Introduction to Mechanisms

Career Exploration

The Introduction to Mechanisms certification provides foundational knowledge of mechanical systems essential to modern engineering and industrial applications. This certification emphasizes understanding how mechanical components such as levers, gears, cams, and linkages function individually and within integrated systems. Participants will learn to design, analyze, and troubleshoot mechanisms, using key mechanical principles to enhance system efficiency and performance. Through hands-on practice, learners will gain the ability to calculate mechanical advantage, evaluate kinematic behavior, and apply mechanical principles to solve real-world industrial challenges.

Industry Recognized Certification Topics

- Mechanical Components and Principles
- Gears and Gear Trains
- Levers and Mechanical Advantage
- Kinematics of Mechanisms
- Mechanical Linkages
- Troubleshooting Mechanical Systems
- System Optimization and Maintenance

Industry Recognized Certification Competencies

- Identify and Explain Mechanical Components
- Calculate Mechanical Advantage
- Analyze and Design Gear Trains
- Perform Kinematic Analysis
- Design and Optimize Linkages
- Troubleshoot Mechanical Failures
- Optimize System Performance

Units - 8 / Labs - 8