

Biomedical Engineering

By: Rohan
Brampton, Ontario
Team 1140R



Introduction

A biomedical engineer would be my ideal career choice since it challenges me to use creativity in a variety of settings, a skill I'm learning quickly because I work in teams with peers all the time. I have a huge interest in helping people and constructing innovative machines. I joined vex IQ robotics in grade 3 and am currently in grade 8, and I have qualified for the world championship twice and won the divisional champion award. I have always had a strong interest in medical and the technology industry.



What is Biomedical Engineering?

The study of designing systems, tools, and gadgets with a medical purpose is known as biomedical technology. Working closely with medical professionals, such as doctors, nurses, technicians, healers, and investigators, is also necessary in order to define, recognize, and meet their needs for institutions, tools, and gadgets. The technique of maintaining, reducing, and removing sources of contamination that affect air, food, and the environment is known as environmental technology.

Additionally, it necessitates identifying contamination sources, measuring contamination levels, cleaning up and restoring polluted locations, and ensuring that local, state, and federal regulations are followed. For someone with a keen interest in both the area and the life sciences, biomedical technology may be the best career path.



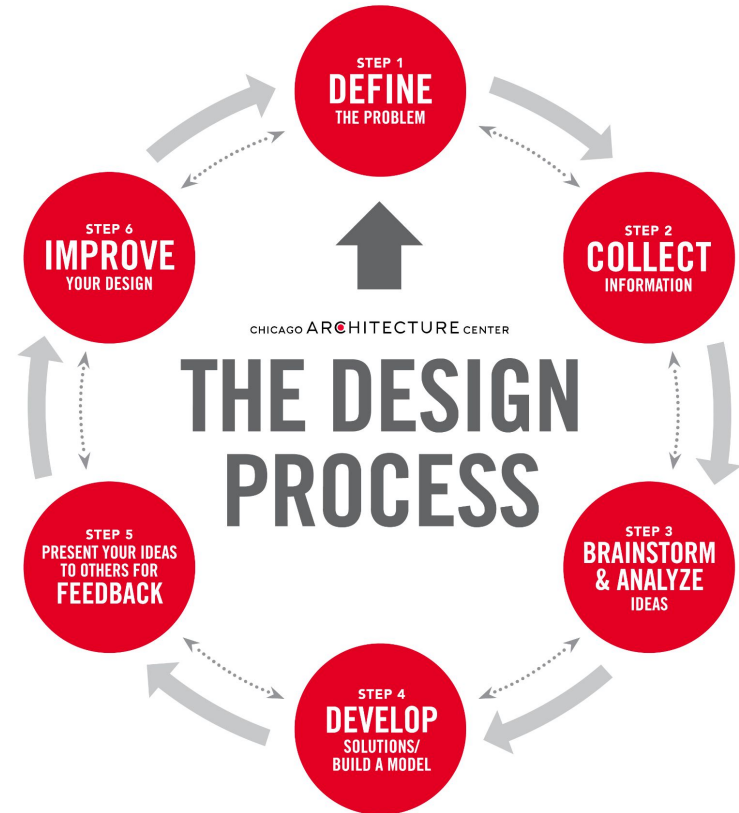
Why I am choosing this career path

The traditional link between technology and the medical area is getting smaller as technology continues to overtake biomedical research and attention. The medical instrumentation industry is making medical training simpler for doctors, more effective for patients, and less expensive for the overall healthcare system as medical devices and the calculators that provide them are increasingly smaller, quicker, and smarter. Business analysts claim that the "converging" of consumer-focused engineering with the once-obscure field of device innovation is one significant change. Increased life expectancy would result in significant gains in the frequency of age-related conditions, such as cancer, dementia, stroke, respiratory problems, and cardiovascular disease, as noted in a recent blog post by Jim Pomager, executive editor of Med Devices online. He said that radio technologies that can identify and process the earliest symptoms of illness can serve as the first line of defence against these major causes of death, while equipment that can help patients better manage their own prolonged conditions can significantly improve their quality of life while lowering the need for more complex interventions. Wearable or discrete displays that are user-friendly and have a variety of sensors and connectivity devices. In the future, I hope to pursue my passion while also assisting others.



Design Process

Vex IQ, I believe, has a design process that is very similar to that of a biomedical engineering job. In my Vex IQ experience, we had to go through a lot of trial and error to get a perfect robot. It is difficult to create an all-around robot in Vex IQ, and we must tailor our robot to specific competitions and games, but we can still draw inspiration from previous designs and incorporate them into our current designs. For example, for rise above, I used the same claw design from squared away. Biomedical engineers must create different-shaped prosthetics based on the patients they are treating. Many biomedical engineers use a trial and error method, which encourages them not to give up. In Vex IQ, common solutions are solved by debugging and paying attention to them the first time they occur.





Conclusion

As I learn more about Vex IQ, I realize how many opportunities it provides for young students aspiring to a career in engineering. I discovered that vex IQ teaches the fundamentals of the majority of engineering jobs.



Citations

Pomager, J. (n.d.). Articles by Jim Pomager. Retrieved January 12, 2023, from <https://www.meddeviceonline.com/author/jim-pomager>

Moore, T. (n.d.). *5 Steps to Become a Prosthetic Engineer*. Guidetoengineering. Guide to engineering. Retrieved from https://www.google.com/url?sa=i&url=https%3A%2F%2Fguidetoengineering.com%2F5-steps-to-become-a-prosthetic-engineer%2F&psig=AOvVaw2SrrFrLWfa29Xae8FV4Sai&ust=1673664455533000&source=images&cd=vfe&ved=0CBAQjRxqFwoTCNDnw4zEw_wCFQAAAAAdAAAAABAE.

Smashicons. (n.d.). *Bioengineering - Free education icons*. Flaticon. Retrieved from https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.flaticon.com%2Ffree-icon%2Fbioengineering_1605666&psig=AOvVaw1jMGQuL2hz4GzG_71B57k7&ust=1673664626564000&source=images&cd=vfe&ved=0CBAQjRxqFwoTCOCBht7Ew_wCFQAAAAAdAAAAABAE.

DiscoverDesign. (n.d.). Monday.com. Retrieved from https://www.google.com/url?sa=i&url=https%3A%2F%2Fdiscoverdesign.org%2Fhandbook&psig=AOvVaw1TrA9_aNZ4xL5n0gjeC0h6&ust=1673664834635000&source=images&cd=vfe&ved=0CBAQjRxqFwoTCIC9ocHFw_wCFQAAAAAdAAAAABAh.

Expert, Z. (2022, February 9). *Is biomedical engineering a good career?* Zippia. Retrieved January 12, 2023, from <https://www.zippia.com/answers/is-biomedical-engineering-a-good-career/>

Wikimedia Foundation. (2022, December 13). *Biomedical engineering*. Wikipedia. Retrieved January 12, 2023, from https://en.wikipedia.org/wiki/Biomedical_engineering



Thank You For
Reading!