**Program: Communication System and Signal Processing**

Among over a million participants in the annual national university entrance examination in China, few students in the liberal arts would succeed in getting admitted into science and engineering majors. It is even a greater accomplishment for such a student to enter the country’s top-ranking university to study the state-designated Level-I Intensive Subject. Motivated by my strong love for electrical engineering and backed up by a level-headed recognition of my academic potential, I faced the challenge and succeeded. With excellent performance in the entrance examination, I was accepted by Institute of XX where I chose to specialize in Information Engineering at the Department of Electronic Engineering.

While feeling pleasantly surprised by my success, my former teachers and my family members expressed their deep concern that my way of thinking through many years of training in liberal arts would hamper my undergraduate academic performance in engineering disciplines. What happened proved that they were not totally unjustified in their misgivings. In the first semester, I did experience some sort of disorientation and maladaptation in a competitive environment. But with due adjustments in my state of mind and learning strategies, my background in liberal arts proved a blessing in disguise; instead of constraining my scholastic development, it helped me win competitive edge over my classmates and highlight my unique advantages.

I started practicing the violin since six and for ten years I won many awards and honors. My long-time musical training has endowed me with an intuitive inspiration and this makes it possible for me to achieve unexpected results in solving practical problems. For instance, in doing a course project on Digital Clock，I drew inspiration from the synchronic theory of the digital network and constructed on the microcomputer a synchronized network for master-slave communication. By means of random digits, I simulated the clock sliding in the nodal point system at different levels of communication. Obtaining clock signal from the data code flow of the timing chain, I realized the simple model of the nodal point clock synchronization in the digital network, which was rated by my advisor as the “most original design of the recent years.”

Encouraged by this initial success, I attempted to play a more active role in extracurricular activities in arts and sports. I have acted as the master of our departmental chorus and the editor-in-chief of the departmental journalism society. In terms of sports, I have been a member of our Institute’s mountaineering group and the key player of the volleyball team and won second prize in the league match. My comprehensive involvements in extracurricular activities have improved my team spirit and leadership, and produced a positive effect on my way of analyzing and solving problems. Compared with average students, I tend to apply an integral or a total approach in dealing with specific problems and to achieve systematic optimization.

In the experiment on traffic light circuits, I did not allow myself to be confined to the simple requirements of a functioning light system. In view of the latest theoretical developments in traffic control, I expanded the scope of my experiment. Based on the statistics concerning the fluctuations of the traffic flow during different internals of the day, I designed a program to perform simulation and realized a fixed mathematical model and a simple model of traffic light control under the pre-installed plan. Based on this, I studied the advanced adaptive system and by integrating the collected basic traffic information, Internet communication, and the technical concepts of simple fuzz control, I carried out theoretical design of the intelligent traffic control system and endeavored to realize the “green wave” effect under the road network environment and to achieve the real-time optimized maneuver in the case of traffic congestion. Although the model was only partially completed due to the technical complexity and heavy workload in fuzz control and expert system, my design conceptualization still won highly positive comments from Prof. XXX and my design work is put on permanent display in the lab as a sample for future students.

My success in experimental courses can be attributed not only to my occasional sparks of inspiration but also to my solid and dexterous experimental skills. I am a frequenter of the Institute’s central laboratory and I would stay there so late into the night or arrive so early in the morning that the doorkeeper simply gave me the key to the door so that I could visit the lab as I pleased. Through extensive practices, I have mastered the skills to operate all the lab’s electronic devices and instruments. This has directly led to my obtaining straight A’s in all the courses of circuit experiments and course projects in electronics, which is absolutely rare in the entire department.

Although I have not completed all the coursework for my undergraduate program, I have already laid a firm academic foundation by doing a satisfactory job in three categories—1. computer application, computer network, and advanced programming based on C++ and Data Structure;  2. circuit analysis, microelectronic devices and circuitry, digital circuits, and electromagnetic fields;  3. signal system, random signal analysis, and principles of communication. My final year’s coursework will cover wideband wireless digital communication, random signal processing and real-time signal processing. This makes me a worthy candidate for your program.

With a GPA of 3.3 and ranking within the top 5 among a total of 60 students, I have been awarded second-class and third-class scholarships. My regular reading of recent technical journals has kept me well-informed of the most updated developments in modern communication technology. I have especially closely followed the developments in CDMA and GSM, together with their central standards and existing technology. My research indicates that both theoretically and technically, China is way behind advanced international levels. Many protocol standards and patented technology are controlled by the U.S., major European countries, Japan and South Korea. Therefore it is necessary for an aspiring student to learn the most advanced theories and technology from one of those countries in order to facilitate his or her career development in the future.

The Department of Electrical & Electronic Engineering of the XX University, with a strong research profile with over 120 academic staff and researchers, is legitimately a leading department in the UK for studying electronics. Its many cooperative programs with the industrial and governmental organizations permit students to acquire important research experiences. The Department enjoys an indisputable position in communication system technology and signal processing and has made widely recognized achievements in the development of 2G and 3G mobile systems. It is my belief that your highly-respected program is most appropriate for me.

In my tentative study plan, I would like to concentrate on Mobile Communication Systems and Networks. Specifically, I am interested in Advanced mobile radio techniques, Advanced Mobile Networks, and Wideband for Mobile Communications. My intended courses encompass communication systems, mobile communication systems, optical communication systems, network and protocols, digital signal processing, digital filter & spectral analysis, and coding theory. I am convinced that this comprehensive curriculum is sufficient to developing me into a well-trained specialist in communication systems and signal processing, with cutting-edge expertise, who will play an important role in tomorrow’s communication development in my country.