A Journey into...

AEROSPACE ENGINEERING

2252W

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ABOUT AEROSPACE ENGINEERING...

What is space? Why does it matter? How do we all come to be as we are? Just a few questions that force you to think about the world that surrounds you. Aerospace includes everything about development in technologies, solving existing problems using trial and error, and problems relating to atmospheric flight.

We chose this career because we strive for answers to these growing questions. Also, as a team and as people, we wanted to have a better understanding of aerospace engineering as it relates greatly to robotics.

AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

AIAA

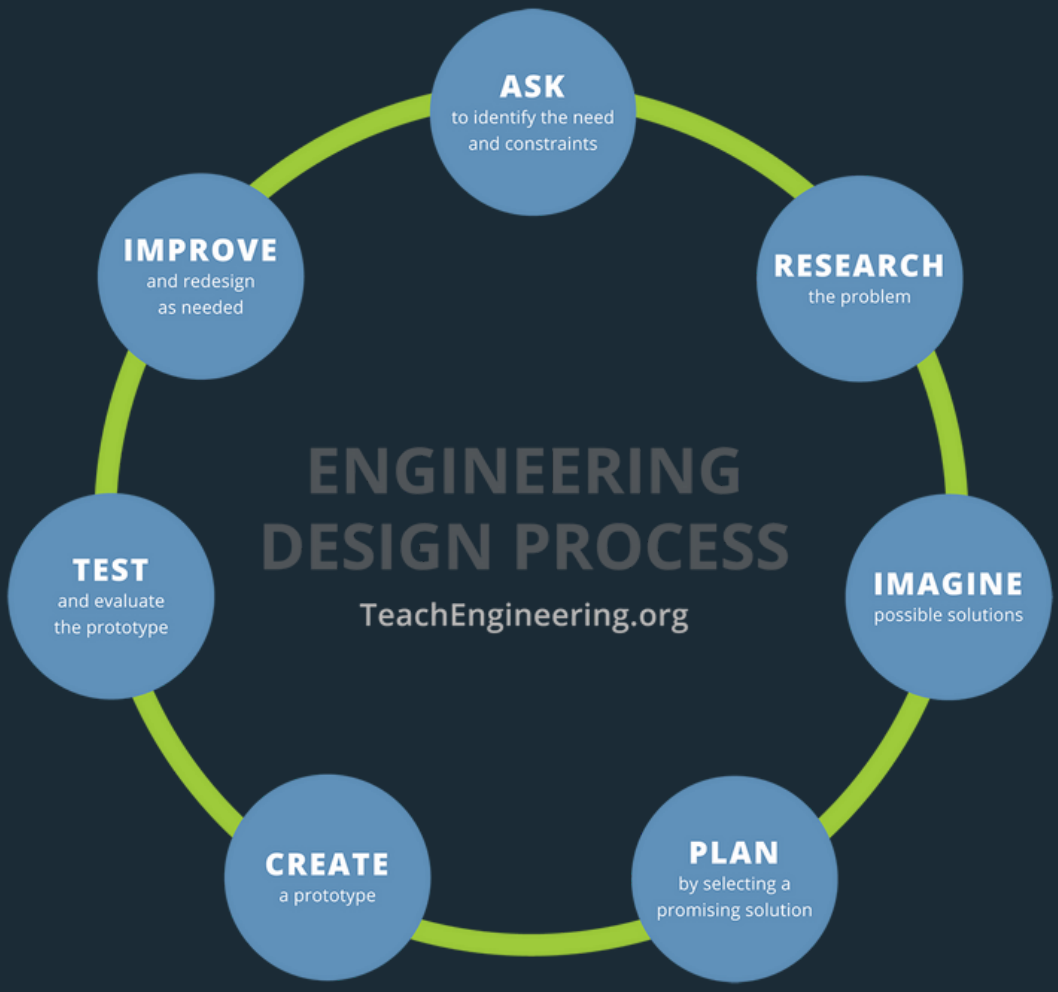
SHAPING THE FUTURE OF AEROSPACE

ROYAL AERONAUTICAL SOCIETY

When it comes to the engineering design process the Aerospace Engineering the AIAA (American Institute for Aeronautics and Astronautics) and the RAeS (Royal Aeronautical Society) provide valuable resources in order to explore these careers in a deeper level!

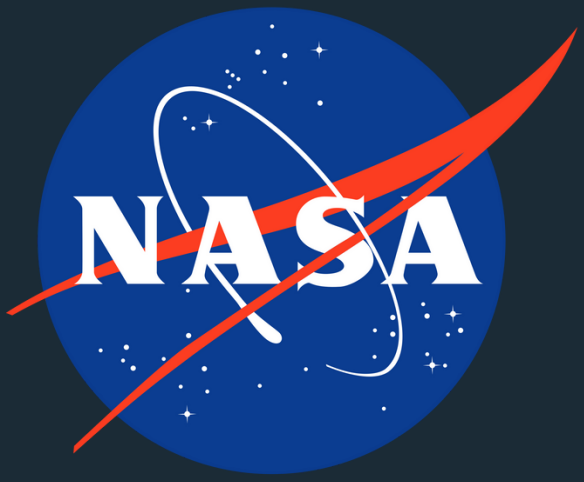
AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

ASK: Identifying possible needs is an essential part of designing any aerospace system. Some factors to understand in later research are mission objectives, budgets, performance, timelines, and many more!



AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

RESEARCH: Throughout the research, aerospace engineers dedicate themselves to analyzing and simulating various performance scenarios for their aircraft and spacecraft.



Ranging from propulsion to aerodynamics, aerospace engineers research their craft to perfection to showcase their desired performance upon testing.

AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

IMAGINE: To formulate and develop your ideas you must first brainstorm and choose the one that proves best. In this field, creating conceptual designs is key to succeeding.

This is done with the use of drawings, plans, and other things that help materialize your ideas. This step is critical, as it causes the need to find possible solutions to real-world problems.

AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

PLAN: After identifying your problems, you need to find the solution for them. Aerospace engineers face this all the time, dealing with trial and error and creating an organized layout for their ideas.

AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

CREATE: In this step, they follow the plan they created. Engineers bring to life their previously laid-out ideas and keep an eye out for any flaws in their design.

AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

TEST: Aerospace engineers go through rigorous testing phases for each of their prototypes and by doing this, reduce the likeliness of errors/ inaccuracy in their work. Despite all the problems they face, they must have perseverance to reach their desired goals.

AEROSPACE IMPACT ON ENGINEERING DESIGN PROCESS

IMPROVE: Continuous improvements enable aerospace engineers to incorporate new technologies for future discoveries, enhance performances and help solve possible technological and outer space challenges. All these elements form the cycle we recognize as the engineering design process.

ENGINEERING DESIGN PROCESS IN PROFESSIONAL PRACTICE

To develop any type of technology or advancements it is necessary to keep organized to reach your goals. The engineering design process provides a simple yet effective strategy. This requires patience, perseverance, and drive. Every step is equally as important as the rest, and each one assures you will have an outcome that you are pleased with.

ENGINEERING DESIGN PROCESS IN PROFESSIONAL PRACTICE

Engineering takes time but creating something unique or life changing goes beyond that. Aerospace engineers create with the mere thought of it. They ask, plan, test, do that and so much more than what comes to mind. The effort they all put in to make the world advance and become an infinitely better place is truly inspirational.

COMPARING ENGINEERING DESIGN APPROACHES

The engineering design process is the most crucial step to communicate and share your ideas when creating a robot, or in the case of aerospace engineers, a spacecraft.

Ranging from creating to testing and later improving, this cycle is known as the engineering design process. It builds critical thinking skills and an amazing foundation for understanding and sharing your work. Aerospace engineers have a very similar style to our robotics team, 2252W. Robotics and aerospace engineering relate in the sense that they both require teamwork, responsibility, persistence, and the ability to not give up on what you are trying to achieve.

VEX ROBOTICS: PREPARING FOR YOUR FUTURE CAREER

In today's career landscape, mastering the theory in your field is not the only important skill to learn. Practical and essential skills such as leadership, teamworking and communication prepare the next generation for future careers. When it comes to VEX Robotics, competitions provide an amazing outlet in order to learn these skills.

VEX ROBOTICS: PREPARING FOR YOUR FUTURE CAREER

- Leadership is an essential part to progress throughout your career. When it comes to decision making, development, and conflict resolution; Leadership enhances your everyday interactions preparing you for future careers.

- With leadership always comes teamwork. Working in teams is one of the most essential parts in any career. It's not only necessary for this though, as it is a skill used in everyday life.

- Along with leadership and teamwork, communication serves as a tie connecting it all together! Communication is the base and the most essential skill to have.

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