

# B405 Advant OCS System Engineering

## Course Description



### Course Duration

The duration is 10 days.

### Course Goal

The goal of this course is to teach students the skills required to configure the basic control and display structure of Advant OCS with MOD 300 Software.

### Student Profile

This training is targeted to a Control or System Engineer responsible for product configuration of Advant OCS with MOD 300 Software.

### Prerequisites and Recommendations

Students should be familiar with principles of basic process control.

Students with traditional MOD 300 Systems only (without Operate<sup>IT</sup>), should attend the B400 System Engineering course. If you have already attended B400, and have upgraded to Advant OCS only (without Operate<sup>IT</sup>), then we recommend you attend the B415 System Engineering upgrade to Advant OCS instead.

If you have an Operate<sup>IT</sup> Process Portal system (without Advant or traditional MOD), we recommend the B425 Configuring the MOD 300 Database Using Windows 2000 course.

### Description

In this course, students learn the basic tools used for system configuration of an Advant Station and AC460 controller. The configuration tools used in this training include the Environment Builder, Graphic Display Builder, and the database Structure Builder. The console used in this course runs in the UNIX operating system. Some exercises build the basic UNIX skills necessary to support the applications.

Students participate in a series of lab exercises that culminate into a course project. During the project phase of the training, students are provided with a P&ID drawing from which they design and implement their own database and operator interfaces. A process simulation adds to the realism and helps students verify their work.

### Course Objectives

Upon completion of this course, students will be able to:

- Identify Advant OCS hardware and functional components.
- Identify system connections and communications protocols.
- Properly shut down and start up an Advant Station.
- Operate a simulated process using standard operator displays.
- Create graphic displays, and configure an operator environment for controlling process loops.



### Course Objectives (continued)

- Configure and maintain the database using Configurable Control Functions (CCF), including continuous and discrete loops.
- Configure TRIO, S100, S800 I/O.
- Use basic UNIX commands.
- State the purpose and basic structure of Taylor Control Language (TCL).
- Back-up/restore the system from tape.

### Course Calendar - B405 Advant OCS System Engineering

Day 1	Day 2	Day 3	Day 4	Day 5
<ul style="list-style-type: none"> <li>• Course Introduction</li> <li>• System Overview</li> <li>• Operator Station Overview</li> <li>• Operational Displays</li> <li>• System Shut-Down and Start-up</li> </ul> Lab: <ul style="list-style-type: none"> <li>• System Familiarization</li> <li>• Operations</li> </ul>	<ul style="list-style-type: none"> <li>• Operational Displays (cont.)</li> <li>• System Configuration Overview</li> <li>• Graphics Configuration</li> <li>• Environment Building</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Graphics Configuration</li> <li>• Environment Building</li> </ul>	<ul style="list-style-type: none"> <li>• Database Configuration Overview</li> <li>• Project Administration</li> <li>• Configurable Control Functions (CCF)</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Project Administration</li> </ul>	<ul style="list-style-type: none"> <li>• CCF (cont.)</li> <li>• CCF Device Loops</li> <li>• Misc. CCF</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Structure Builder Navigation</li> </ul>	<ul style="list-style-type: none"> <li>• Taylor Remote I/O</li> <li>• S100 I/O</li> <li>• S800 I/O</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Database Configuration</li> </ul>

Day 6	Day 7	Day 8	Day 9	Day 10
<ul style="list-style-type: none"> <li>• Alarm/Event Logger</li> <li>• Course Project Introduction</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Course Project</li> </ul>	<ul style="list-style-type: none"> <li>• Practical UNIX</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Course Project</li> </ul>	<ul style="list-style-type: none"> <li>• PLC Interface</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Course Project</li> </ul>	<ul style="list-style-type: none"> <li>• Back-up and Restore Functions</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Project, Part II</li> <li>• Back-up and Restore</li> </ul>	<ul style="list-style-type: none"> <li>• TCL Overview</li> </ul> Lab: <ul style="list-style-type: none"> <li>• Project Wrap-up</li> </ul>

