

Livingston & Haven's

Institute of Applied Technologies



THE BEST

Hydraulic, Mechatronic & Lubrication

TRAINING for Manufacturing.



2015 Training Schedule
www.LivHaven.com/training

PRINCIPLES OF INDUSTRIAL HYDRAULICS (PIH)

5-Day Seminar

First-level training for maintenance personnel who have not undergone formal training in industrial hydraulics.

What you will learn:

- Fluid principles, standard control valves, pumps and hydraulic valve symbols
- Basic set-up techniques
- How to troubleshoot hydraulic circuits
- How pump controls work and how they are set up
- Understand 10 fundamental circuits used in most hydraulic systems

Dates:

Jan 26 - 30
Feb. 23 - 27
Apr. 13 - 17
June 22 - 26
Aug. 3 - 7
Sept. 28 - Oct. 2
Oct. 19 - 23
Nov. 16 - 20

\$1,750 includes:
Tuition, workbook,
student handouts, lunch
and refreshments



3.2 C.E.U's

Appropriate for: maintenance mechanics, millwrights, technicians, supervisors, plant engineering personnel

HYDRAULIC SYSTEM MAINTENANCE (HSM)

5-Day Seminar

Second-level training seminar for maintenance personnel who already have an understanding of hydraulic principles.

What you will learn:

- Proper fluid requirements for modern hydraulic systems
- How systems are set up for improved efficiency and reliability
- Study component operation/use in hydraulic circuits
- How to disassemble, evaluate and assemble standard hydraulic components into hydraulic circuits for testing

Dates:

Jan. 12 - 16
Aug. 31 - Sept. 4
Dec. 7 - 11

\$1,750 includes:
Tuition, workbook,
student handouts,
lunch and refreshments



3.2 C.E.U's

Prerequisite: PIH or consent from the Institute

Appropriate for: maintenance mechanics, millwrights, technicians, supervisors

PRINCIPLES OF MOBILE HYDRAULICS (PMH)

5-Day Seminar

First-level training seminar for maintenance and service technicians with mobile hydraulic equipment responsibility.

What you will learn:

- How principles of hydraulics relate to the operation, maintenance and troubleshooting of mobile hydraulic equipment
- How to read and interpret mobile hydraulic valve symbols
- Understand variable displacement pumps and pump controls used with hydraulic systems

Dates:

July 20 - 24

\$1,750 includes:
Tuition, textbook,
student handouts,
lunch and refreshments



3.2 C.E.U's

Appropriate for: mobile maintenance mechanics & technicians, supervisors

Livingston & Haven's Institute of Applied Technologies

UNDERSTANDING PROPORTIONAL VALVES (UPV)

5-Day Seminar

Plant maintenance personnel of all levels learn the function and operation of electro-proportional hydraulic valves – recommended for electrical and mechanical personnel.

What you will learn:

- Understand the difference between standard directional control valves and electro-proportional valves
- Difference between open and closed loops
- How proportional valves are used to control pressure, flow, direction and speed
- How to test for proper operation

Dates:

June 1 - 5
Oct. 26 - 30

\$1,800 includes:
Tuition, textbook,
student handouts,
lunch and refreshments



3.2 C.E.U's

Appropriate for: maintenance mechanics & technicians, electricians, supervisors

MECHATRONICS

4-Day Seminar

Advanced training focusing on key concepts used in Mechatronic system design, troubleshooting and maintaining Mechatronic Systems.

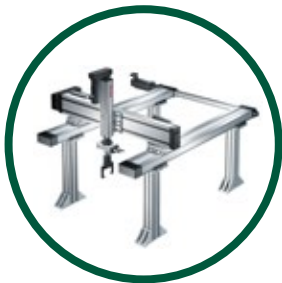
What you will learn:

- Introductions, discovery and overview of key elements
- Understanding the machine & controls
- Targeting “performance”
- Optimization and Implementation
- Coding: Bits, Bytes and Delays
- Multi-axis synchronization

Dates:

May 11 - 14

\$1,100 includes:
Tuition, textbook,
student handouts,
lunch and refreshments



Appropriate for: all maintenance technicians

HYDRAULIC SPECIALIST REVIEW & CERTIFICATION

3-Day Seminar

The International Fluid Power Society offers certification as a hydraulic specialist including a three-hour test. This course offers a thorough review as well as administers the exam.

This provides an objective, third-party assessment of an individual's skill level and is recognized industry-wide signifying an elevated status in the workforce.

- L&H will register students for IFPS concurrent with the course. Note: IFPS proctored exam fee is separate from course fee.

Dates:

Sept. 21 - 23

\$950 course fee
Test: Per IFPS fee
schedule



Appropriate for: engineers and high-level technicians. L&H recommends prior attendance at PIH and HSM or HSD

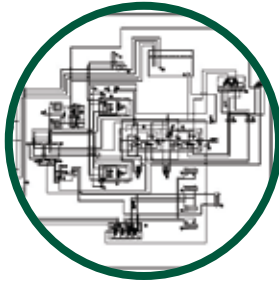
HYDRAULIC SYSTEM DESIGN (HSD)

5-Day Seminar

An advanced training seminar focusing on four hard-hitting modules.

What you will learn:

- Understand sizing, options and applications of various hydraulic circuits
- How to use standard pressure, directional and flow-control components
- Introduction and application of logic cartridge valves for hydraulic circuits
- How to use proportional pressure, directional and flow-control components
- Understand pump types and application of fixed and variable displacement pumps



3.2 C.E.U's

Prerequisite: PIH & UPV strictly enforced for this advanced course

Appropriate for: advanced maintenance technicians, plant & design engineers

Dates:

Oct. 12 - 16

\$1,800 includes:
Tuition, workbook,
student handouts,
lunch and refreshments

Students are required to bring calculators and must have the ability to manipulate and transpose various hydraulic related algebraic equations

PRINCIPLES OF ELECTRICITY

4-Day Seminar

A first-level training seminar providing theory, practical knowledge and structured hands-on lab exercises.

What you will learn:

- DC and AC electrical theory
- Understand principles of electrical conductance, resistance and reactance
- Understand voltage, current, power and their interrelationship
- How to build electrical circuits from schematic diagrams
- How to learn proper use of measurement functions on a digital multi-meter



Appropriate for: all maintenance technicians

Dates:

May 18 - 22

Nov. 2 - 6

\$1,450 includes:
Tuition, training materials,
measurement equipment,
lunch and refreshments

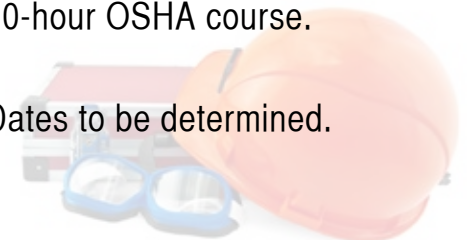
WE OFFER ON-SITE TRAINING!

We will bring customized fluid power and lubrication training to your company to increase general understanding using your equipment. Individually tailored so personnel will understand how your own equipment works and needs to be maintained. From a single instructional class, to long-term engineering and mechanical staff development, we can assist with your training needs.

OSHA

Contact us to be included in our 10-hour OSHA course.

Dates to be determined.



Want more information?

email institute@livhaven.com or call 704.588.3670 ext. 7406



Livingston & Haven

Traditionally, we have been recognized as a distributor of fluid power and automation products.

Since 1947, Livingston & Haven has evolved into **much more** than a distribution house. We are an innovative solutions provider and and strive everyday to be an essential partner in the successful future of U.S. Manufacturing.



The Institute of Applied Technologies

Our seminars meet the training needs of the manufacturing industry. Attendees value both the hands-on labs and the quality of our instructors.

Personnel with better training skills can provide your company with a competitive edge by:

- Delivering reduced downtime
- Producing better systems
- Efficiently performing duties
- Engaging and showing loyalty

Commit to excellence for your associates.

