VENUS

Software Training

Hamilton Bonaduz AG
Hamilton Germany GmbH
Hamilton Benelux B.V.

The VENUS ML STAR
SOFTWARE

...associated worldwide with uncompromising quality in precision fluid-measuring products. Because of the dedicated nature of the products we supply, it is important to us that our customers have the opportunity to become fully trained on the operation of our products. Our software training covers the needs of both laboratory operators and assay programmers.

Take the maximum advantage of your instrument by:

- Ensuring the safety of your staff and equipment

- Enabling your staff to adapt the instrument to new protocols or workflows

- Increasing efficiency through optimization of processes

- Reducing downtime due to erroneous operation

What we offer:

- Training laptops for each trainee with the latest VENUS version (VENUS four) installed*

- Small group size (limited to 6 participants for maximum efficiency)

- Mix of theory & practical exercises, including hands-on sessions on an ML STAR system

- Availability of trainers for responding to questions after the training

- All training material and files generated during the training provided for later reference

- Training confirmation (Letter of Attendance) upon successful completion of a training course

- Trainings in English and German

We are looking forward to welcoming you to one of our trainings and to sharing our knowledge with you!
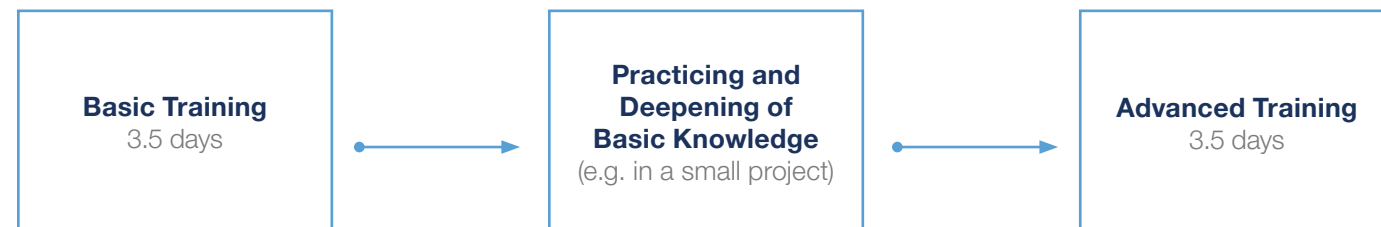
* different for online trainings

VENUS Software TRAININGS

BEGINNER TO ADVALCED

Basic Training 3.5 days	→	**Practicing and Deepening of Basic Knowledge** (e.g. in a small project)	→	**Advanced Training** 3.5 days

Basic Training
(On-Site at Hamilton/virtual, 3.5 days*)

This training transmits beginner to intermediate level knowledge to VENUS programmers and conveys both programming with General Steps and ML STAR Steps such as Single, Easy, and Smart Steps. The content focuses mainly on General and Single Steps. The training is ideal for anyone who would like to understand already existing methods as well as optimize and create their own methods. The training material is discussed in terms of presentations, combined with practical exercises with the software. These exercises consist of easy application examples in the beginning, while becoming increasingly more complex. A hands-on session on an ML STAR system accompanies the training.

- Introduction to the VENUS Software Editors
- System Configuration
- Creation of Deck Layouts and Methods
- Usage of General, Smart, Easy, and Single Steps
- Usage of general User Dialogs
- Usage of HSL Libraries
- Creation of Sequences and usage within a Method
- Tip Handling
- Basics in Liquid Handling
- Basics in Error Handling
- Reading Excel Worklists

Advanced Training**
(On-Site at Hamilton/virtual, 3.5 days*)

The advanced software training transmits the additional knowledge needed to successfully implement complex application tasks. The content presented will help you to increase the efficiency and the process precision of your automation projects. Comprehensive practical exercises with the software and some hands-on sessions on an ML STAR system accompanies the training.

- Part I: Some Labware Features, Plate Stackers and NTRs
- Part II: Variables and their Scope, Arrays and Channel Pattern
- Part III: Local Sub-Method Parameters and Sub-Method Libraries (SMTs)
- Part IV: Data Handling incl. Reading Files, Load and Match Barcodes incl. Barcode File, Use of SQL and Report Writing
- Part V: Advanced Error Handling and Parallel Processes (no dynamic scheduler)
- Part VI: Customized Dialogs incl. Vector Custom Dialogs (special Libraries)

* Standard for training sessions on-site at Hamilton Germany, Bonaduz, and Benelux. A discount is possible for multiple attendees from the same company (i.e. discount may differ, depending upon the responsible Hamilton subsidiary). Please note that virtual training does not include hands-on sessions on an ML STAR system and have a different time schedule.

**Requirement for the Training: Participation in a VENUS Basic Training and basic experience by applying the basic knowledge (practice and first deepening your basic knowledge).

On-Site/Virtual/ Customized TRAINING

DEPENDING ON YOUR NEEDS

If desired, we can send instructors to provide a regular training session at your company. In addition, there is the option of organizing customized trainings either at your company, in Bonaduz, Gräfelfing or virtually (online), depending on your individual needs.

Please note that the completion of a VENUS Basic Training course is required for participation in customized training. Please contact us to receive further information.
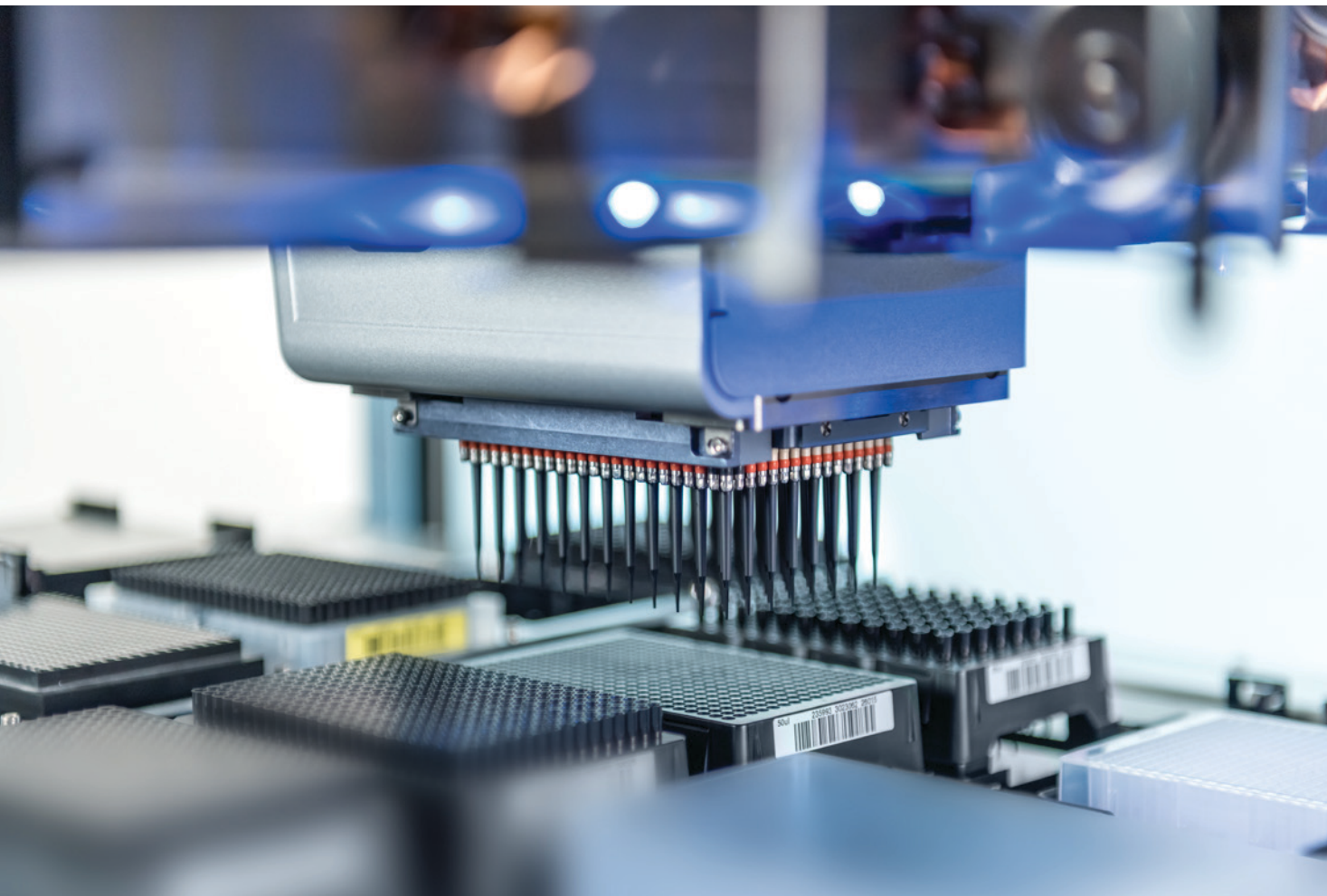
Software Training REGISTRATION

The fee for training sessions in Bonaduz, Gräfelfing (Munich), and Eindhoven (Netherlands) includes lunch, drinks and snacks but excludes taxes, traveling and accommodation expenses. We also offer VENUS training in a virtual format. For dates, availability, and registration for our regular on-site and online training, please scan the QR code or view here.

Note: You can cancel a course four weeks before the trainings without cancellation fees.

CONFIRMATION

After booking, a detailed confirmation for the training session will be sent via email. If desired, Hamilton can support you with accommodation arrangements. Please bear in mind that a sufficient number of participants must be confirmed for the training; otherwise, Hamilton is permitted to cancel or postpone the training course. The registered participants will be informed as soon as possible.

CONTACT

HAMILTON Bonaduz AG /
HAMILTON Germany GmbH /
HAMILTON Benelux B.V.

E-Mail: softwaretraining.rob.ch@hamilton.ch

GENERAL REQUIREMENTS FOR TRAININGS

- Windows-based computer skills
- For Advanced Training: completion of Basic Training and sufficient practical experience
- English language skills
- English literacy (presentation slides are presented in English)

ADDITIONAL REQUIREMENTS FOR ONLINE TRAININGS

- Compatible computer with a reliable internet connection via cable, headset
- Access via Zoom or Teams
- Each attendee requires a computer with a software version installed
- If possible, use more than one screen
- Adequate workplace, avoid distraction (please be aware that a virtual software training requires your full attention)

Software Trainings
APPENDIX

COURSE CONTENTS IN DETAIL

The content of these training programs is subject to change without notice. Every effort has been made to ensure the accuracy of this brochure's contents. Should any errors be detected, HAMILTON Bonaduz AG would greatly appreciate being informed of them. The above notwithstanding, HAMILTON Bonaduz AG can assume no responsibility for any errors in this brochure, or for changes to training dates or the consequences thereof.

BASIC Training

- Introduction to the VENUS Software Editors
  Several Editors can be used when working with VENUS. All will be introduced during the basic training; especially the Method Editor (including System Deck Editor and Run Control), the System Configuration Editor will be applied.

- System Configuration
  Hamilton System Configuration Editor is applied to configure the VENUS Software to a specific instrument. It covers general System Settings, Step Selection and Configuration of the ML STAR, and the Toolbox used for method development.

- Creation of Deck Layouts
  The attendees will design the application examples in the software by adding labware such as carriers, tips, buffer troughs, plates, sample tubes, etc. onto the system deck by using the System Deck Editor

- Method Development using Steps Programming
  Programming for ML STAR instruments always means either creating new or adapting existing methods. A method is a list of instructions for the instrument, appearing as pipetting steps, transport steps, loops, user dialogs, etc. The user software offers standard steps such as General Steps and ML STAR Steps such as pipetting and transport steps. There are different levels of programming: the attendees will learn to apply General Steps as well as the ML STAR Single Steps. Further ML STAR Steps such as Easy Steps will be introduced. Attendees will also learn how to create and handle variables and what needs to be considered for correct tip handling. The basic use of local Sub-Methods will also be shown. In addition, the import, export, and copying of methods will be covered.

- Usage of general User Dialogs
  Dialogs mean that there is an interface between software and user who will run a method on a system. The attendees will learn how dialogs can be used

to inform the user or to receive input for the run (e.g. number of samples).

- Usage of HSL Libraries
  An HSL Library is a collection of standard functions which the programmer can choose from when writing methods. These libraries support the programmer for special topics such as tip tracking, traces for documentation and debugging, mathematical operations and sequence handling.

- Creation of Sequences and usage within a Method
  The Sequence Editor is part of the System Deck Editor. VENUS uses Sequences for pipetting, transporting, tip handling, etc. The attendees will learn how to create and apply, as well as dynamically modify sequences within a Method.

- Basics in Liquid Handling
  Liquid Handling (i.e. pipetting) means the transfer of certain quantities of liquid from one container (e.g., well or tube) to another. A pipetting operation is achieved through the following: tip pick-up, aspirating liquid, dispensing liquid and tip eject. There are several settings for aspiration and dispense, including Liquid Level Detection that are crucial for optimal pipetting. These settings will be explained, and the attendees will learn what Liquid Classes are.

- Basics in Error Handling
  For various error situations (e.g., not enough liquid, no tip present), walk-away error handling which uses predefined default settings can be set. All ML STAR Steps offer this possibility. Basic knowledge about default and customized error handling will be transmitted during the training.

ADVANCED Training

Note: For participation in an Advanced Training course, you will need to complete a Basic Training course and must provide basic experience in working with VENUS and an ML STAR system. Take your time after a Basic Training

course, in order to practice and deepen your basic knowledge before attending an Advanced Training course.

- Part I: Some Labware Features, Plate Stackers, and NTRs
  This training part transmits advanced topics for Labware Features for the deck layout and how stackers are handled.

- Part II: Variables and their Scope, Arrays and Channel Pattern
  This training part transmits what Variable Scopes are and when it makes sense to use different Scopes. In addition, Arrays of Variables and Array of Sequences as well as the use of a dynamic Channel Pattern are covered.

- Part III: Local Sub-Method Parameters and Sub-Method Libraries (SMTs)
  This training part transmits the use of In- and Output parameters of Local Sub-Methods and how to create and apply SMTs.

- Part IV: Data Handling incl. Reading Files, Load and Match Barcodes incl. Barcode File, Use of SQL and Report Writing
  This training part transmits extensive knowledge while working with a variety of data within the VENUS software. The training covers topics on how to read, track, and display data. The trainees will learn to deal with the different requirements for data handling. Focus of this part:
  - Using Worklists (file handling e.g., XLS, CSV, ASCII)
  - Loading and matching of barcodes incl. handling the Barcode File
  - Sample tracking and data export (e.g. reports)
  - ML STAR Step Returns

- Part V: Advanced Error Handling and Parallel Processes (no dynamic VENUS Scheduler)
  This training part transmits how to implement Error Handling by the User and how to receive error information from an ML STAR Step Return. In addition, the implementation of parallel processes are covered. Please note that the Dynamic Scheduler of VENUS is not included.

- Part VI: Customized Dialogs incl. Vector Custom Dialogs (special Libraries)
  This training part transmits how to create a Custom Dialog and how to use additional libraries for special dialogs such as the Vector Custom Dialogs that include a Status Window showing the status of the process during a run.

We provide a separate Training for Advanced Liquid Handling, including Labware Definition (basics). For further information check our webpage.

Activities in-and-around
BONADUZ

SIGHTSEEING IN CHUR AND LEISURE ACTIVITIES IN THE DOMLESCHG AREA

If you arrive over the weekend, you'll have enough time to discover our surroundings in the beautiful canton of Graubünden. You might even be interested in spending your evenings in Chur, the city closest to HAMILTON Bonaduz AG.

An impressive walk through the Viamala gorge will show you the power of water on solid stone over centuries.

Excursions

- Rhäzüns-Feldis-Scheid-Rothenbrunnen-Bonaduz/ Chur (by cable car, on foot or by train) 3 hrs
- Chur-Lenzerheide-Chur (by bus or car or on foot around Lenzerheide Lake) 4 hrs
- Chur-Arosa-Chur (by train or car - 368 turns in the road!) ½ day
- Bonaduz-Viamala-Zillis-Bonaduz ½ day
- Bonaduz-Thusis-Davos-Thusis-Bonaduz 1 day
- The Bernina Express (train) Chur-Tirano-Chur 1 day
- The Glacier Express (train) Chur-Zermatt-Chur 2 days

https://www.chur.graubuenden.ch/de

Additional Information

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Postfach 7002 Chur
Switzerland

Tel: +41 81 252 18 18
Fax: +41 81 252 90 76

Email: info@churtourismus.ch

The Tourism Office can provide you with information about alpine and cross-country skiing, ice skating, hockey games, sledding, rafting, canyoning, fishing, swimming, golf, tennis, squash, ballooning, cycling, paragliding, mountain-biking, horse riding, hiking and much more.

MUNICH

SIGHTSEEING IN MUNICH AND LEISURE ACTIVITIES IN THE AREA

Sightseeing

- Frauenkirche
- Nymphenburg Palace
- Marienplatz
- St. Peter's Church "Alter Peter"
- Allianz Arena or BMW Welt
- Olympiapark
- Tierpark Hellabrunn

Excursions

- Starnberger See
- Tegernsee
- Ammersee
- Walchensee
- Heimgarten
- Therme Erding

If you want to combine your stay with sightseeing and some leisure activities, we recommend some interesting spots in and around Munich.

www.muenchen.de/int/en

EINDHOVEN

SIGHTSEEING IN EINDHOVEN AND LEISURE ACTIVITIES IN THE AREA

Sightseeing

- The Blob
- Philips Museum
- Van Abbemuseum

If you want to combine your stay with sightseeing and some leisure activities, we recommend some interesting spots in Eindhoven.

www.holland.com/global/tourism/destinations/more-destinations/eindhoven.htm

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