

SIEMENS

Process Analytics Gas Analyzers Trainings



Process Analytics

Gas Analyzers

Trainings

From individual analyzers to custom system solutions, Siemens offers a comprehensive range of modern process analyses for all types of industries, processes, and applications. However, the performance and availability of modern analytical devices and systems can only be optimally used in conjunction with knowledgeable and application-oriented use and transformed into economic success. Therefore, Siemens process analytics complements the device and system offerings with a comprehensive training program for planning, operating, and maintenance personnel.

The courses are modularly structured and cover the entire spectrum of analytical devices used in continuous gas analysis. Generally, the courses include physical measurement techniques, constructive design, and practical application of the devices, including extensive practical exercises related to the devices and their components. Additionally, course content is reinforced through systematic repetition and success review.

The main training location is the Siemens Training Center Europe in Karlsruhe. In addition, we offer trainings at the customer's site. Given the limited number of participants, the courses provide room for the exchange of customer-specific topics alongside the regular program.

We are pleased to introduce a new offering: Interactive live online training with practical exercises transmitted via high-definition live streaming.

The trainings are conducted online via streaming, supported by interactive software. No recorded videos are used during the interactive live session. The aforementioned training content is demon-

strated live by a trainer and the participants see and learn exactly the same content as in a face-to-face training. Of course, the interactive training offers the same benefits as classroom training: exchange with other course participants or clarification of questions.

This brochure provides an overview of the planned courses.

The prices stated include the course itself, the course documentation and catering during the event.

Other costs such as travel and accommodation expenses are not included. Prices are subject to the statutory value-added tax.

Please note that some courses require prerequisite for participation in follow-up courses.

Further information about our course programme can be found at:







<http://www.sitrain-learning.siemens.com/DE/en/rw4563/Process-Analytics>

Tel. +49-172/4459628

E-Mail: pa-training.industry@siemens.com

Course title	Classroom	Online	Content
	For further information scan QR code		
SC-G-OXYU	3 days BAS		<p>OXYMAT 6 / OXYMAT 61 / ULTRAMAT 6 / ULTRAMAT 23</p> <p>Physical measurements, paramagnetism and infrared absorption according to the NDIR single and double beam principle / Measurement of oxygen / Micro flow sensor, reference gas / Measurement of infrared active gases / Structure and function of analyzers controlled by microprocessors / Construction and function of microprocessor controlled analyzers / Oxygen sensor, infrared sensor and electrochemical oxygens cell / Operation, parameters and maintenance software / Commissioning and use of OXYMAT 6, OXYMAT 61, ULTRAMAT 6 and ULTRAMAT 23 Infrared cells and phase adjustment / Preventive maintenance / Failure diagnosis and remedy / Practical exercises in the laboratory</p> <p>Requirement: General knowledge of electrical engineering</p>
SC-G-UL23	2 days ADV		<p>ULTRAMAT 23</p> <p>Infrared absorption according to the NDIR principle / Micro flow sensor / Measurement of infrared active gases and oxygen / Structure and function of analyzers controlled by microprocessors / Single beam infrared cells / Electrochemical oxygen cell / Commissioning and use of the ULTRAMAT 23 / Preventive maintenance / Failure diagnosis and remedy / Practical exercises in the laboratory</p> <p>Requirement: Basic knowledge of process analysis / General knowledge of electrical engineering</p>
SC-G-ULT6	2 days ADV		<p>ULTRAMAT 6</p> <p>Infrared absorption according to the NDIR principle, micro flow sensor / Measurement of infrared active gases / Splitted beam infrared cell, phase adjustment / Structure and function of analyzers controlled by microprocessors / Commissioning and use of the ULTRAMAT 6 / Preventive maintenance / Operation, parameters, maintenance software, failure diagnosis and remedy / Practical exercises in the laboratory</p> <p>Requirement: Basic knowledge of process gas analytics / General knowledge of electrical engineering</p>
SC-G-LAS	2 days BAS		<p>In-Situ Gas Analyzer LDS 6 and SITRANS SL Operation and maintenance</p> <p>Principles of laser diode spectroscopy / In situ measurement of gases / Customer specific application requirements / Structure of the analyzer LDS 6, fiber optics / Structure of the analyzer SITRANS SL / Software, operation and parameters / Sensor alignment and transmission / Diagnostics, preventive maintenance / Version for hazardous areas / Remote control software and diagnostics via modem</p> <p>Requirement: Basic knowledge of gas analytics / General knowledge of electrical engineering</p>
SC-G-TDL	2 days BAS		<p>SITRANS TDL Operation and maintenance</p> <p>Principles of laser diode spectroscopy / In situ measurement of gases / Customer specific application requirements / Structure of the analyzer SITRANS TDL / Software, operation and parameters / Sensor alignment and transmission / Diagnostics, preventive maintenance, remote diagnosis / Version for hazardous areas</p> <p>Requirement: Basic knowledge of gas analysis / General knowledge of electrical engineering</p>
SC-G-FID	2 days BAS		<p>FIDAMAT 6 Operation and maintenance</p> <p>Physical principles for the detection of hydrocarbons / Flame ionization, hydrocarbons in the gas phase / Structure and function of analyzers controlled by microprocessors / The software and its parameters / Pneumatic structure of the analyzer and of the sample preparation system / Start up and use of the FIDAMAT 6 / Preventive maintenance / Failure diagnosis and remedy / Practical exercises in the laboratory</p> <p>Requirement: Basic knowledge of process analytics / General knowledge of electrical engineering</p>

Course title	Classroom	Online	Content
	For further information scan QR code		
SC-G-GA7	2 days BAS		<p>SIPROCESS GA700 OXYMAT 7 ULTRAMAT 7 CALOMAT 7 Modular system operation and maintenance</p> <p>Modular gas analyzer: Presentation of modular structure (incl. place of installation) System / Subsystem: Rack- and wall-mounted housings / Analyzer modules OXYMAT 7, ULTRAMAT 7, CALOMAT 7, incl. introduction into principle of measurement / Options Startup of a complete system (installation, wiring, configuration, ...) / Local user interface: Basic setting and quick-start menu / Service levels / Structure of menu / Calibration / Preventive maintenance</p> <p>Requirement: Basic knowledge of process analytics / General knowledge of electrical engineering</p>
SC-G-GA7A	2 days ADV		<p>SIPROCESS GA700 OXYMAT 7 ULTRAMAT 7 CALOMAT 7 Modular system Advanced User</p> <p>GA700 troubleshooting / diagnostic Middle-range repairs selecting and utilizing the necessary spare parts Option Modules Possibility of Remote Service Enhanced GA700 operation using the Local User Interface (LUI) and the PDM Software Enhanced commissioning of the analyser and conditioning of the sample preparation unit</p> <p>Requirement: Attendance at training GA700 Operation and maintenance (SC-G-GA7)</p>
SC-G-CEMS	3 days BAS		<p>Set CEMS Ssystem overview</p> <p>Commissioning and operation of the Continuous Gas Analyzers (CGA) in Continuous Emissions Monitoring Systems (CEMS) Diagnostics / Various types of oxygen cells / Different types of Set CEMs / Measurement with the UV - cell / Infrared absorption / NDIR-principle & sample preparation/ Details on the Sample Conditioning System / Basics on the regulations: e.g. QAL1 according to EN 15267 / Basics on the LOGO! Module (small controller) / Commissioning SET CEMs / How we can find spare parts</p> <p>Prerequisites: This training is for advanced technicians. Basic Knowledge on CGA's and Sample Conditioning Systems are needed</p>
SC-G-UV600	2 days BAS		<p>SIPROCESS UV600 operation and maintenance</p> <p>Principle of operation and technical data / Hardware variants / Calibration cell, gas modules / I/O module / Structure of user interface / First setup, initial configuration / Diagnostics / Repair, operation and maintenance of the PC / Parameter setting with Sopas ET (incl. installation) / Integration SDD / Connection / Access level / Live – view / Data backup / Software upgrade</p> <p>Requirement: Basic knowledge of process analytics / General knowledge of electrical engineering</p>
SC-G-OXYR	1 days ADV		<p>Refresher Oxymat 6/61/64</p> <p>Last changes to Oxymat 6 Review basics: Calibration / How to open a "Support Ticket" / How to use PIA Lifecycle Portal Course-specific review: Operation, parameters, maintenance software / Preventive maintenance / Error diagnosis and fixation / Spare parts order</p> <p>Requirement: The participants are required to have attended the CGA basic course SC-G-OXYU</p>
SC-G-U23R	1 days ADV		<p>Refresher ULTRMAT 23</p> <p>Last changes to ULTRAMAT 23 / U23 DTC Review basics: Calibration / How to open a "Support Ticket" / PIA & SIOS Course-specific review: Operation, parameters, maintenance software / Preventive maintenance / Error diagnosis and fixation</p> <p>Requirement: The participants are required to have attended the CGA basic course SC-G-UL23</p>

Course title	Classroom	Online	Content
	For further information scan QR code		
SC-G-CAL	1 day ADV 		<p>CALOMAT 6 intensive Thermo conductivity of gases Physical principle of thermo conductivity / Thermo conductivities of gases, thermistor / Structure and function of analyzers controlled by microprocessors / Pneumatic structure of the analyzer / Pneumatic structure of sample preparation system / Start up and use of the CALOMAT 6 / Preventive maintenance / The software and its parameters / x-interference and types of correction / Turbo Generator application / Failure diagnosis and remedy / Practical exercises in the laboratory</p> <p>Requirement: Basic knowledge of gas analysis / General knowledge of electrical engineering</p>
SC-G-LASR		1 day ADV 	<p>Refresher Laser Last changes to In-Situ Gas Analyzer LDS 6 and SITRANS SL Review basics: LDS 6 Assembly / How to open a "Support Ticket" / How to use PIA Lifecycle Portal Course-specific review: Operation, parameters, maintenance software / LDS Com Log File interpretation / Preventive maintenance / Error diagnosis and fixation</p> <p>Requirement: The participants are required to have attended the CGA basic course SC-G-LAS</p>
SC-S-EXBA	0,5 days BAS 	0,5 days BAS 	<p>Basics of explosion protection Basics of an explosion: Preconditions for an explosion / Potential sources of ignition / Protection against explosions Types of protection: Overview / Flameproof enclosure Ex d / Pressurized enclosure Ex p / Increased safety Ex e / Intrinsic safety Ex i / Encapsulation Ex m / Zone separation, Zone 0 / Type of protection for Zone 2 Ex n / Protection by enclosure (dust) Ex t / Protection of non-electrical devices Explosion protection in North America (special features): Special features of the Class Division model Application in hazardous locations: Selection of equipment / Zone 0</p> <p>Requirement: Basic knowledge in process analytics / General knowledge of electrical engineering</p>
SC-S-EXUS	0,5 days BAS 	0,5 days BAS 	<p>Explosion Protection for users (service, plant planners) Basics: Overview types of protection / Definitions and characteristic quantities / Marking Requirements for application: Preconditions for application / Explosion protection document / Zone separation / Device selection Application of equipment: Flameproof enclosure (Ex d) and increased safety (Ex e) / Pressurized enclosure (Ex p) / Intrinsic Safety (Ex i)</p> <p>Requirement: Basic knowledge in process analytics / General knowledge of electrical engineering</p>

Course title	Classroom	Online	Content
	For further information scan QR code		
SC-I-ASM	2 days BAS	2 days BAS	<p>Analyzer System Manager Operator, basics and operation</p> <p>Industrial Ethernet: MAC address, TCP/IP, Subnets, Topologies / Redundance protocols (RSTP, MRP, HRP) / Scalance Hardware Configuration</p> <p>ASM Architecture General ASM handling: Alarm- and message handling / Gas Bottle Management / Calibration module / Validation module / Diagnostic values / Maintenance module / Schedule module / Reporting module</p> <p>Requirement: Basic knowledge in Windows / Basic knowledge in industrial Gas Analyzers / Knowledge in evaluating results of Process Analyzers</p>
SC-I-AID		0,5 days BAS	<p>SITRANS AID IQ</p> <p>General Introduction to SITRANS AID IQ Change system configuration: Add new analyzers / Change existing analyzer configuration / Change identical analyzer</p> <p>PLC SW Update Update PLC Firmware Update Update HMI Firmware Update</p> <p>Requirement: Basic knowledge in Windows / Basic knowledge in industrial Gas Analyzers</p>

Siemens AG

Training Centre Europe
Process Instrumentation and Analytics
Östliche Rheinbrückenstr. 50
76187 Karlsruhe, Germany
Article no.: DIPA-B10440-00-76DE
Printed in Germany

Subject to changes and errors.

The information in this document contains only general descriptions or performance features which may not always apply in the specific case described or which can change through further development of the products. The desired performance features are only binding if they are expressly agreed upon at the time of contract conclusion.

All product designations may be trademarks or product names of Siemens AG or other supplying companies, the use of which by third parties may infringe the rights of the owners.