

Alignment



Lubrication

Transmission



Bearings & Seals



Measurement

Mechanical Training

Basic Mechanics – 2 Days

This course provides an introduction to mechanical systems, definitions and formulas used to perform calculations. These skills are critical for those performing mechanical duties to understand the operation and variables associated with systems.

Participants will: Discuss Matter and Energy, Calculate Work, Power and Horsepower, and discuss Levers and Pulleys, Calculate Area, Volume, Force, and Pressure and Velocity.

Precision Measurement – 2 Days

This course will include a discussion and detailed description of measuring devices and their use in industry. During the course, participants will use these devices to measure multiple components.

Participants will: Identify different measurement devices and selection criteria, learn correct operation and perform measurement with Rules, Protractors, Vernier Calipers, Dial Calipers, Micrometers and Gauges.

Bearings and Seals – 2 Days

This course will include a discussion and detailed description of both Plain and Rolling Element Bearings. These are used extensively throughout industry to provide reduced friction motion on many systems.

Participants will: Identify the different types of bearings and their use, choose and apply proper lubrication, remove and replace bearings, and gain and understanding of clearances and tolerances.

Mechanical Training

Lubrication – 2 Days

This course will include a discussion and detailed description of industrial lubricants, their use and proper application for friction reduction. There are many different lubricants and each one has specific uses and application methods.

Participants in this course will: Explain how lubricants reduce friction, identify the proper amounts of lubrication to be applied, identify various application methods, learn to apply various types of lubrication manually, and understand the operation and maintenance of automatic lubrication systems.

Mechanical Power Transmission I – 2 Days

This course will provide a detailed overview of the different mechanical transmission systems used in industry. Various types of systems and components are used and must be properly identified and maintained to ensure correct operation.

Participants will: Identify different types of Gears and Sizing, identify different types of chains, sprockets and sizing, identify different types of Belts, Pulleys and Sprockets, calculate input and output speeds, discuss installation and alignment procedures, and discuss clutch operations.

Mechanical Power Transmission II Hands-On – 2 Days

This course will provide hands-on activities to verify understanding of system components and installation considerations discussed in Session I.

Participants will: Install gear drive system, install chain drive system, install belt drive system, properly calculate speed and select proper devices, properly tension drive systems, and properly align drive systems.

Shaft Alignment Hands-On – 3 Days

This course will provide a hands-on approach to shaft alignment using several methods and tools found in industry.

Participants will: Determine and correct soft foot conditions, use a straight edge to perform shaft alignment, use dial indicators to perform shaft alignment, Rim-Face Method and Reverse Dial Method.

Laser Shaft Alignment and Vibration Analysis – 3 Days

This course will introduce concepts and performance of laser alignment and vibration analysis equipment. These devices are gaining extensive use in industry and have become an important part of many maintenance and preventive maintenance procedures.

Participants will: Identify the components and operation of laser alignment systems, identify the terms and methods of use of laser alignment systems, perform hands-on laser alignment procedures and calculations, identify the components and operation of vibration analysis systems, identify the terms and methods of use of vibration analysis systems, and perform hands-on vibration analysis procedures and calculations.

*Other **Mechanical Training** topics are available other than those listed in this publication.*

We can customize training to meet the specific needs of your company.

We also offer a full training curriculum of:

- ***Industrial Training***
- ***Health and Safety Training***
- ***Leadership & Supervisory Training***

Check out our updated “Business and Industry Services” webpage under our college website at www.wiregrass.edu to view more information regarding course scheduling and fees.

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