Academic Enrichment Courses:

- CH 320M, Organic Chemistry I
- CH 320N, Organic Chemistry II
- BCH 369, Fundamentals of Biochemistry
- BIO 325, Genetics
- CC 306M, Introduction to Medical and Scientific Terminology

My interests lie in the application of electrical engineering in the medical field, especially with what is to be seen in the upcoming years. The potential of biotechnology in orthopedics especially piques my interest. The ability to develop more sensible and accurate prosthetic is currently the aim of many doctors; a program that can interpret a signal transmitted from the brain and convey the intended action through the prosthetic is precisely the type of problem we are given the skills to solve in communication networks. I am also very interested in using signals and systems to interpret brain waves more thoroughly than an EMG machine for patients in comas or suffering from paralysis; this could fundamentally change the way doctors interact and treat patients with these conditions. I believe my primary core, communication networks, paired with medicine would allow me to understand and solve the technical problems facing medical professionals.

I have selected 15 hours - all but one course is an upper division science - to satisfy the ECE department's requirements and to support my career goals. My primary focus with these 15 hours is to satisfy the required prerequisites medical schools ask for before matriculation.

Organic Chemistry I and II, Fundamentals of Biochemistry, and Genetics are all courses that the Association of American Medical Colleges requires students to take before acceptance into medical school. I am taking these four classes to satisfy the prerequisites they have laid out so that I may apply to medical school. Moreover, these four classes are absolutely vital to my understanding of more complicated anatomy, immunology, and physiology which is the basis of medical school. Understanding these core subjects will allow me to better understand how the body works and to work to develop systems which can understand every step that occurs between the brain transmitting a signal and a muscle in a human's arm or leg responding.

The only class listed above that is not required by the Association of American Medical Colleges is CC 306M Introduction to Medical and Scientific Terminology. I am interested in this course because it introduces students to much of the jargon used in everyday hospitals and medical environments, including their Latin and Greek roots. Understanding the origin of such terminology will help in my understanding of why certain illnesses and specialties are named what they are. With the substantial amount to know in medicine, I believe understanding where words stem from is a pivotal skill to have.

In summation, I am using academic enrichment to fulfill the requirements laid out by the Association of American Medical Colleges as well as strengthen my understanding of everyday jargon used in the medical field. The classes I have proposed taking are also imperative for my development because they provide me with a strong foundation of basic concepts that I will need to apply to more complex processes found in the human body. I want to combine my knowledge of engineering with the knowledge I will gain in my science classes to make me a more competent doctor, engineer and researcher in the future.