

HITACHI ENERGY UNIVERSITY

COURSE PORTFOLIO 2022/2023

Learning Center Grid Automation



Location Baden Switzerland and St Neots U.K.

Face to face and remote classroom training for

- **Substation Automation Systems**
- **Protection Systems**
- **Communication Networks**

Welcome

Our learning center Grid Automation in Baden, Switzerland and St Neots United Kingdom, offers a wide range of training services including basic and advanced training courses as well as project-specific or customized courses.

Course prices

In general, the course fee includes e-documentation, lunches and coffee breaks. On request, printed course documentation can be ordered against payment. Neither travel or living expenses nor health insurance are included in the course fee.

The latest version of the course schedule, course description and prerequisites can be found on our learning center [webpages](#).

New: Remote Classroom Training

We offer new all courses as a [remote classroom](#) /[laboratory training](#) together with instructor led course. So, you have the choice, rather to attend the course face to face at the learning center or you take it virtual with a live session from home and additional with the possibility of remote connection to the training-model. All remote courses run always from 9AM - 4PM CET with breaks.

Cancellation conditions

Except where otherwise stated, no fee is to be paid if the cancellation is received 21 calendar days prior to the start of the course. Thereafter 50% of the course is fee charged. For cancellation received up to 7 calendar days before the start of the course the full fee becomes due.

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

Standard courses may be cancelled due to lack of participants. In such cases, you will be informed at least 3 weeks prior to the scheduled start of the course.

Location of learning center



Hitachi Energy Switzerland AG
Bruggerstrasse 72, CH-5400 Baden
Switzerland



Hitachi Energy (based at ABB premises)
Howard Road Eaton Socon, St Neots
Cambridgeshire PE19 8EU, United Kingdom

Contact us:

Please contact us for catalog courses:

[Price request for catalog courses](#)

Or for special customized courses:

[Customized course request](#)

Table of content:

Editorial	3
Portfolio Structure	3
Training Services overview	4
Theory Courses (SAS, Net-Com, Protection)	5
System Courses (SAS & Protection)	6
Product Courses (SAS & Protection)	7
Product Courses (Network Communication)	8

Editorial

Vision



Hitachi Energy University enhances the productivity of businesses and individuals for its customers and employees by making learning a valuable experience.

Course Schedule → Link



Training Services (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 your needs and requirements. All information related to your project will be used to run a customized training.

Travel information



More detailed travel information can be found on our webpage or in our Hitachi Energy University Switzerland.

Training conditions



For our training conditions please refer to our Hitachi Energy Switzerland / Learning Center Grid Automation – Course Portfolio.

Equipment and infrastructure



We strongly emphasize that our trainings are in step with actual practice. Therefore, we provide our trainees with adequate infrastructure in each course, such as computers, simulators and devices.

Instructors



All our instructors are product or system experts and very experienced in their field of work. In addition to their engineering knowledge they are capable of didactics and training methodology.

Training Quality



Our highly qualified team are always aiming to meet your needs. Grid Automation Learning Centers are certified by EduQua, which is a Swiss Certificate for quality in further education. It guarantees and develops the quality in the institution of further education.

Training module structure (training level guidance)

The design of our training services is based on a main outcome level (showed in the table below). So, we have a guidance of the main outcomes of a training module and how they can be sequenced with each other.

	Level 1 / Fundamentals, Operation & Maintenance	Level 2 / Application, System Modification	Level 3 / adv. Solutions, Engineering, Integration
Technology Courses Focused on technology know-how and praxis experience	Fundamentals Basic application concepts Introduction in typical solutions General philosophies ... Fundamental information ... Basic knowhow ... Basic requirements ...	Application In-depth application concepts Design complete unit solutions In-depth function explanation Basic calculation examples Coordinate function concepts Praxis proven solutions	Advanced Solutions Complex applications & solutions Calculation based on power system analyzes Complex arrangements & functions Solution concepts & definition (Template) Perform system analytical skills
Product Courses Focused on single product knowledge and hands-on exercises	Operation / Basic Maintenance Function concept, operate secure the product Exchange device, Error handling Maintain safely the product Minor changes (Parameter, Settings, ...) Typically for Operation (O&M) Personnel	Configuration/Modification Adv. Troubleshooting & Maintenance Configure/implement add. Function Modify & add. new signal flow In-depth function test Extend and integrate new product Typically for Costumer System Specialist	Engineering, Integration Focus is project engineering execution! Engineering from scratch (Template, Product Prime) Typically for Integrator-Partners & Eng.
System Courses Focused on the overall SAS system knowledge and hands-on exercises	Operation / Basic Maintenance Function concept, operate secure the product, Exchange device, Error handling Maintain safely the system Minor changes (Parameter, Settings, ...) Typically for Operation (O&M) Personnel	Configuration/Modification Adv. Troubleshooting & adv. Maintenance Configure add. Function Modify & add. new signal flow In-depth function test Extend and integrate new product or bays Typically for Costumer System Specialist	Engineering, Integration Focus is project engineering execution! Engineering from scratch (Templates, Reference Application) Typically for Integrator-Partners & Eng.

Training services overview

Catalog courses: Described content and open for all target groups

Catalog courses have a fix described content and outcome, a fix schedule and can be delivered as F2F or remote classroom training.

We offer them in the areas of:

Grid Automation Technology (incl. Grid Integration)

Substation Automation and Protection Systems

Communication Networks

At the following pages you will find a list of all open courses.

If you are interested, please contact us for an offer:

[Price request for catalog courses](#)

Customized courses: On-demand and tailor-made for your team

You are requiring a special customized course for your team or your project?

- For every kind of target group
- With flexible content (for ideas, please navigate below in the "Catalog courses")
- With flexible duration and date
- Flexible venue CH / Baden, UK –/ Saint Neots or On-site
- With or without training-model
- For a group above 4-5 person
- Delivery F2F or remote
- Price for complete course

If you are interested, please send us your requirements for helping you to consult your course outcome.

[Customized course request](#)

Coaching courses: On-demand for individual needs

You are requiring an individual workshop to get trained on specific need?

- For every kind of target group
- Flexible content (for ideas navigate below or in the "Catalog courses")
- Flexible duration and date
- Flexible venue CH / Baden, UK / Saint Neots or On-site
- With or without training-model
- Individual for 1-2 person
- Delivery F2F or remote
- Price per course day

If you are interested, please send us your requirements for helping you to consult your course outcome.

[Customized course request](#)

All training services you can visit as a remote classroom training or as a face-to-face leded course!

For the todays actual available course dates you please check the actual course schedule!

(This actual course schedule will be updated at least every month)

No.	Open Course Title (with link to description)	Day	All planned dates Date yyyy: mm/dd	E/D/F	Price request Country
Theory Courses					
Power System, Substation Automation & Protection					Course price request
<i>Level 1</i>					
CHP101	Power Grids Integration and Automation Technology - Fundamentals	5	2022: 08/29 – 09/02 2023: 02/27 – 03/03	E E	CH
<i>Level 2</i>					
CHP184	Digital Substation Architecture Design – Applications	2	2022: 09/05 – 09/06 2023: 03/06 – 03/07	E E	CH
CHP108	Cyber Security for Power Utilities – Applications	2	2022: 09/07 – 09/08 2023: 03/08 – 03/09	E E	CH
CHP131	Protection for Power Plants – Applications	5	2022: 09/12 – 09/16 2023: 03/13 – 03/17	E E	CH
CHP132	Protection for Lines, Busbars, CBs & Power Transformers – Applications	5	2022: 09/12 – 09/16 2023: 03/13 – 03/17	E E	CH
<i>Level 3</i>					
CHP188	Protection Studies for various Power Networks – Advanced Solutions	5	2022: 10/24 – 10/28 2023: 04/17 – 04/21	E E	CH
<i>On-Request</i>					
CHP134	Protection for Industry & Distribution – Applications	5	on request	E	CH
Communication Networks					
					Course price request
<i>Level 1</i>					
CHP525	Utility MPLS-TP Networks - Fundamentals	2	2022: 09/08 – 09/09 2023: 03/09 – 03/10	E E	CH
<i>On-Request</i>					
CHP520	Utility SDH Networks - Fundamentals	2	on request	E	CH
CHP522	Ethernet Switching and TCP/IP - Introduction	2	on request	E	CH

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No.	Open Course Title (with link to description)	Day	All planned dates Date yyyy: mm/dd	E/D/F	Price request Country
System Courses					
Substation Automation & Protection					Course price request
<i>Level 1</i>					
CHP122	SAS600 Substation Automation – Operation	2	2022: 09/26 – 09/27 2023: 04/17 – 04/18	E E	CH
CHP123	SAS600 Substation Automation - Operation & Maintenance	5	2022: 09/26 – 09/30 2023: 04/17 – 04/21	E E	CH
CHP115	Relion® 670/650 series with PCM600 for Protection Solutions – Operation	2	2022: 09/19 – 09/20 2023: 03/20 – 03/21	E E	
CHP150	Relion® 670/650 series with PCM600 for Protection Solutions – Maintenance & Configuration	5	2022: 09/19 – 09/23 2023: 03/20 – 03/24	E E	
<i>Level 2</i>					
CHP194	IET600/ITT600 for SAS600 Modification – System Engineering	5	2022: 10/03 – 10/07 2023: 04/24 – 04/28	E E	CH
CHP157	SAM600 for Digital Substation Solutions - Operation & Maintenance	2	2022: 09/26 – 09/27 2023: 03/27 – 03/28	E E	CH
CHP158	Relion® for Digital Substation Solutions - Testing & Commissioning	5	2022: 09/26 – 09/30 2023: 03/27 – 03/31	E E	CH
CHP176	RTU540/560 Remote Terminal Unit Modification – System Engineering	5	2022: 12/05 – 12/09 2023: 06/26 – 06/30	E E	CH
<i>Level 3</i>					
CHP191	IET600/ITT600 for IEC 61850 Integration & Testing – System Engineering	5	2022: 11/28 – 12/02 2023: 06/19 – 06/23	E E	CH
<i>On-Request</i>					
CHP195	IET600 for IEC 61850 Integration with MicroSCADA - System Engineering	9	on request	E	CH

Only for internal Hitachi personnel

Course price request

<i>Level 3</i>					
CHP196	IET600 Expert for IEC 61850 Integration MicroSCADA - System Engineering (only Hitachi int.)	6 (2x3d)	2022: 10/24 – 11/02 2023: 01/16 – 01/25	E E	CH
CHP197	SAS600 advanced Integration and Testing - System Engineering (only Hitachi internal)	6 (2x3d)	2022: 11/14 – 11/23 2023: 02/13 – 02/22	E E	CH
CHS151	Digital Substation Upgrade Course – System Engineering (only Hitachi internal)	6 (2x3d)	2022: 10/03 – 10/12 2023: 03/27 – 04/05	E E	CH

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No.	Open Course Title (with link to description)	Day	All planned dates Date yyyy: mm/dd	E/D/F	Price request Country
Product Courses					
Substation Automation & Protection					Course price request
<i>Level 2</i>					
CHP115	Relion® 670/650 series with PCM600 for Protection Solutions – Operation	2	2022: 09/19 – 09/20 2023: 03/20 – 03/21	E E	
CHP150	Relion® 670/650 series with PCM600 for Protection Solutions – Maintenance & Configuration	5	2022: 09/19 – 09/23 2023: 03/20 – 03/24	E E	CH
CHP157	SAM600 for Digital Substation Solutions - Operation & Maintenance	2	2022: 09/26 – 09/27 2023: 03/27 – 03/28	E E	CH
CHP158	Relion® for Digital Substation Solutions -Testing & Commissioning	5	2022: 09/26 – 09/30 2023: 03/27 – 03/31	E E	CH
CHP153	REB500/REB500sys for Busbar & Station Protection Solutions – Maintenance & Configuration	3	2022: 10/03 – 10/05 2023: 03/06 – 03/08	E E	CH
CHP170	SDM600 System Data Management - Operation & Configuration	1	2022: 09/09 2023: 03/10	E E	CH
<i>On-Request</i>					
CHP155	Relion® 670/650 series with PCM600 for Grid Protection Solutions – Maintenance & Configuration	5	on request	E	CH
CHP156	Relion® 670/650 series with PCM600 for Generator Protection Solutions – Maintenance & Configuration	5	on request	E	CH
CHP164	REF542plus for Control and Protection Solutions – Operation & Configuration	4	on request	E	CH
CHP151	REG216/316*4 for Generator Protection Solutions – Operation & Configuration	5	on request	E	CH

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No.	Open Course Title (with link to description)	Day	All planned dates Date yyyy: mm/dd	E/D/F	Price request Country
Product Courses					
Communication Networks					
FOX615 Multiservice Platform					Course price request
<i>Level 1: Product Courses - Basic</i>					
CHP595	FOX615 Multiservice Platform for SDH Networks	5	2022: 09/05 – 09/09 2022: 09/26 – 09/30 2022: 10/17 – 10/21 2022: 11/21 – 11/25 2023: 03/06 – 03/10 2023: 04/24 – 04/28 2023: 06/26 – 06/30	E F E E E E E	CH
CHP598	FOX615 Multiservice Platform for MPLS-TP Networks	5	2022: 09/12 – 09/16 2022: 10/24 – 10/28 2022: 11/28 – 12/02 2023: 03/13 – 03/17 2023: 04/17 – 04/29 2023: 06/19 – 06/23	E E E E E E	CH
FOX515 - FOX505 - FOX515H - FOX660 TDM Utility MUXs					Course price request
<i>Level 1: Product Courses - Basic</i>					
CHP552	FOX515H & Hs Multiservice Utility-MUX	3	on request	E	CH
CHP553	FOX505 Access MUX	4	on request	E	CH
<i>On request</i>					
CHP592	FOX515 Access/Transport MUX	5	on request	E	CH
FOX605 & FOX660 MPLS-TP Utility MUXs					Course price request
<i>Level 1: Product Courses - Basic</i>					
<i>On-Request</i>					
CHP555	FOX605 A Secure MPLS enabled Utility-MUX	4	on request	E	CH
Network Management System					Course price request
<i>Level 1: Basic courses</i>					
CHP593	FOXMAN-UN Network Management System for Operators	3	2022: 09/19 – 09/21 2022: 12/05 – 12/07 2023: 03/13 – 03/15 2023: 06/26 – 06/28	E E E E	CH
CHP554	FOXView Enterprise Network Management System	1	on request	E	
<i>Level 2: Advanced courses</i>					
CHP594	FOXMAN-UN Network Management System for Administrators	2	2022: 09/22 – 09/23 2022: 12/08 – 12/09 2023: 03/16 – 03/17	E E E	CH
For the todays actual available course dates you please check the actual course schedule!					

No.	Open Course Title (with link to description)	Day	All planned dates Date yyyy: mm/dd	E/D/F	Price request Country
Product Courses					
Communication Networks					
ETL600 Power Line Carrier / NSD570 Tel- eprotection Equipment					Course price request
<i>Level 1: Product Courses - Basic</i>					
CHP570	ETL600 R4 Universal Digital PLC Equipment	5	2022: 09/12 – 09/16 2022: 11/21 – 11/25 2023: 02/27 – 03/03 2023: 06/19 – 06/23	E E E E	CH
CHP574	NSD570 Teleprotection Equipment	2.5	2022: 09/19 – 09/21 2022: 11/28 – 11/30 2023: 04/17 – 04/19	E E E	CH
<i>Level 2: Product Courses - Advanced</i>					
CHP575	NSD570 IEC61850 GOOSE Interface	1.5	2022: 09/21 – 09/22 2022: 11/30 – 12/01 2023: 04/19 – 04/20	E E E	CH
AFS Switch, Router & Firewall Family					Course price request
<i>Level 1: Product Courses - Basic</i>					
CHP558	AFS600 Switch Family	3	on request	E	CH
<i>Level 2: Product Courses - Advanced</i>					
CHP560	AFF Firewall	2	on request	E	CH
PABX Equipment					Course price request
<i>Level 1: Product Courses - Basic</i>					
CHP588	SV9500 Appliance Server Telephone System	5	2022: 11/28 – 12/02	E	CH
CHP590	SV9100 Telephone System	5	2022: 09/19 – 09/23 2023: 03/13 – 03/17	E E	CH
<i>On-Request</i>					
CHP589	SV9500 Standard Server Telephone System	5	on request	E	CH

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Product Courses					
Communication Networks					
XMC20 Multiservice Platform					Course price request
UKP593	UNEM Network Management System for Operators	3	2022: 10/04 – 10/06 2023: 05/23 – 05/25	E E	UK
UKP594	UNEM Network Management System for Administrators	2	2022: 08/30 – 08/31 2022: 11/22 – 11/23 2023: 03/28 – 03/29	E E E	UK
UKP595	XMC20 Multiservice Platform for SDH Networks	5	2022: 08/08 – 08/12 2022: 10/31 – 11/04 2023: 01/23 – 01/27 2023: 05/08 – 05/12	E E E E	UK
UKP598	XMC20 Multiservice Platform for MPLS-TP Networks	5	2022: 08/22 – 08/26 2022: 11/14 – 11/18 2023: 02/20 – 02/24 2023: 07/10 – 07/14	E E E E	UK

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