

John Vang

Mrs. Silva

English 12 H

3 March 2023

### Electrical engineering

I became interested in electrical engineering when I decided I wanted to do something with math and dealing with something I like. So I decided to work in the field dealing with electronics. I thought it would be a good career because the world runs on electricity whether that is a solar panel or security camera. I think electrical engineering is a great career to get into because the world will be running on electricity, so their job will be needed now and in the future.

Now what is an electrical engineer? An electrical engineer is someone who is responsible for developing electrical devices and testing them for safety and efficiency. This can include “design, develop, test, and supervise the manufacture of electrical equipment, such as electric motors, radar and navigation systems, communications systems, or power generation equipment” (Bureau of Labor Statistics). “Additionally, engineers may conduct or write the specifications for destructive or nondestructive testing of the performance, reliability and long-term durability of devices and components” (Lucas). They are able to look over the building process with software to make diagrams and oversee the installation process of their design. Electrical engineering is a job where you will be mainly working on projects. Not only will you be working on your

projects, you may need to work with your clients or customers to determine their requisite.

Additionally, as an electrical engineer they work full time. Electrical engineers work in many different ways like engineering services, research, development, and manufacturing. All the various ways of working will generally be indoor. Indoor areas like “laboratories and research facilities, factories, mines, industrial and production plants, power stations, and office settings” (Careebuilder). The engineers “may visit sites to observe a problem or a piece of complex equipment” (Bureau of Labor Statistics). An electrical engineer will have to work closely with clients and partners to keep work organized and to know what the client wants.

Apart from knowing your work environment, some important qualities to have as an electrical engineer are creativity, cooperation, leadership, persistence, and more. Creativity is an important quality because the work will need new ideas to solve problems and develop new ideas. Cooperation is another important quality to have because working in the industry will require you to work with people out of your industry and other people to solve problems or develop new ideas for work. Leadership will be needed to take the lead in some situations and offer opinions and direction. Persistence will also be a good quality to have because when you face problems in the industry you will need to have to keep on trying to keep finding solutions. The ability to plan and organize will “help electrical engineers plan how to allocate resources, develop achievable budgets, and manage their time and the time of people involved in their projects” (CareerBuilder). Being an electrical engineer will need you to be able to have an eye for detail because small mistakes can cause big problems. “Electrical and electronics engineers design and develop complex electrical systems and

electronic components and products” (Bureau of Labor Statistics). With these complex projects their work must be on track and focus on their skill to not make any mistakes. Concentration is needed to keep all these tasks in check.

Further, The education requirement for an electrical engineer is at least a bachelor degree. According to Sokanu, 71% of electrical engineers have a bachelor's degree, with the second most common being a master's degree at 24%. Some experience will be valued like internships or participation in engineering programs. For example, taking engineering at CART is something that is worth stating in a resume. Participating in a program dealing with making or engineering like a robotics club can help with getting a job in this field. “Electrical engineering students are strongly advised to undertake an internship to make connections and refine their practical skills before entering the workforce” (CareerBuilder). Having a Professional Engineering license will also help you with more open opportunities to take.

Moreover, according to the Bureau of Labor Statistics, the median annual wage for electrical engineers was 100,420 in May 2021. The Bureau of Labor Statistics also states “The lowest 10 percent earned less than \$62,360, and the highest 10 percent earned more than \$162,930.” “Many experienced engineers with advanced degrees are promoted to management positions or start their own businesses where they can earn even more” (Lucas). Depending on the type of electrical engineer you are will determine your pay. Also electrical engineers that have more experience will be paid more. Your salary will also depend on how long you have been working from starting, junior, mid level, senior, and top level.

Additionally, electrical engineering overall does not have a large increase in employment. The occupation will probably grow about 3% every year. Most of these job openings are to replace people who transfer to different occupations or retire. Employment will increase because as the future comes more electricity and electronics will be needed, and so will electrical engineers. “Engineers are expected to have key roles in developing sophisticated consumer electronics, solar arrays, semiconductors, and communications technologies” (Bureau of Labor Statistics). “Motivated electrical engineers have various opportunities to advance within their field” (Careerbuilder). Those fields can be some dealing with management roles. Some more flexible areas like consultants or contractors. Some do decide to go more towards the academic area to teach in their area of expertise.

Furthermore, A great educational institution to go to is Massachusetts institute of technology also known as MIT. Massachusetts Institute of technology is a great place to go for this occupation because of their great programs that focus on electrical engineering. “At MIT, pushing the boundaries of knowledge and possibility is our joyful obsession, and we celebrate fundamental discoveries and practical applications alike. As educators, we also value research as a potent form of learning by doing. Through MIT’s Undergraduate Research Opportunities Program (UROP), more than 85% of undergraduates enrich their education through engaging in frontline, faculty-led research” (Massachusetts Institute of Technology). Another great educational institution to go to is University of California Berkeley also called Berkeley, is one of the top educational institutions to go to for electrical engineering. University of California - Berkeley is a great place to choose because of its great programs that focus on teamwork and “with strong interactions that extend into biological sciences, mechanical and civil engineering,

physical sciences, chemistry, mathematics and operations research” (University of California Berkeley).

In conclusion, I think electrical is a great career and is something I’m interested in. The job environment is something I’m looking for and working around things that I am interested in will help me stay with the career I choose. The knowledge I get from this career will help me pursue and obtain other jobs, knowing that I will be able to be flexible with this path I chose. I will pursue this career future because I think I would enjoy the environment and the things I will work on and knowledge I collect. I think the career I choose will fit my lifestyle and cover all my needs. With that I will definitely be pursuing this career in the future.

Works Cited

Bureau of Labor Statistics., *United States Dept. of Labor*, 8 Sep. 2022,

[www.bls.gov/ooh/architecture-and-engineering/electrical-and-electronics-engineers.htm](http://www.bls.gov/ooh/architecture-and-engineering/electrical-and-electronics-engineers.htm).

Accessed 6 Mar. 2023

CareerBuilder., “*Best career advice for aspiring electrical engineers*”, 29 Sep. 2022,

[www.careerbuilder.com/advice/blog/career-advice-for-aspiring-electrical-engineers](http://www.careerbuilder.com/advice/blog/career-advice-for-aspiring-electrical-engineers).

Accessed 6 Mar. 2023

Sokanu., *CareerExplorer*, 2012.

[www.careerexplorer.com/careers/electrical-engineer/](http://www.careerexplorer.com/careers/electrical-engineer/). Accessed 6 Mar. 2023

University of California Berkeley, “*Electrical Engineering & Computer Sciences*”,

[engineering.berkeley.edu/](http://engineering.berkeley.edu/). Accessed 6 Mar. 2023

Lucas, Jim. “*What Is Electrical Engineering?*”, 26 Aug 2014

[www.livescience.com/47571-electrical-engineering.html](http://www.livescience.com/47571-electrical-engineering.html). Accessed 6 Mar. 2023

Massachusetts Institute of Technology, *Research*,

<https://www.mit.edu/research/>, Accessed 6 Mar. 2023