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i-Lifelong Learning Essay

The curricula of engineering programs are among the most demanding and rigorous of all undergraduate majors. It is easy to become immersed in the abundance of material covered and focus on the specifics of problem sets and lab reports rather than the strategies and techniques needed to complete them. The importance of developing and refining life-long learning skills can inadvertently be overlooked, which is precisely why the ABET outcomes are in place.

Throughout my time at Ohio State, I have developed a variety of strategies for locating and evaluating sources of both technical and professional knowledge. First and foremost, I have learned to recognize the value of the information within the textbooks and handbooks required (or even just recommended) for each of my courses. Indexes, Abstracts, Codes, and Standards are typically included within these books and can automatically be regarded as credible sources; becoming proficient in navigating their contents has proven to be worthwhile countless times in the past. Another invaluable method for locating a wealth of informative and reliable resources is via the use of the Ohio State University Libraries' Catalog online as well as WorldCat@OSU, which provides access to seven different databases worldwide. Parameters can be specified by way of an Advanced Search, such as the type or format of material (books, peer-reviewed articles, etc.) or the span of years during which the material was published. In addition to the online OSU libraries system, a plethora of technical and professional knowledge can be found elsewhere on the Internet. One practice I have acquired in order to maximize the potential for finding trustworthy sources is to use Google Scholar rather than the traditional Google search engine. Aside from the many approaches I've taken in finding electronic and print sources of technical and professional knowledge, I have also gone directly to the source. Contacting accredited agencies, professional organizations, and legitimate corporations personally—via email, telephone,

postal mail, or even in person—has been one of the most useful tactics I've used to obtain professional knowledge.

On multiple occasions, I have integrated and applied new knowledge to both my academic and professional work. Many of these instances are in regards to the use of computer programs, specifically Microsoft Excel and MATLAB. Adequate proficiency in both programs has been essential to my success in many engineering courses, and both require continual practice and incorporation of newly learned techniques and functions. When I was employed as a Student Assistant to the Heart Failure Research Team at the OSU Wexner Medical Center's Davis Heart and Lung Research Institute, I was assigned the task of creating and managing a system for patient screening information via Microsoft Excel. At the time, I was only just beginning my second year at Ohio State, and the scope of my experience with Excel was limited to my first-year introductory engineering courses. As such, this extensive assignment presented an opportunity to develop and strengthen my Excel skills; largely via independent research and practice, I acquired a vast amount of new knowledge concerning the program's capabilities and applications. Unbeknownst to me at the time, this information proved to be extremely valuable in terms of my academic coursework; I was able to incorporate and apply many of the skills I refined in my professional work directly to several academic assignments.

My ultimate career goals are rather unrestricted. I am particularly interested in combining the engineering and design concepts I've mastered with my extensive background in biological sciences to innovations in medicine; my real passion lies in improving human health. Upon graduation, I plan to explore the workforce and ideally secure a position within the field of biomedical engineering. From there, I will either follow a path towards becoming a professional engineer, or apply to medical school and pursue a career specifically in medicine. Regardless of which direction I take, an ability to employ lifelong learning will be essential to my success. Medicine and Engineering alike are two of the most rapidly evolving fields in existence, with advances being made, innovations being discovered, and new

techniques being developed daily. To be successful in either field, it will be imperative to stay up to date with the latest research and continuously recognize and adopt the most novel practices available.

After graduating with my B.S. in Food, Agricultural, and Biological Engineering from Ohio State, there are various stages of formal continuing education that I will likely seek out. If I choose to pursue a career in medicine, the continuation of my education will certainly begin with preparing for and taking the MCAT, followed by applying to and attending medical school. After that I would complete a residency program and then obtain licensure via either the USMLE (U.S. Medical Licensing Examination) or the COMLEX (Comprehensive Osteopathic Medical Licensing Examination) depending on whether I attended an M.D. or D.O. medical school, respectively. If I choose to pursue a career in biological or biomedical engineering, the continuation of my education would likely begin with preparing for and taking the Fundamentals of Engineering (FE) examination. Next, I would seek a position that would allow me to gain the experience necessary to be eligible to become a professional engineer; finally, I would take the Principles and Practice of Engineering (PE) examination.

Regardless of which path I choose, in addition to the formal continuing education, I will also seek out and participate in a variety of informal learning experiences. In both instances, I will develop a habit of reading technical journals, books, and articles regarding the latest innovations in the field whenever I have the time. I will also take advantage of any online training that may be available. Furthermore, I plan to explore the various professional organizations available for whichever career path I choose, and take advantage of any opportunities I may have to attend and partake in professional conferences.