ABB University Switzerland

Course Program 2015
Learning Center Power Electronics and MV Drives
Editorial

Introduction
The mission of our learning center is to provide competence to our customer and employees. We want to enable them to operate their assets in a safe, economical and efficient way. Our vision is to assist our customers in optimizing the performance, safety and reliability of their assets.

Our learning center offers a wide range of professional training courses adapted to meet your needs and to establish a long-time partnership.

Your business is exclusive — your training and education should be exclusive, as well!

Training courses
Scheduled classes (public)
In our learning center in Turgi, Switzerland, we use our high quality training equipment and real simulating training units. The trainees will gain practical experience using available tools and techniques while doing practical exercises.

Tailored classes (on request)
The training can be held in our learning center in Switzerland or on-site at customer’s facilities. The program and content can be adapted according to their needs and requirements. All information of the installed unit are used to run a custom-tailored training.

Our learning center offers a variety of additional course languages. Please contact us for more details.

Travel information
More detailed travel information can be found on our homepage or in the general ABB University Switzerland brochure.

Training conditions
Our learning center shall not reserve any resources such as trainers, equipment, training material and facilities without having received the officially signed purchase order.

Cancellation
Except where otherwise stated, no fee is to be paid if the cancellation is received more than 10 calendar days prior to the start of the course. Thereafter 50% of the course fee is charged. For cancellations received less than 10 working days before the start of the course, the full fee becomes due.

Hands-on training
Classroom training
Course portfolio MV Drives
Learning path - Service and Commissioning

Target group
- Field service engineers of ABB and partners
- Testing
- Application Engineering

Description
- E-Learning (to be completed)
- Classroom training in Turgi, Switzerland
- Classroom training (optional)

- MEGADRIVE-LCI
  - G830 MEGADRIVE-LCI with AC 800PEC S&C training
  - G839 MEGADRIVE-LCI with AC 800PEC Hands-on

- Wind Converters
  - J715 PCS6000 EXPERT training

- Classroom training in Turgi, Switzerland

ACS1000
- G711e ACS1000 e-Learning
- G711 ACS1000 e-Learning
- G719 ACS1000 Hands-on training

ACS2000
- G781e ACS2000 e-Learning
- G781 ACS2000 S&C training
- G789 ACS2000 Hands-on training

ACS5000
- G741e AC5000 e-Learning
- G741 ACS5000 S&C training
- G749 ACS5000 Hands-on training

ACS6000
- G761e ACS6000 e-Learning
- G761 ACS6000 S&C training
- G769 ACS6000 Hands-on training

ACS1000 and ACS6000
- G711e ACS1000 e-Learning
- G761e ACS6000 e-Learning
- G720 ACS1000 and ACS6000 S&C combined training

ACS1000 and ACS5000
- G711e ACS1000 e-Learning
- G741e AC5000 e-Learning
- G721 ACS1000 and ACS5000 S&C combined training

ACS5000 and ACS6000
- G741e AC5000 e-Learning
- G761e ACS6000 e-Learning
- G722 ACS5000 and ACS6000 S&C combined training

ACS1000 and ACS2000
- G711e ACS1000 e-Learning
- G781e ACS2000 e-Learning
- G723 ACS1000 and ACS2000 S&C combined training
Course program MV Drives
Learning path - Operation and Maintenance

**Target group**
- Operation
- Maintenance
- Electrician
- Sales

**Description**
- E-Learning (to be completed)
- Classroom training in Turgi, Switzerland
- Classroom training (optional)

Diagram:
- G790e MV Drives Introduction 1 (e-Learning)
- G791e MV Drives Introduction 2 (e-Learning)
- G750 ACS1000 O&M training
- G770 ACS2000 O&M training
- G731 ACS5000 Air Cooled O&M training
- G732 ACS5000 Water Cooled O&M training
- G750 ACS6000 O&M training
- MEGADRIVE-LCI
  - G800 MEGADRIVE-LCI with PSR2 O&M training
  - G820 MEGADRIVE-LCI with AC 800PEC O&M training
- Cycloconverter
  - G875 ACS6000c Cycloconverter O&M training
  - G870 PSR Cycloconverter O&M training
- Wind Converter
  - J740 PCS6000 BASIC training
- G74 DriveMonitor™ O&M training
Course portfolio MV Drives

Course Prices
The following prices are valid for courses conducted in the Learning Center Power Electronics and MV Drives in Turgi, Switzerland.

The course fees per person include one documentation set, daily transportation from the hotel to our learning center, lunches and coffee breaks. Neither travel, other living expenses nor health insurance are included.

Our price is calculated without taxes, VAT, withholding taxes, customs, fees and other duties. Shall any of these taxes apply, it shall be borne by the client.

The latest version of the course schedule can be found on Internet: www.abb.ch/abbuniversity

Operation and Maintenance training

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Duration</th>
<th>Date</th>
<th>CHF/Person</th>
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<tbody>
<tr>
<td>G700</td>
<td>ACS 1000 Operation and Maintenance</td>
<td>3 days</td>
<td>scheduled</td>
<td>3660</td>
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<td>G770</td>
<td>ACS 2000 Operation and Maintenance</td>
<td>3 days</td>
<td>scheduled</td>
<td>3660</td>
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<tr>
<td>G731</td>
<td>ACS 5000 Air-Cooled Operation and Maintenance</td>
<td>3 days</td>
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<td>3690</td>
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<tr>
<td>G732</td>
<td>ACS 5000 Water-Cooled Operation and Maintenance</td>
<td>4 days</td>
<td>scheduled</td>
<td>5180</td>
</tr>
<tr>
<td>G750</td>
<td>ACS 6000 Operation and Maintenance</td>
<td>4 days</td>
<td>scheduled</td>
<td>5180</td>
</tr>
<tr>
<td>G800</td>
<td>MEGADRIVE LCI with PSR2 Operation and Maintenance</td>
<td>4 days</td>
<td>scheduled</td>
<td>4950</td>
</tr>
<tr>
<td>G820</td>
<td>MEGADRIVE LCI with AC 800PEC Operation and Maintenance</td>
<td>4 days</td>
<td>scheduled</td>
<td>4950</td>
</tr>
<tr>
<td>G794</td>
<td>DriveMonitor\textsuperscript{TM} Operation and Maintenance</td>
<td>1 day</td>
<td>on request</td>
<td>on request</td>
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<tr>
<td>G875</td>
<td>ACS 6000c Cycloconverter Operation and Maintenance</td>
<td>4 days</td>
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<tr>
<td>G870</td>
<td>PSR Cycloconverter Operation and Maintenance</td>
<td>3 days</td>
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<tr>
<td>J710</td>
<td>PCS6000 BASIC training</td>
<td>5 days</td>
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Service and Commissioning training*

<table>
<thead>
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<th>Course</th>
<th>Description</th>
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<th>CHF/Person</th>
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</thead>
<tbody>
<tr>
<td>G711</td>
<td>ACS 1000 Service and Commissioning</td>
<td>3 days</td>
<td>scheduled</td>
<td>3030</td>
</tr>
<tr>
<td>G781</td>
<td>ACS 2000 Service and Commissioning</td>
<td>3 days</td>
<td>scheduled</td>
<td>3030</td>
</tr>
<tr>
<td>G741</td>
<td>ACS 5000 Service and Commissioning</td>
<td>4 days</td>
<td>scheduled</td>
<td>3390</td>
</tr>
<tr>
<td>G761</td>
<td>ACS 6000 Service and Commissioning</td>
<td>4 days</td>
<td>scheduled</td>
<td>3390</td>
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<tr>
<td>G720</td>
<td>ACS 1000 &amp; ACS 6000 Service and Commissioning combined course</td>
<td>5 days</td>
<td>scheduled</td>
<td>5310</td>
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<tr>
<td>G721</td>
<td>ACS 1000 &amp; ACS 5000 Service and Commissioning combined course</td>
<td>5 days</td>
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<td>5310</td>
</tr>
<tr>
<td>G722</td>
<td>ACS 5000 &amp; ACS 6000 Service and Commissioning combined course</td>
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<td>scheduled</td>
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<tr>
<td>G723</td>
<td>ACS 1000 &amp; ACS 2000 Service and Commissioning combined course</td>
<td>5 days</td>
<td>scheduled</td>
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<tr>
<td>G830</td>
<td>MEGADRIVE LCI with AC 800PEC Service and Commissioning</td>
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<tr>
<td>G795</td>
<td>DriveMonitor\textsuperscript{TM} Service and Commissioning</td>
<td>2 days</td>
<td>on request</td>
<td>on request</td>
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<tr>
<td>J715</td>
<td>PCS6000 EXPERT training</td>
<td>5 days</td>
<td>on request</td>
<td>on request</td>
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*Training courses are only available for ABB employees and channel partners and part of the field service engineer's certification program.
Course portfolio MV Drives

**Hands-on training**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Duration</th>
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<th>CHF/Person</th>
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<td>G719</td>
<td>ACS 1000 Hands-on</td>
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<td>G789</td>
<td>ACS 2000 Hands-on</td>
<td>1 day</td>
<td>scheduled</td>
<td>910</td>
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<tr>
<td>G749</td>
<td>ACS 5000 Hands-on</td>
<td>1 day</td>
<td>scheduled</td>
<td>910</td>
</tr>
<tr>
<td>G769</td>
<td>ACS 6000 Hands-on</td>
<td>1 day</td>
<td>scheduled</td>
<td>910</td>
</tr>
<tr>
<td>G839</td>
<td>MEGADrive LCI Hands-on and Update</td>
<td>3 days</td>
<td>scheduled</td>
<td>2650</td>
</tr>
</tbody>
</table>

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**E-learning**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Duration</th>
<th>Date</th>
<th>CHF/Person</th>
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<tbody>
<tr>
<td>G790e</td>
<td>MV Drives Introduction 1</td>
<td>n.a.</td>
<td>n.a.</td>
<td>for free</td>
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<tr>
<td>G791e</td>
<td>MV Drives Introduction 2</td>
<td>n.a.</td>
<td>n.a.</td>
<td>for free</td>
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<tr>
<td>G786e</td>
<td>ACS 2000 Sales</td>
<td>n.a.</td>
<td>n.a.</td>
<td>for free</td>
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</table>

**Classroom training**
Target group
- Field service engineers of ABB and partners
- Testing
- Application Engineering

*Training courses only available for ABB employees and part of the field service engineer’s certification program.

Description
- E-Learning (to be completed)
- Classroom training in Turgi, Switzerland
- Classroom training (optional)
Course portfolio Power Control
Learning path - Service and Commissioning

**Target group**
- Field service engineers of ABB and partners
- Testing
- Application Engineering

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**Description**
- E-Learning (to be completed)
- Classroom training in Turgi, Switzerland
- Classroom training (optional)
Course portfolio Power Control
Learning path - Operation and Maintenance

Target group
- Operation
- Maintenance
- Electrician

Description
- E-Learning
  (to be completed)
- Classroom training in Turgi, Switzerland
- Classroom training (optional)

UNITROL 6000
- J683 UNITROL 6800 O&M training
- J684 UNITROL 6080 O&M training

UNITROL 5000
- J620 UNITROL 5000 O&M training

UNITROL F
- J520 UNITROL F O&M training

SYNCHROTACT 5
- J900 SYNCHROTACT 5 O&C training

Control 800xA
- J452 AC 800PEC Matlab/Simulink for PEC-3 training
- J450 AC 800PEC Matlab/Simulink training
- J400 AC 800PEC Hardware and Tools training
- J410 AC 800PEC Control Builder training

High Power Rectifier
- J220 High Power Rectifier O&M training

FOCS
- J251 FOCS Level 1 training
- J252 FOCS Level 2 training

J990 Excitation Systems and Synchronous Machines Fundamentals
J950 PSR2/FUPLA Programming training
J900 SYNCHROTACT 5 O&C training
J620 UNITROL 5000 O&M training
J520 UNITROL F O&M training
J452 AC 800PEC Matlab/Simulink for PEC-3 training
J450 AC 800PEC Matlab/Simulink training
J400 AC 800PEC Hardware and Tools training
J410 AC 800PEC Control Builder training
J220 High Power Rectifier O&M training
J251 FOCS Level 1 training
J252 FOCS Level 2 training
Course Program 2015

Course portfolio Power Control

Course Prices
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Operation and Maintenance training

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<th>Description</th>
<th>Duration</th>
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<th>CHF/Person</th>
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<tr>
<td>J990</td>
<td>Excitation Systems and Synchronous Machines Fundamentals</td>
<td>4 days</td>
<td>scheduled</td>
<td>1970</td>
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<td>J220</td>
<td>High Power Rectifier Systems Operation and Maintenance</td>
<td>4 days</td>
<td>on request</td>
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<tr>
<td>J320</td>
<td>UNITROL P Operation and Maintenance</td>
<td>5 days</td>
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<tr>
<td>J520</td>
<td>UNITROL F Operation and Maintenance</td>
<td>5 days</td>
<td>on request</td>
<td>on request</td>
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<tr>
<td>J620</td>
<td>UNITROL 5000 Operation and Maintenance</td>
<td>5 days</td>
<td>on request</td>
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<tr>
<td>J683</td>
<td>UNITROL 6800 Operation and Maintenance</td>
<td>5 days</td>
<td>scheduled</td>
<td>4940</td>
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<tr>
<td>J684</td>
<td>UNITROL 6080 Operation and Maintenance</td>
<td>5 days</td>
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<tr>
<td>J900</td>
<td>SYNCHROTACT 5 Operation and Commissioning</td>
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<td>G840</td>
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<tr>
<td>J950</td>
<td>PSR2/FUPLA2 Programming</td>
<td>5 days</td>
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<td>J251</td>
<td>FOCS Level 1</td>
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<td>FOCS Level 2</td>
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<td>J410</td>
<td>AC 800PEC Control Builder</td>
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<td>J450</td>
<td>AC 800PEC Matlab/Simulink</td>
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<tr>
<td>J452</td>
<td>AC 800PEC Matlab/Simulink for PEC-3</td>
<td>3 days</td>
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## Service and Commissioning training*

<table>
<thead>
<tr>
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<th>Duration</th>
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<tr>
<td>J210</td>
<td>High Power Rectifier Systems Service and Commissioning</td>
<td>5 days</td>
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<td>J340</td>
<td>UNITROL P Service and Commissioning</td>
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<td>J390</td>
<td>UNITROL P Hands-on and Update Training</td>
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<td>J640</td>
<td>UNITROL F Service and Commissioning</td>
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<td>J690</td>
<td>UNITROL F Hands-on and Update Training</td>
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<td>J130</td>
<td>UNITROL 1000 Service and Commissioning</td>
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<td>J131</td>
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<tr>
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<td>J692</td>
<td>UNITROL 6800 Upgrade Training UN6080 to UN6800</td>
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## E-learning

<table>
<thead>
<tr>
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<th>Description</th>
<th>Duration</th>
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<tr>
<td>J201e</td>
<td>High Power Rectifier Basic Knowledge</td>
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<td>High Power Rectifier Advanced Knowledge</td>
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</table>
Learning center location in Turgi, Switzerland

Training rooms ground floor

Training rooms 1st floor