



Vibration Analyst, Reliability, Machine Monitoring and Diagnosis courses schedule for 2021

Vibration Analyst Schedule for 2021 – Public courses in Nærum & Darmstadt

Training Course	Dates 2021 in Nærum <i>(English only)</i>	Dates 2021 in Darmstadt <i>(English only)</i>
Category I - Training & Certification Basic Vibration Analyst	Week 12 March 23rd to 26th	Week 10 March 9th to 12th
Category II - Training & Certification Intermediate Vibration Analyst	Week 16 April 19th to 23rd	Week 18 May 3rd to 7th
Category III - Training & Certification Advanced Vibration Analyst	Week 36 September 6th to 10th	Week 38 September 20th to 24th
Category IV - Training & Certification Master Vibration Analyst	n/a	Week 46 November 15th to 19th

ARP Schedule for 2021 – Public courses in Nærum & Darmstadt

Training Course	Dates 2021 in Nærum <i>(English only)</i>	Dates 2021 in Darmstadt <i>(English only)</i>
ARP-A, Advocate - Training & Certification Category I: Track A	Week 25 June 21st to 23rd	Week 23 June 7th to 9th
ARP-A, Advocate - Training & Certification Category I: Track B	Week 25 June 23rd to 25th	Week 23 June 9th to 11th
ARP-E, Reliability Engineer - Training & Certification Category II	Week 40 October 4th to 8th	Week 42 October 18th to 22nd



Machinery Monitoring and Diagnosis courses Schedule for 2021 – USA Public courses

Training Course	Description	Dates 2021 in Gardnerville <i>(English only)</i>	
MD1 - Basic Protection and Condition Monitoring Training	<ul style="list-style-type: none"> ◆ Why use of vibration measurements, techniques and tools, off-line & on-line monitoring systems. ◆ Fundamentals of machine behavior. Best practice for taking measurements. ◆ Covering Auxiliary machines, Balance of Plant (Rolling Element Bearing). 	Week 23 June 10th	
		Week 36 September 9th	
MD2 - Turbomachinery Diagnosis & Rotordynamics Training	<ul style="list-style-type: none"> ◆ Rotor diagnostics by vibration analysis, definitions and theory. ◆ Fluid-film bearings and turbomachinery analysis techniques, fundamental rotor response, stiffness, instabilities. ◆ Interpretation of waveform, phase, orbit, polar & bode, vector, shaft centerline and full & half spectrum plots. Root cause analysis, recommendations exercise. 	Week 24 June 14th – 16th	
		Week 37 September 13th – 15th	
MD3 - Balancing Rotors in-situ Training <i>(2 options available)</i>	Rigid rotor balancing	Week 24 June 17th	Week 37 September 16th
	Flexible rotor balancing	Week 24 June 18th	Week 37 September 17th
MD4 - Hands-on Diagnostic Seminar Training	<ul style="list-style-type: none"> ◆ How to correctly diagnose machinery fault conditions, including turbomachinery, suggest the right recommendations and practices. ◆ Bearing types (journal and antifriction) and related faults. Interpretation of data plots and root cause failure analysis investigations, many case study and exercise. 	Week 25 June 22nd – 24th	



Machinery Monitoring and Diagnosis courses Schedule for 2021 – EU Public courses

Training Course	Description	Dates 2021 in Darmstadt <i>(English only)</i>	
MD1 - Basic Protection and Condition Monitoring Training	<ul style="list-style-type: none"> ◆ Why use of vibration measurements, techniques and tools, off-line & on-line monitoring systems. ◆ Fundamentals of machine behavior. Best practice for taking measurements. ◆ Covering Auxiliary machines, Balance of Plant (Rolling Element Bearing). 	Week 7 February 16th	
MD2 - Turbomachinery Diagnosis & Rotordynamics Training	<ul style="list-style-type: none"> ◆ Rotor diagnostics by vibration analysis, definitions and theory. ◆ Fluid-film bearings and turbomachinery analysis techniques, fundamental rotor response, stiffness, instabilities. ◆ Interpretation of waveform, phase, orbit, polar & bode, vector, shaft centerline and full & half spectrum plots. Root cause analysis, recommendations exercise. 	Week 44 November 1st – 3rd	
MD3 - Balancing Rotors in-situ Training <i>(2 options available)</i>	Rigid rotor balancing <ul style="list-style-type: none"> ◆ Balancing using 1 or 2 planes, 4 run no phase and overhung balancing methods. Types of unbalance, vector review. 	Week 7 February 17th	Week 44 November 4th
	Flexible rotor balancing <ul style="list-style-type: none"> ◆ Vector review, balance response and recognizing resonance. Mode shape, rotor non-linearity, thermal vector, field consideration, with balancing workshop. 	Week 7 February 18th	Week 44 November 5th
MD4 - Hands-on Diagnostic Seminar Training	<ul style="list-style-type: none"> ◆ How to correctly diagnose machinery fault conditions, including turbomachinery, suggest the right recommendations and practices. ◆ Bearing types (journal and antifriction) and related faults. Interpretation of data plots and root cause failure analysis investigations, many case study and exercise. 	Week 48 November 30th – December 2nd	