Course description

A221

Advant Controller 400 and Advant Station 500 OS Maintenance I

Course goal
The goal of this course is to teach maintenance and repairs of a running Advant 410 or Advant 450 Controller with Advant Station 500 Operator Station and OnLine Builder.

Learning objectives
Upon completion of this course the participants will be able to:
- Operate Advant Station 500 Series OS
- Locate faults in installations and trace signals into and out of the Advant Controller
- Describe the meaning of status LED's
- Replace input and output circuit boards
- Describe information contained in status displays on Advant Station 500 Series Operator Stations
- Utilize this information when locating faults

Participant profile
This training is targeted to maintenance technician or a person who want an Advant introduction

Prerequisites
Basic knowledge of electrical functions.

Topics
- The different parts of the system and their interaction
- Use of the manuals and other standard documents
- Advant Controller 400 I/O and the central functions
- Advant Station 500 OS functions
- Database structure
- AMPL programming language
- Use of OnLine Builder to trace signals
- Fault finding methods

Course type and methods
This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities.

Duration
The duration is 5 days.
## Course description

**A221**
Advant Controller 400 and Advant Station 500 OS Maintenance I

## Course outline

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course overview</td>
<td>Review - Q/A session</td>
<td>Review - Q/A session</td>
<td>Review - Q/A session</td>
<td>Review - Q/A session</td>
</tr>
<tr>
<td>System overview</td>
<td>Process Control &amp; Database</td>
<td>Cabinet configuration and item designation</td>
<td>S400 I/O family</td>
<td>Fault Tracing Methods</td>
</tr>
<tr>
<td>AdvaCommand, User Interface</td>
<td>AdvaBuild, AS500 On-line Builder</td>
<td>Terminal diagrams</td>
<td>S800 I/O family</td>
<td>Repairs and maintenance</td>
</tr>
<tr>
<td>Display selection</td>
<td>Fault tracing command MDB</td>
<td>Basic Units</td>
<td>Master Net</td>
<td>Fault Tracing Exercises</td>
</tr>
<tr>
<td>Process adaptation - Signal path</td>
<td>AdvaBuild, AS100 ES Online builder</td>
<td>Status List</td>
<td>System Status</td>
<td>Wrap-up, summary</td>
</tr>
<tr>
<td>AdvaCommand, Manual Control</td>
<td>Process Control AMPL</td>
<td>Backup and Loading into the Advant Controller</td>
<td>Fault Tracing commands LS, SHTARG and SLTARG</td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Fault tracing commands LV, MV, GETAB and GEPCD</td>
<td>Central backup</td>
<td>Process &amp; Process Model</td>
<td></td>
</tr>
</tbody>
</table>

ABB University
BU Process Industries Products
www.abb.com/controlsystems
www.abb.com/abbuniversity