Kathryn Atherton

ABE 290

Homework #1

1. An Agricultural and Biological Engineer has the responsibility of using fundamental scientific knowledge and applying it to research real-world solutions while making each solution practical, affordable, and efficient. The five roles of Agricultural and Biological Engineers are found in water, energy, food, environment, and health. The first role is to either find a new process or make the current process more efficient to produce clean water and make it more widely available to people around the world. The next role is to find cheap, efficient, clean energy replacements for fossil fuels, such as solar energy, that can be implemented all over the world. Another role of Agricultural and Biological Engineers is to develop new machinery and practices to make the production of food more efficient and prevent the deterioration of nutrients in the soil so as to make farming more sustainable. The next role is to protect the environment and natural resources, which ties into the previous three roles, and also includes managing the Nitrogen cycle to fix and prevent human disruption of the natural cycle. Finally, Agricultural and Biological Engineers play a major role in finding new medical practices, creating new medical instruments, and engineering better medicines to make and keep humanity healthier. In a nutshell, Agricultural and Biological Engineers have the responsibility of fixing the mistakes of humanity’s past in order to save Earth’s and humanity’s future, and doing so in a practical, efficient, and ethical manner. The specific roles of engineers change as science advances and humanity evolves, but the goal will always stay the same: make Earth a better place to live, not only for humanity, but for the rest of the living things on this planet as well.
2. My life plan is to graduate from Purdue Biological Engineering with honors and go on to receive my PhD, most likely at Purdue since I love it here so much, but obviously that decision is a long way off. After I complete my education, my dream is to work at a children’s research hospital, doing research in genetic therapy and/or cancer treatments. I aspire to find a cure for some sort of disease or disorder that a person has little to no power over whether or not they receive it, and that subsequently affects their entire lives. I also love that children’s hospitals have such dedicated and amazing faculty and staff who work to make an otherwise depressing environment as happy and fun as possible for the children. They dress up, play games, become good friends with the children, and make the usually drab environment brighter with color and light, and they do it for the sake of the children. I think that is so fantastic to be so devoted to a cause, and I hope to be as passionate about my job and have such a profound purpose motivating me in my work every day. I decided upon this plan in high school, after taking a biotechnology class and learning about genetic therapy and becoming extremely interested in the progress made by researchers, as well as its possible applications. I also worked with students with special abilities in their gym class, which I absolutely loved, as each student was so incredibly kind and happy, which always put me in a better mood for the rest of the day. I would love to be able to work with and for people like that for the rest of my life.