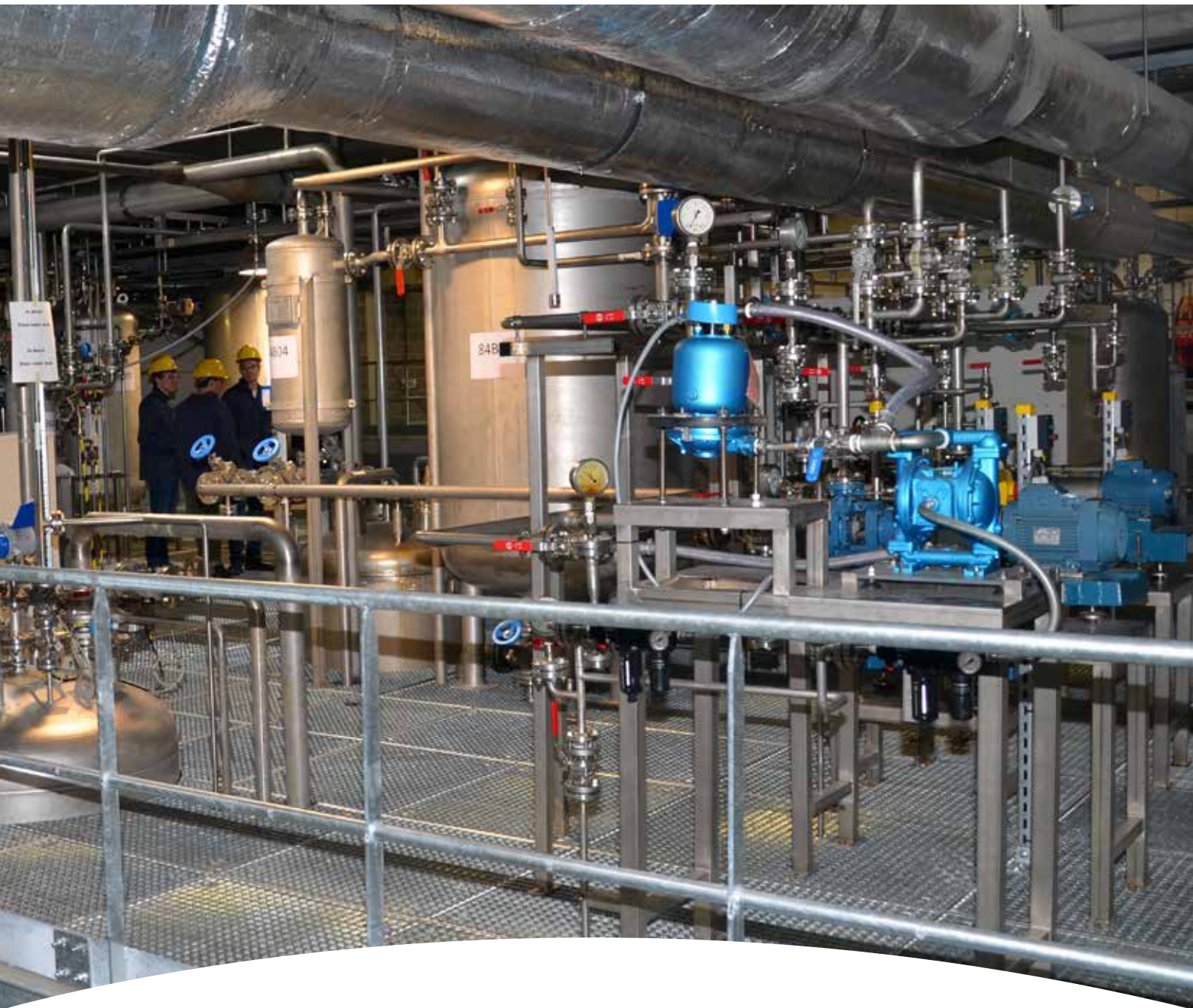


# Honeywell Training Services



HONEYWELL AUTOMATION COLLEGE HELPS YOU IMPROVE THE PERFORMANCE OF YOUR WORKFORCE TO GAIN MAXIMUM BENEFIT FROM YOUR AUTOMATION INVESTMENT.

## Technical Development Program

**Honeywell**

## Technical Development Program

Honeywell is pleased to announce the **Technical Development Program**.

This Technical Development Program is an outcome based, modular, and structured training program for your employees to gain comprehensive knowledge on Instrumentation, Automation Control and Safety Systems, used in modern industrial process plants.

Each participant will get the opportunity to apply newly learnt skills in a real-world, fully functional plant environment.

The training courses are delivered by professional instructors who are subject matter experts in their domain.





## Who should attend

The **Technical Development Program** is beneficial for both new hires and high potential engineers and technicians, looking for a fast-track learning experience on state-of-the-art process instrumentation and automation technologies.

## Venue

The program takes place at our HPS EMEA Automation College located in Brussels, Belgium. The real-life hands-on plant experience exercises will take place at the pilot plants from ACTA, our partner in this Technical Development Program.

## Program Duration

### Foundation Module

Duration Part A: 5 weeks

Duration Part B: 5 weeks

### Advanced Module

Duration: 6 weeks

## Queries, Dates and Registration

Please contact your local Automation College\* or your local Honeywell account manager.

\*Please refer to page 6 of this brochure for a list of EMEA Automation College Contacts.

Brussels, the capital of Europe and house of the European Parliament, is a central location in Western Europe, only a few hours away from other major capitals, such as London, Paris, Frankfurt, Amsterdam.



# Technical Development Program Outline

## Program Objectives

The objectives of the Honeywell HPS Technical Development Program are:

- Develop students' ability to read, understand, and use technical concepts to support Honeywell Process Control technologies.
- Provide students with a user-friendly and safe hands-on environment to enable practice of concepts learned in the classroom.
- Enable students to use technical information to tackle real-world process industry problems.

The program outcome is for students to become competent in both knowledge and skills in their daily work. Upon completion of the entire curricula, a final evaluation will be executed to ensure students are competent to perform field-based activities.

## The program consists of Foundation and Advanced Modules:

### Technical Development Program - Foundation Module - Part A (5 weeks)

- Implement Experion PKS Server, HMIWeb Display Builder and C300
- Understand Industrial Process Control Networking
- Implement Safety Manager
- Troubleshoot and Maintain Experion PKS System

### Technical Development Program - Foundation Module - Part B (5 weeks)

- Work on the real Process Plant – Safety Training
- Understand various instruments used in the Process Plant – hands-on exercises
- Various modern Field Networks – Practical work on the mini plant
- Learn Process Control Fundamentals for Plant Operators

### Technical Development Program - Advanced Module (6 weeks)

- Install and Administer Experion PKS
- Understand and Implement Experion PKS Virtualization
- Perform Experion PKS System Level Troubleshooting



# The Pilot Plant Provides a Hands-On Plant Experience

The hands-on exercises are delivered in co-operation with our partner 

1. The ACTA training facility is a full scale process plant, built to train process operators, engineers and maintenance technicians. The plant is divided into several sections, which can be used as stand-alone small units, and can also be combined to build a complete plant. Each section is equipped with measurement and control equipment (flow, level, pressure, temperature). The instruments are connected to a DCS, so trending, changing of control parameters (PID), combining different sensors – actuators, is possible.

## The sections of the process training plant are:

**Section 1 – Utilities:** Contains a steam generator and a cooling unit. The steam generator is capable of producing 200 kg/h saturated steam at a pressure of 8 bar. The cooling unit is able to cool down the heat of the steam generator. The utilities section also includes a vacuum unit.

**Section 2 – Compressor:** A rotary screw compressor is used to create gas under pressure. All compressor control systems are external (throttling inlet valve, throttling outlet valve, recycle flow, etc.) so several control strategies can be used and evaluated.

**Section 3 – Water Loop:** Three vessels and a pump form a loop from each of the 3 vessels to each of the other vessels, with a heat exchanger in between, to heat up the water. Two vessels can be put under pressure or under vacuum, so different pumping conditions can be created.

**Section 4 – Jet:** The compressed air from the compressor can be used as motive gas for a jet to create vacuum. Alternatively, this jet can be used to entrain water, which must be separated from the motive gas afterwards. A cyclone and a water separation vessel are being used for this process.

**Section 5 – Pumps:** Centrifugal and volumetric pump types with different types of seals are used. They can be switched as single pumping, pumping in parallel or in series. Single loop pumping (vessel – pump – vessel) or complex loop pumping (different vessels, different pumps, complex control strategies) is possible. Basic operations, like switching to a stand-by pump, can be exercised.

**Section 6:** Contains two more process loops. Loop 1 is equipped with a heat exchanger to cool down the water that is heated up in Section 3. The second loop is equipped with a parallel filter set, so operations, such as opening and cleaning a filter without interrupting the process, can be practiced.

2. In addition, ACTA includes a small scale Biodiesel Purification Unit for additional training purposes, such as HAZOP, P&ID reading, unit operations, start-up sequences, control strategy, tuning (single loop tuning and process tuning), signal networking (As-I bus, Profibus, Foundation Fieldbus), communication between operators and technicians, maintenance technicians and engineers, to handle processes containing real chemicals.

# EMEA Honeywell Automation College Contacts

Please find below the contact information for our main training locations per EMEA region. For additional information and to access the on-line schedule, please visit our website:

[www.honeywellprocess.com/en-US/training/](http://www.honeywellprocess.com/en-US/training/)

## Honeywell Belgium



### EMEA Automation College

Honeywell Europe S.A.  
Hermes Plaza  
Hermeslaan 1H  
1831 Diegem (Brussels)

Email: [HPS-Training-Belgium@honeywell.com](mailto:HPS-Training-Belgium@honeywell.com)

Tel: +32 (0)2 728 2589

## Honeywell Finland



### Automation College Varkaus

Honeywell Oy  
Navitas 1, Block B, 2nd floor  
Wredenkatu 2  
78250 Varkaus

Email: [HPS-Training-Finland@honeywell.com](mailto:HPS-Training-Finland@honeywell.com)

Tel: +358 (0)20 752 2275

## Honeywell Russia



### Automation College Moscow

Honeywell ZAO  
Kievskaya street 7, 8th Floor  
121059 Moscow

Email: [HPS-Training-Russia@honeywell.com](mailto:HPS-Training-Russia@honeywell.com)

Tel: +7 495 796 9800

## Honeywell Kingdom of Saudi Arabia



### Automation College Dhahran

Honeywell Turki Arabia Ltd.  
P.O. Box 31916  
31952 Khobar  
Dhahran Techno Valley  
Dhahran

Email: [HPS-Training-MiddleEast@honeywell.com](mailto:HPS-Training-MiddleEast@honeywell.com)

Tel: +966 (0)3 813 3777

## Honeywell South Africa



### Automation College Midrand

Honeywell Southern Africa (Pty) Ltd  
Treur Close, Waterfall Park  
1685 Midrand

Email: [HPS-Training-SouthAfrica@honeywell.com](mailto:HPS-Training-SouthAfrica@honeywell.com)

Tel: +27 (0)11 695 8070

## Honeywell United Arab Emirates



### Automation College Dubai

Honeywell Middle East  
P.O. Box 232362  
Emaar Business Park  
Building 2, Levels 2&3  
Sheikh Zayed Road  
Dubai

Email: [HPS-Training-MiddleEast@honeywell.com](mailto:HPS-Training-MiddleEast@honeywell.com)

Tel: +971 (0)4 454 0614



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#### **For More Information**

To learn more about Honeywell Automation College and view a list of global locations, please visit [www.honeywellprocess.com/en-US/training](http://www.honeywellprocess.com/en-US/training) or email [automationcollege.hpsemea@honeywell.com](mailto:automationcollege.hpsemea@honeywell.com).

#### **Honeywell Process Solutions**

Honeywell Automation College  
[www.honeywellprocess.com](http://www.honeywellprocess.com)

October 2015  
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