ROSIE RIVETERS

Explores Manufacturing

WOMEN IN STEM

STEM Career Exploration

Hey there, future world-changers! Have you ever wondered how the things you use every day, like toys, clothes, and gadgets, are made? All of these items are created through a process called manufacturing. Manufacturing is a super cool and important field with many exciting careers. Let's explore some of these jobs and discover how you can make a difference in the world of manufacturing!

CODING - BINARY CODE WEARABLE

The manufacturing industry relies heavily on computer systems to optimize production processes, making computer science an essential aspect of modern manufacturing.

- Industrial automation engineering involves designing and programming the automated systems used in manufacturing, such as robotic assembly lines and conveyor systems. Industrial automation engineers must understand programming languages, robotics, and control systems to create efficient and reliable manufacturing processes.
- Data analysts analyze and interpret data generated by manufacturing processes, identifying opportunities for process improvement and increased efficiency.
- Software engineers develop and maintain the software applications used in manufacturing, such as inventory management systems and computer-aided design (CAD) software.

ENGINEERING - SLING SHOT ROCKETS

Manufacturing offers a wealth of exciting career opportunities for anyone interested in engineering.

- Aerospace engineering involves designing and developing aircraft, spacecraft, and other aerospace vehicles. Aerospace engineers must understand the principles of the four forces of flight to design efficient and safe flying machines.
- Mechanical engineering involves designing and developing mechanical systems and machines used in manufacturing processes. Mechanical engineers may work on designing and improving anything from engines and turbines to medical devices and industrial robots.
- Electrical engineers design and develop electrical systems used in manufacturing, such as motors and control systems.

DESIGN - BALLOON POWERED CAR

Design plays a critical role in the manufacturing industry.

- Industrial design involves creating and developing new products and improving existing ones. Industrial designers often work with engineers marketing teams, and manufacturers to design products that are not only look good but also functional and efficient.
- Product design involves creating new products from scratch, such as furniture, appliances, and electronics. In product design designers must consider usability, ergonomics, and aesthetics while ensuring the product meets the needs of the target audience.
- Mechanical engineers design and develop mechanical systems that are used in manufacturing processes.

ROBOTICS - ART BOTS

Robotics technology is increasingly used in manufacturing to automate and optimize production processes, making manufacturing safer, faster, and more efficient.

- Robotics engineering involves designing, developing, and testing robotic systems used in manufacturing, such as industrial robots used in assembly lines or collaborative robots that work alongside human workers. Robotics engineers must have a deep understanding of mechanical engineering, control systems, and artificial intelligence to create robots that can perform complex tasks with precision and accuracy.
- Robotics programmers use their coding skills to develop the software that controls robots, including their movement, sensors, and behavior.
- Robotics maintenance and repair ensures that robotic systems in manufacturing facilities are operating at optimal performance.

ROSIE RIVETERS

Rosie Riveters is a non-profit organization that develops girls' - from diverse backgrounds - confidence, problem-solving, and critical thinking skills through our hands-on and interactive STEM (science, technology, engineering, and math) projects.

www.RosieRiveters.com