Course Overview
SwRI’s introductory two-day hybrid virtual & in-person short course covers lateral and torsional rotordynamics, blade dynamics, vibration measurement, and balancing concepts, for engineers, operators, and technicians working on rotating machinery in the oil and gas and power generation industries. Instruction will be provided by experienced SwRI Machinery Program staff and will include fundamental principles, practical hands-on exercises, case studies, and machinery demonstrations.

Cost
The short course cost is $500 USD per registrant. Registration includes two days of course instruction, training materials, class exercises, and two lunches (provided to in-person attendees).

Course Topics
Lateral Rotordynamics
• Mass elastic model development
• Bearing performance
• Undamped critical speeds
• Lateral mode shapes
• Damped imbalance response
• Aerodynamic cross coupling
• Stability analysis
• Case studies

Torsional Rotordynamics
• Mass elastic model development
• Steady state critical speeds
• Torsional mode shapes
• Typical failure modes and modifications
• Forced response analysis
• Transient torsional analysis
• Torsional field testing

Hands-On Exercises
• Rotor vibration measurement
• Rotor balancing

Turbomachinery Blade Dynamics
Centrifugal Compressor Installation Visit and Instrumentation Overview
Field Vibration Measurements

For more information, please contact:
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