

# PHASE BUILDER IMPLEMENTATION



## Course Overview

**Course number: 3466**

**Course length: 4-5 days**

This 4.5-day course provides an introduction to the implementation in the APM and HPM of the phase logic and device level control in batch and sequencing applications. The major topics covered are the Honeywell Functions Plan methodology and the Phase Builder tool.

## Course Delivery Options

- In-Center Instructor-Led Training
- On-Site Instructor-Led Training

## Prerequisite/Skill Requirements

### Prerequisite Course(s)

- TPS/Universal Station System
- LCN/UCN Implementation (3300UCN) – any controller and one of the following:
  - HPM/APM Points and CL Implementation (3754)
  - Any previously offered HPM or APM CL course (3750, 3751, 3753)
- TPS/GUS System
  - GUS/LCN/UCN Implementation using the DEB (5722) and
  - HPM Points and CL Implementation (5716)

### Required Skills and/or Experience

- None

### Desirable Skills and/or Experience

- Basic batch process knowledge.
- Knowledge of the International Electrotechnical Commission (IEC) 1131-3 Specification that standardizes sequential function chart procedures and symbols.
- And/or knowledge of the Functions Plan convention from DIN Standard 40700 for the design and implementation of phases.

- Knowledge of S88.01, the standard for batch control models and terminology developed by the Standards and Practices Committee 88 (SP88) of the Instrument Society of America.
- Knowledge of the Modular Batch Automation methodology, which defines the batch control models used by S88.01.

## Course Topics

### You will learn how to....

- Modular Batch Automation (MBA) & Functions Plan
  - MBA Hierarchy
  - Functions Plan Control Elements - Phases and Smart Device Controller (SDC)
  - Phase Details - Attributes, Format, Types of Steps & Function Blocks, Operating Modes & States
  - Smart Device Controller (SDC) Details - Operating Modes, Mode Tracking, Abnormal Handling
  - Operating Functions Plan - issuing commands, responding to messages, abnormal conditions, troubleshooting.
- Phase Builder Tool
  - System Requirements & Installation
  - Using Phase Builder Tool to define project, phases & SDCs, peer-to-peer communication and exception handling.
  - Code Generation
  - Phase Builder Reports
  - Importing Data
  - Help Sub-system
- Implementation Considerations
  - Designing Phases - Insertion Points, Optimizing Step Usage, Equipment Listing
  - Run-time Step and Process Displays

## Additional Training

To increase your knowledge and skills, there are additional courses available from Automation College.

**For more information and registration, visit [www.automationcollege.com](http://www.automationcollege.com).**