

Apros Training Course – General Features and Special Topics

Apros Training Course – General Features and Special Topics will be organised by VTT in October the same week as the [Apros User Group Seminar](#) is arranged. A one-day General Features Course will be held on Tuesday, October 10th, and a one-day Special Topics Course will be held on Friday October 13th.

Apros is a tool for system-wide modelling and dynamic simulation of industrial processes. With Apros, you can build up a dynamic model of an installation including process, piping, automation and electrical systems, based on P&I diagrams and other engineering data. Apros is globally used, e.g., in process and automation engineering, safety analyses and training systems. For more information, see <http://www.apros.fi/en/>.

The one-day General Features training course is targeted to new users, no modelling background is required. During the course, the main software features are introduced, and example models are built during hands-on exercises. The course is supervised by Apros top experts. The course gives basic knowledge of the software and adequate skills for further self-learning or participation in modelling projects.

The Special Topics Course is primarily directed to advanced users. A set of possible training topics are listed as a preliminary survey on the last page. The final topics to be realized during the training course are selected based on the survey. The possible topics cover new features and often requested training themes.

The participants shall use their own laptops (64-bit Windows, computer, mouse needed) in the training. The Apros software will be installed beforehand, and the course fee includes a 1-month evaluation period. In case of any problems to bring/use an own laptop, please contact the course coordinator.

The training will be held in VTT's premises, address Kivimiehentie 3, Espoo Finland (ca 3 km from the Apros User Group seminar location).

The price for the one-day General Course is 580 € (+VAT), and for the one-day Special Topics Course 700 € (+VAT).

Please note that the maximum number of participants in the course is 8 persons and the minimum is three (3) participants for the course to be arranged. The trainees are accepted in the order of registration. Please use the registration form below and include your signature. VTT will send a confirmation message by e-mail.

For more information about the course and assistance in practical arrangements, please do not hesitate to contact us.

Contact person

Mr. Sixten Norrman E-mail: sixten.norrman@vtt.fi

Phone: +358 40 593 8685

Registration

To register, please fill in and sign this registration form and send it to sixten.norrman@vtt.fi (P.O.Box 1000, FIN-02044 VTT). The deadline of the registration is Monday, September 25th, 2023.

Course dates and prices (tick your choice):			
	General Features, 1 day	October 10 th , 2023	580 € (+VAT)
	Special Features, 1 day (Fill in survey on next page)	October 13 th , 2023	700 € (+VAT)
Total sum (+VAT)			

Name:	
Title:	
Organization:	
Contact Address	
Address:	
Postcode and town:	Country:
Phone:	Email:
Invoice Address – if not the same as the Contact Address	
Address:	
Postcode and town:	Country:
Organization VAT number for invoicing:	Organization order number:
Additional information e.g. educational background and special interests regarding the training course.	
Date and Place:	Signature + clarification of signature:

fill – print – sign – scan – send

Survey regarding training on Special Topics

Which topics from the list below would you prefer to be included in the one-day training on special topics. If you intend to participate, please select six topics. Note, that all your selected topics might not be realized, rather the topics are selected based on common interest.

Topic	Details	Remarks
Using SCL	SCL basics, extracting data from a model, adding modules, defining functions etc.	
Modelling pumps	Basic pumps, motor pumps	<ul style="list-style-type: none"> Enhancements to the motor pump module has been done in version 6.10
Modelling components used for heat transfer, especially new condensing heat exchangers	Shortly about heat pipes, heat structures and heat exchangers, focus on new horizontal and vertical condensing heat exchangers	<ul style="list-style-type: none"> New condensing heat exchangers available since version 6.11, only for the 6-eq model
Modelling valves, especially new ISA-valves	Shortly about commonly used valve components, focus on new ISA-valves	<ul style="list-style-type: none"> ISA-valves have been introduced in version 6.10
User defined correlations	Correlations are defined with SCL. Correlations can be defined for heat transfer, heat radiation and wall friction (3-eq) and for critical heat flux, gas and liquid film thickness, interfacial heat transfer and Nusselt number of natural convection (6-eq)	<ul style="list-style-type: none"> Introduced in version 6.10 for the 3-eq model Extended in 6.11 to the 6-eq model
Pipeline modelling with new interface	The new pipeline modelling feature enables the creation of pipe paths intuitively in 3D instead of creating sequences of points, pipes and valves	<ul style="list-style-type: none"> Introduced in version 6.10, enhanced in version 6.11 and further in 6.12 Available only for the 6-eq model
User components with additional SCL scripting	How to use SCL / how not to use SCL with user components	
Python plugin	How to integrate and use Python scripts with Apros via a User component with SCL scripts	<ul style="list-style-type: none"> Available since version 6.10 Requires python to be installed on the computer
Advanced gas ejector modelling	Recommended for the simulation of an ejector where the flowing fluid is a gas (e.g. steam or air)	<ul style="list-style-type: none"> Introduced in version 6.09