of its essential difficulties, and the principles used in

its analysis, design and implementation. This can only be grasped by the combination of theory and software hands-on experiences that allow the students to understand the problem and apply the software engineering principles.

I am primarily interested in teaching Electrical, Computer and Software Engineering related courses at the undergraduate or graduate level. My preference includes teaching (but not limited to) the following courses: Computer Programming, Electric Circuits, Electronics, Engineering Electromagnetic, Applied Mathematical and Numerical Methods for Engineering, Digital Logic systems, Digital Signal Processing, Digital Image Processing, Artificial Intelligence, Software Engineering and Design, Object-Oriented Design & Analysis and Computer Graphics.