MECH 103

● ● ○ Intermediate 30 hours 2 modules · 14 lessons

Seals, Bearings, Alignment & Vibration

The reliability skills that decide how long rotating equipment lives: seals, lubrication, alignment and condition monitoring.

30	2	14	2,000	70	6
HOURS OF TRAINING	MODULES	LESSONS	STUDY CARDS	SCENARIOS	3D SIMULATORS

COURSE OBJECTIVES

By the end of this course you will be able to:

1. Adjust and replace packing and select mechanical seal types and flush plans.
2. Choose, install, lubricate and diagnose rolling-element bearings.
3. Calculate grease quantity and relubrication intervals and avoid over-greasing.
4. Perform laser and dial-indicator shaft alignment and apply speed-based tolerances.
5. Identify coupling types and explain how misalignment damages couplings, bearings and seals.
6. Interpret vibration spectra and ISO severity zones to identify imbalance, misalignment and bearing defects.
7. Build a basic condition-monitoring route and trend data.

WHAT YOU WILL LEARN

Seals & packing
Face geometry, balance, heat, flush plans and gland adjustment.

Bearings & lubrication
Bearing types, life, grease fill and contamination control.

Shaft alignment
Offset and angularity, soft foot, thermal growth and tolerances.

Couplings & drives
Jaw, gear, disc couplings, belts, chains and sheaves.

Vibration analysis
Spectrum basics, fault frequencies and severity zones.

Reliability practice
Route design, trending and acting on the data.

MAJOR TOPICS COVERED

Module 5	Seals, Packing, Bearings & Lubrication	7 lessons
Module 6	Shaft Alignment, Couplings, Power Transmission & Vibration	7 lessons

COURSE HIGHLIGHTS

- **30 hours** of structured, self-paced instruction with active-time tracking.
- **6 interactive 3D simulators** — rotate, explode and cut away real equipment, then change the controls and watch the numbers respond.
- **70 field scenarios** with background, decision points and worked answers.
- **2,000 study cards**, 14 printable checklists and hands-on calculators.
- **Module quizzes** and a completion certificate with a verification code.

WHO IT'S FOR

Mechanics and reliability technicians responsible for rotating equipment at treatment plants.

BEFORE YOU START

MECH 101 and MECH 102 recommended.

WHERE TO NEXT

MECH 104 — Valves, Actuators, Process Equipment & Systems

Start learning Create a free account at tryetech.com, open **Mechanical Maintenance** and begin with Module 5.