



Consulting and Training | Reach New Heights

**Course Name**

# Industrial Hydraulics and Pneumatics

---

**Sector Name**

Mechanical Engineering

**Document Type**

Generated by Boostlab

[Click Here To Visit Course](#)

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770



## Industrial Hydraulics and Pneumatics

### Course Introduction

Industrial hydraulics and pneumatics are essential technologies in modern manufacturing and automation systems. These systems use pressurized fluids (hydraulics) or air (pneumatics) to generate force and motion, which are crucial for powering machines, equipment, and tools. Hydraulics and pneumatics are widely used in industries such as automotive, aerospace, manufacturing, and construction, providing solutions for lifting, moving, and controlling mechanical components. Understanding how these systems work is key to improving efficiency, reducing downtime, and ensuring safety in industrial operations. This training will provide the foundational knowledge and practical skills required to work with hydraulic and pneumatic systems.

This program will cover the basic principles of hydraulics and pneumatics, including system components, design considerations, and troubleshooting techniques. Participants will learn how to read and interpret hydraulic and pneumatic circuit diagrams, select appropriate components, and ensure proper system maintenance. The course will explore key components like pumps, valves, cylinders, and compressors, and how they are used in industrial applications.



ABU DHABI: +971 2 449 6000  
ABU DHABI: +971 50 412 3294  
DUBAI: +971 4 888 6787  
KSA: +966 56 416 0617  
EGYPT: +20 127 111 1770

[Click Here To Visit Course](#)

BOOST

## Industrial Hydraulics and Pneumatics

### Target Audience

This course is designed for engineers, technicians, and maintenance professionals working with or responsible for hydraulic and pneumatic systems in industrial settings.

ABU DHABI: +971 2 449 6000  
ABU DHABI: +971 50 412 3294  
DUBAI: +971 4 888 6787  
KSA: +966 56 416 0617  
EGYPT: +20 127 111 1770

[Click Here To Visit Course](#)

## Industrial Hydraulics and Pneumatics

### Learning Objectives

- ✓ Understand the basic principles and differences between hydraulic and pneumatic systems.
- ✓ Learn about the components and operation of both hydraulic and pneumatic systems.
- ✓ Gain skills in reading and interpreting circuit diagrams and building basic systems.
- ✓ Develop troubleshooting techniques for identifying and resolving common hydraulic and pneumatic system issues.
- ✓ Explore advanced applications and integration of hydraulics and pneumatics in industrial settings.

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To Visit Course](#)

## Industrial Hydraulics and Pneumatics

### Course Outline

#### ✓ 01 DAY ONE

##### **Introduction to Hydraulics and Pneumatics**

- ✓ Overview of hydraulics and pneumatics systems
- ✓ Basic principles of fluid power (Pascal's Law, pressure, force, and flow)
- ✓ Differences between hydraulic and pneumatic systems
- ✓ Applications of hydraulic and pneumatic systems in various industries
- ✓ Advantages and disadvantages of hydraulic and pneumatic power
- ✓ Overview of system components: pumps, actuators, valves, compressors
- ✓ Safety considerations in working with hydraulic and pneumatic systems

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To visit Course](#)

## Industrial Hydraulics and Pneumatics

### Course Outline

#### ✓ 02 DAY TWO

##### **Hydraulic Systems Components and Circuits**

- ✓ Key components of hydraulic systems: pumps, valves, actuators, filters
- ✓ Hydraulic fluid properties and selection
- ✓ Hydraulic pumps: types (gear, piston, vane) and their applications
- ✓ Control valves: types (directional, pressure, flow) and their functions
- ✓ Hydraulic actuators: cylinders and motors
- ✓ Reading and understanding hydraulic circuit diagrams
- ✓ Designing simple hydraulic circuits for basic applications

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

## Industrial Hydraulics and Pneumatics

### Course Outline

#### ✓ **03 DAY THREE**

##### **Pneumatic Systems Components and Circuits**

- ✓ Key components of pneumatic systems: compressors, valves, actuators, filters
- ✓ Pneumatic compressors: types (reciprocating, rotary screw, centrifugal)
- ✓ Pneumatic valves: types (directional, pressure, flow) and their applications
- ✓ Pneumatic actuators: cylinders and motors
- ✓ Reading and understanding pneumatic circuit diagrams
- ✓ Differences between pneumatic and hydraulic circuits

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

## Industrial Hydraulics and Pneumatics

### Course Outline

#### ✓ **04 DAY FOUR**

##### **System Maintenance and Troubleshooting**

- ✓ Importance of regular maintenance in hydraulic and pneumatic systems
- ✓ Common hydraulic system faults: leaks, pressure drops, overheating
- ✓ Troubleshooting pneumatic systems: pressure issues, air supply problems
- ✓ Diagnosing and repairing component failures in hydraulic and pneumatic systems
- ✓ Maintenance of hydraulic pumps, valves, actuators, and compressors
- ✓ Filtration and fluid contamination control in hydraulic systems
- ✓ Preventative maintenance practices for extending system life

ABU DHABI: +971 2 449 6000  
ABU DHABI: +971 50 412 3294  
DUBAI: +971 4 888 6787  
KSA: +966 56 416 0617  
EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

## Industrial Hydraulics and Pneumatics

### Course Outline

#### ✓ 05 DAY FIVE

##### **Advanced Applications and Integration**

- ✓ Integrating hydraulics and pneumatics into automated systems
- ✓ Using sensors and controllers to monitor system performance
- ✓ Hybrid systems: combining hydraulic and pneumatic technologies for efficiency
- ✓ Advanced applications: robotics, construction machinery, automotive systems
- ✓ Energy-saving techniques in hydraulic and pneumatic systems
- ✓ System design considerations for efficiency, speed, and control

ABU DHABI: +971 2 449 6000

ABU DHABI: +971 50 412 3294

DUBAI: +971 4 888 6787

KSA: +966 56 416 0617

EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

## Industrial Hydraulics and Pneumatics

### Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 22, 2026	June 26, 2026	5 days	4250.00 \$	UAE , Dubai
Dec. 21, 2026	Dec. 25, 2026	5 days	4950.00 \$	Singapore , Singapore
March 15, 2027	March 19, 2027	5 days	4250.00 \$	UAE , Abu Dhabi
July 13, 2026	July 17, 2026	5 days	2150.00 \$	Virtual , Online

ABU DHABI: +971 2 449 6000  
ABU DHABI: +971 50 412 3294  
DUBAI: +971 4 888 6787  
KSA: +966 56 416 0617  
EGYPT: +20 127 111 1770

[Click Here To vist Course](#)

[info@boostuae.com](mailto:info@boostuae.com) [info@boostorg.com](mailto:info@boostorg.com)

Generated by BoostLab •

