This five-day, hands-on course provides you with comprehensive training in groundwater modelling using FEFLOW. It consists of an introductory and an advanced part. The introductory part is identical to the course ‘Introduction to groundwater modelling’ while the advanced part aims at providing you with the skills for advanced modelling topics. To accommodate particular preferences of the group of participants, a selection of the advanced topics listed below is offered.

FEFLOW is widely recognised as a comprehensive software package for subsurface flow and transport simulation. FEFLOW’s unique meshing capabilities (structured and unstructured) allows for the highest degree of flexibility to account in detail for the most simple to complex geometrical configurations. The software is used by leading research institutes, universities, consulting firms and government organisations all over the world.

FEFLOW’s scope of application ranges from simple local-scale to complex large-scale modelling. Application areas include water management, mine water, saltwater intrusion, geothermal energy, and variably saturated media.

COURSE TOPICS

Introductory Part
- Introduction to FEFLOW and its graphical user interface
- Creating 2D and 3D mesh geometries (structured and unstructured meshes)
- FEFLOW’s interface with geological software
- Setting up flow models with confined and unconfined aquifers
- Setting up mass-transport models and groundwater-age models
- Setting up steady-state and transient models
- Usage of GIS/CAD data interfaces and other formats
- Results evaluation, visualisation and animation

Advanced Part
- Unsaturated flow modelling
- Density-dependent flow modelling
- Heat transport, geothermal energy systems and closed/open-loop systems
- Fractures and discrete features
- Multicomponent transport and chemical reactions
- Introduction to the FEFLOW programming interface and Python scripting
- Introduction to automatic model calibration with FePEST
- Hands-on exercises
TARGET GROUP AND PREREQUISITES
Groundwater professionals working in consulting companies, public authorities, university and research institutions. Participants are expected to have a basic knowledge of groundwater modelling as well as computer application.

RELATED COURSES
- FEFLOW - Introduction to groundwater modelling
- FEFLOW - Advanced groundwater modelling
- FEFLOW - Introduction to IFM programming
- FEFLOW/FePEST - Introduction to model calibration, uncertainty analysis and predictive analysis
- NUMERICAL MODELLING FOR GEOTHERMAL INSTALLATIONS - Application of FEFLOW in near-surface and deep geothermic
- GROUNDWATER MODELLING AT MINE SITES - Introduction to using FEFLOW in mining

EXCAMPLE OF INSTRUCTOR

CARLOS A. RIVERA VILLAREYES
Dr. Carlos Rivera works as the Director Sales Service and Support at DHI WASY, Germany. Within his activities, he leads the FEFLOW user support team. Dr. Rivera has trained professionals around the world in different groundwater modelling topics in English and Spanish. Dr. Rivera has profound knowledge of groundwater and unsaturated-zone modelling as well as parameter estimation (model calibration, e.g., with PEST).

Dipl.-Ing. (FH), Civil Engineering, University of Piura, Peru
MSc, Desert Studies - Water Resources Management, Ben-Gurion University, Israel
PhD, Hydrology, University of Potsdam, Germany

Visit our courses & events calendar for more courses:
www.theacademybydhi.com/courses-and-events-calendar

THE ACADEMY BY DHI
THE ACADEMY offers a palette of courses and capacity building packages designed to fit your needs and challenges. We offer standard and/or tailored training - face-to-face as well as online.

MIKE Powered by DHI courses focus on practical skills, hands-on exercises and teaching you how to get the most out of your software. These courses also enable you to understand the power of the MIKE tools for building decision support systems.

Thematic courses allow you to apply concepts, applications and decision support principles to the entire business process within current areas: aquaculture and agriculture, energy, climate change, flooding, coast and marine, surface and groundwater, urban water, industry, environment and ecosystems, product safety and environmental risk, etc.

Our trainers are experienced professionals, many of whom are recognised international experts in their fields. The use of highly skilled trainers guarantees the quality of THE ACADEMY courses.

Learn more about THE ACADEMY on www.theacademybydhi.com