



Services

Universal Technologies, Inc. and Universal Technologies Interactive, Inc.

Machinery Reliability Program and Personnel Qualification Evaluation...on and off site: Universal Technologies provides an evaluation service for your machinery reliability/condition monitoring programs. The evaluation service is designed to recognize strengths, identify areas of improvement, and develop a customized plan of action to take your program and personnel to the highest level of effectiveness.

Vibration Analysis, Precision Alignment & Balancing Services and Technical Advising: Universal Technologies provides on-site and off-site vibration analysis, precision shaft alignment, precision balancing, and failure analysis services. In addition, Universal Technologies offers a "second opinion" and assistance with machinery reliability problems.

Condition Monitoring Program Implementation and Administration: Universal Technologies provides reliability/condition monitoring program implementation and administration services. This service is designed to assist clients with establishment of new programs, or updating existing programs to eliminate the typical delays and inefficiencies. Our professional staff tailors the program to specific customer needs. For facilities that require a complete "Turn-key" program, Universal Technologies performs all data collection, analysis and reporting functions. For other companies who handle data collection in-house, we provide reporting and analysis functions; and for others, simply provide an evaluation of existing programs.

Job and Task Analysis and Personnel Qualification Evaluation:

Job and Task Analysis (JTA) processes are used to ensure that personnel are qualified to perform assigned tasks. Once tasks are identified for a particular job, key elements of each specific task as well as the knowledge and skills needed to perform the task are identified and grouped. An on-going customized process is developed to effectively assess areas for improvement and methods for addressing these areas.

Training Program Development: Universal Technologies has extensive experience in professional training program and presentation design and development. Our customized performance-based training programs are designed and developed using a systematic approach that meet or exceed recognized accreditation requirements.

Custom Interactive Training Programs and Multimedia Software Design and Development: Universal Technologies Interactive, Inc. offers multimedia product development and customization services based on customer requests. These services range from customizing existing products to comply with specific company procedures or manufacturer's requirements to complete product development, including needs analysis, initial design, rapid-prototyping, development, revision, and delivery. Universal Technologies Interactive Inc. specializes in industrial employee assessment, multimedia training development and a growing line of Computer Based Training products.

Universal Technologies Interactive Inc. new product the "*skills-accelerator*[™]" is an on-line program that helps companies to determine what their employees don't know about their jobs and then identifies resources and tools to develop the employees in these areas. The *skills-accelerator*[™] is a program that not only creates an individual knowledge and skills assessment, but also a development plan for each employee.



Training Programs

Universal Technologies offers a variety of seminars in public and in-house formats for the following work groups. All Universal Technologies training products and programs meet or exceed recognized accreditation requirements, such as those of the Institute of Nuclear Power Operations (INPO) used throughout the nuclear power industry.

Management, Engineering and Procurement

MEP-301: Managing Machinery Reliability

MEP-302: Procurement and Engineering Roles in Machinery Reliability

MEP-401: Managing Mechanical Reliability using PdM Technologies

MEP-402: Managing Electrical Reliability with PdM Technologies

Operations/Process Personnel

OPS-101: Basic Operator Care for Machinery Reliability

OPS-201: Advanced Operator Care for Machinery Reliability

Mechanical

MECH-101: Precision Maintenance Skills

MECH-201: Precision Shaft Alignment...using dial indicators

MECH-202: Precision Shaft Alignment...using rotalign laser systems

MECH-203: Precision Shaft Alignment...using rotalign pro laser systems

MECH-204: Precision Shaft Alignment...using optalign laser systems

MECH-205: Precision Shaft Alignment...using optalign plus laser systems

MECH-206: Precision Shaft Alignment---using combi laser systems

MECH-207: Precision Shaft Alignment...vertical machines

MECH-301: Advanced Precision Shaft Alignment

MECH-302: Bearing Root Cause Failure Analysis

MECH-303: Gaskets, Packing and Mechanical Seal Failure Analysis

MECH-401: Applied Precision Maintenance Skills

MECH-402: Precision Pump Repair

Instrument and Electrical Technicians

IAE-101: Electrical Fundamentals for Non-Electrical Personnel

IAE-201: Precision Maintenance Skills for Electricians

PdM Technicians

PdM-101: Introduction to Vibration and Detection Analysis

PdM-102: Vibration Analysis Level 1 Plus

PdM-201: The Practical Vibration Analysis

PdM-202: Vibration Analysis Level 2 Plus

PdM-203: Precision Field Balancing

PdM-204: Precision Shop Balancing

PdM-301: The Advanced Vibration Analyst

PdM-302: Time Waveform Analysis



Training

Universal Technologies Training:

Why our customers choose Universal Technologies' for their maintenance reliability training and performance needs:

Customized Training

It is the intent of *Universal Technologies* to provide the highest quality technical training, products and services available *in strict accordance with the needs of its clients*. All training materials are offered for client review. Upon request, Universal Technologies' products are customized to address specific instrumentation and internal company procedures. To best meet the individual needs of each client, Universal Technologies obtains client input on specific industrial processes, machinery types, internal task qualification processes and company applications that impact seminar content. Personnel task qualification and knowledge assessment evaluations are provided upon request.






Activity Based Training™

Universal Technologies' seminars provide practical information as well as procedures that are specific to customer's tools and instruments that result in immediate transfer of knowledge and skills to the job. All training materials are developed in accordance with current systematic approach to training (SAT) models for accredited training, and are customized based on specific clients needs. All Universal Technologies training seminars consist of up to 50% guided hands-on

Universal Technologies' Systematic Approach to Training (SAT) helps companies ensure *the right training* is delivered to *the right people* and at *the right time* to assist companies in achieving their optimum levels of performance.

Training Programs

Universal Technologies has extensive experience in professional training programs, presentation design and development. The following outlines the current portfolio of individual seminars and specified training program tracks for the following different work groups:

-  Management, Engineering and Procurement - MEP
-  Operations - OPS
-  Mechanical - MECH
-  Instrument and Electrical Technicians - IAE
-  PdM Technicians – PdM



Systematic Approach to Training (SAT)

Universal Technologies and Universal Technologies Interactive:



Training is developed and conducted using the Systematic Approach to Training (SAT)

Analysis

Design

Development

Implementation

Evaluation

Analysis Phase – Define individual jobs and tasks; perform comprehensive gap analysis of current task performance processes and conduct individual knowledge and skills assessment.

Design Phase – Design diversified training options for resolving identified gaps. Methods may include live training, CBT training, on-line training, self study, on-the-job training, etc.

Development Phase – Develop or procure selected design option.

Implementation Phase – Deliver the solution.

Evaluation Phase – Determine if gaps have been addressed through performance evaluations, and continued re-assessment.

The cycle continues with more analysis, improved design, development and implementation.

☑ The Analysis step begins with Job Definition and Job and Task Analysis.

Job and Task Analysis (JTA) processes are utilized to identify: 1) Specific Job Classifications...mechanical, electrical, operation, etc. 2) Specific Skill Areas...rotating equipment repair, pipe fitter, welder, etc. 3) All tasks that are required for various skill areas. 4) Knowledge and skills associated with each job task. 5) Current level of knowledge and skills. 6) Gaps between knowledge and skills possessed verses those needed. After identifying all the tasks and knowledge and skill requirements, **gap analysis** is performed.

☑ **Gap Analysis** - The goal of “**Gap Analysis**” is to determine specifically which tasks are not being preformed to “identified standards” and why. Universal Technologies’ divides the gap analysis process into three basic parts:

Task Performance Assessment – Survey questions are used to identify how tasks are currently being performed in comparison to the way they would be performed with the “best reliability practices” in place.

Knowledge Assessment – Determine individuals’ understanding of basic concepts associated with their particular assigned tasks.

Skills Assessment – Determine level of skills and ability to actually perform elements of the task.








Universal Technologies, Inc.

New Directions for machinery reliability training, products and services!

In recent years, more and more companies have realized the need to emphasize and implement machinery reliability programs. In today's environment with the need to continuously analyze and reduce costs without jeopardizing quality, companies throughout all major industries are seeing the cost benefits of machinery reliability training and programs. An investment in a company's work-force training, knowledge, and skills has long been tied to improvements in employee productivity and a company's financial performance.

Universal Technologies, Inc. and Universal Technologies Interactive, Inc. specialize in assisting their customers improve efficiency, reliability and productivity through **improved personnel job task performance attained by use of the Systematic Approach to Training**. Universal Technologies trainers, service providers, and training product developers have extensive experience not only in performing the tasks associated with the services they provide, but in effectively sharing their knowledge and experience. We continue to build experience by providing services and consulting throughout a wide variety of industries, including petro-chemical, electrical power, food and beverage, pulp and paper, steel and aluminum, fiberglass, and various other products and equipment manufacturers.

Universal Technologies' and Universal Technologies Interactive primary mission is to promote world-class professionals through knowledge and skills identification, assessment and training.

-  Assist customers to achieve world-class status by providing knowledge and skills training that increases their safety and environmental protection, maximizes the life of their machinery, and achieving higher productivity goals.
-  Provide technical training, products and services used to achieve and maintain qualified personnel in machinery reliability programs.
-  Enhance employee development, productivity, knowledge and skills through use of the Systematic Approach to Training (SAT) model.
-  Deliver "just in time" employee assessment classroom training, on-line training and performance support, modules in machinery reliability programs.
-  Assist companies that realize the commitment to employee education and training programs predicts the company's financial performance.