Exploring stem careers through nasa

Abstract

The career of astronautical engineering is a sub-branch of aerospace engineering. Astronautical engineers focus on spacecrafts and space technologies on a daily basis and perform tests to improve their prototypes. They build, invent and design ground-breaking technology for the future of space exploration. Their education varies but always has at least a bachelor’s degree in a field like aerospace. Also, many students take internships to experience opportunities college lacks to provide for rising astronautical engineers. Presented daily are interesting projects and challenges, which keeps the job intellectually stimulating and meaningful. Finally, astronautical engineers usually work in teams so they can help one another through projects of all types. Overall, astronautical engineers are very smart and knowledge hungry scientists who wish to help humanity further their quest to figure out their place in their unique universe.

Exploring STEM Careers Through NASA-

Astronautical Engineering

“ That’s one small step for a man, one giant leap for mankind,” Neil Armstrong. When Armstrong took his first steps on the moon, thousands of people’s achievements and the hard work was shown to the world. All of them had worked together to meet one major goal, to send a man to the moon. One of the groups of people were astronautical engineers. Astronautical engineering is a career in which engineers work to design, invent, build, and even test spacecrafts of different variations. This career demonstrates in many ways its role and contributions to the aerospace

industry. It also needs a strong college education and, thankfully, there many internships available that help with the process. Astronautical engineering presents different, interesting, and challenging situations that other careers can’t offer while also being very teamwork oriented.

Astronautical engineers have the job of creating, designing, innovating, fixing and changing spacecrafts. Their role in the aerospace industry is significant because without them technologies like shuttles, satellites, space capsules, space launch vehicles and more would cease to exist. They also collaborate and work frequently with other branches and fields of science as stated by the reading assignment. They must be able to speak well, divide the work into manageable tasks, and work towards a common goal (“ Career Map: Aerospace Engineer”, 2017). Many of these fields rely on astronautical engineers to function smoothly and continue with more advanced work. An astronautical engineers’ role is to help other branches of the aerospace industry while also making their own progress in their individual field.

The contributions and inputs to the aerospace industry from astronautical engineers are significant. Astronautical engineers give their expertise and time into figuring out the improved technologies of the future. By making new technologies like planetary probes, rovers and rockets, they contribute to the effort of finding more knowledge about our planet, space, and even other planets in the universe. Their inventions can also contribute to other needs of the aerospace industry as stated in the reading assignment. For example, some newly designed rocket materials can be repurposed to be used in a different aviation project. Astronautical engineering work is versatile and able to help many people in the aerospace industry as a whole.

When having a job as taxing as an astronautical engineer, it is expected to have a high education. This career demands good math skills and science skills. To gain these skills, a college study of four to seven years after high school is needed for a base understanding. A bachelor’s degree in engineering is required for almost all entry-level aerospace engineering jobs (“ Aerospace Engineer | Science & Engineering Career”, 2018). This includes astronautical engineers. Some students striving to be an astronautical engineer also participate in graduate programs, get their associate of science degree, and some even get their masters and doctoral degrees. The master’s degree adds two years of college study, and the doctoral degree adds about four years of study as stated by the reading assignment. While the path to being an astronautical engineer seems long, it is important to remember that college teaches the necessary skills astronautical engineers will use in their daily life on the job.

Internships for astronautical engineering are common and beneficial. The majority of opportunities are available with manufacturers of spacecraft, space agencies and executive agencies that focus on scientific research and engineering projects. (“ All About Careers Ltd”, 2017). Internships provide a way for students looking to be astronautical engineers to get hands-on experience in the field. While college lacks in this sense, internships can give real-life experiences and bring forth situations in a work environment to learn from. Internships also help give the student a sense of what it’s like to work on the job and gives them an opportunity to shadow a professional already experienced in the field. Internships also give other opportunities to rising astronautical engineers like connections to companies they may apply

to work for in the future. A good example of this is the countless internships NASA provides in the reading assignment for undergraduate students during the spring, summer, and fall.

Astronautical engineering is a unique job that allows people to work toward something greater than themselves. Some interesting things about the job are that every day the worker can help make unique pieces of technology and work on various projects that all have an overall greater goal. It is also interesting that astronautical engineers get to continue to learn and expand their knowledge of science and math during their career life, as described by the reading assignment. Continuing to learn and expand as a person is just as important as helping the human race expand their knowledge of space and the unknown. Astronautical engineering provides opportunities to achieve both. Some challenges astronautical engineers face on a daily basis though are roadblocks in ideas and problems in construction. These challenges can be overcome through problem-solving and group efforts.

Teamwork is heavily present in the astronautical engineering field. Engineer teams work towards achieving a common goal together, as stated by the reading assignment. By being in a group, they can collaborate and help each other overcome obstacles. Teamwork is used to share more ideas, split up work, and give collective efforts in to complete a project faster and more efficiently. This allows for more to be achieved in a shorter time frame and more likely to have scientific breakthroughs faster. It is important for astronautical engineers to be able to communicate their ideas to the group, so they can benefit everyone.

Astronautical engineering is a small piece of the aerospace industry, but it plays a huge role in it while also providing various valuable contributions. The education needed is high and meticulous to get but is worth it to get the right knowledge along with internships to get hands-on experience. There are many interesting things about an astronautical engineering career that are waiting to be discovered and explored. There are also many challenges that are needed to be overcome, but with the help of others demonstrating a sense of teamwork, these obstacles are only minor inconveniences. Astronautical engineering is a noble career for the curious, creative, and scientifically driven men and women of the world that are making a difference in exploration and innovation every day.

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