

# COURSES AND EVENTS CALENDAR 2017

## SOUTH AFRICA

SURFACE & GROUNDWATER, ENVIRONMENT, CLIMATE CHANGE AND FLOODING

### **BUILDING EXPERTISE**





## COURSES AND EVENTS CALENDAR 2017

	FOCUS AREA	TITLE	DATES	LOCATION
SURFACE & GROUNDWATER	MIKE HYDO BASIN	Introduction to river basin modelling	6 - 7 June	Johannesburg
	FEFLOW	Introduction to groundwater modelling	4 -6 September	Johannesburg
	FEFLOW	Advanced groundwater modelling	7 -8 September	Johannesburg
	FEFLOW/FePEST	Introduction to model calibration, uncertainty analysis and predictive analysis	11 - 13 September	Johannesburg
	WATER RESOURCES INFORMATION MANAGEMENT	Introduction to Information Management using MIKE INFO	25 - 26 October	Johannesburg
	REMOTE SENSING	Get the full picture using satellite images	On Request	Johannesburg
	HYDROLOGICAL MODELLING IN MINING CATCHMENTS	Introduction to using MIKE SHE in mine impacted catchments	On Request	Johannesburg
CLIMATE CHANGE AND FLOODING	FLOOD FORECASTING AND EARLY WARNING	Introduction to real-time forecasting systems using MIKE OPERATIONS	27 July	Johannesburg
	FLOOD FORECASTING AND EARLY WARNING	Configuring real-time forecasting systems using MIKE OPERATIONS	On Request	Johannesburg
	WATER RESOURCES AND CLIMATE CHANGE	Impact and adaptation studies	On Request	Johannesburg
ENVIRON	ENVIRONMENTAL IMPACT ASSESSMENT	EIAs and supporting tools	28 - 29 June	Johannesburg
URBAN	OPTIMISING NON-REVENUE WATER MANAGEMENT	Tools and techniques	20-21 November	Johannesburg

### ANNUAL WATER CONFERENCE IN SOUTH AFRICA

DHI South Africa will once again be hosting a conference during May 2017, with the focus on addressing the challenges related to increasing climate variability.

Specific topics will be released at a later date.

The conference will be held in Johannesburg. Dates and venue to be advised.

*Interested? Contact us on [mikebydhi.za@dhigroup.com](mailto:mikebydhi.za@dhigroup.com)*



SURFACE & GROUNDWATER	<b>MIKE HYDRO BASIN</b> Introduction to river basin modelling	This two-day course gives you an overview of how to use MIKE HYDRO basin to support river basin management and reservoir operations. The course can be adapted to focus on different aspects of river basin management including hydropower, surface water groundwater interaction, irrigation and water quality.	<ul style="list-style-type: none"> <li>• Introduction to river basin modelling</li> <li>• Water allocation rules</li> <li>• Reservoir and hydropower modelling</li> <li>• Optional modules including irrigation, rainfall-runoff processes, river routing, surface water-groundwater interaction and water quality processes</li> </ul>
	<b>FEFLOW</b> Introduction to groundwater modelling	This three-day course provides you with an introduction to groundwater modelling using FEFLOW. You learn about the basic concepts of the software through building two and three-dimensional flow and solute-transport models.	<ul style="list-style-type: none"> <li>• FEFLOW and its graphical user interface</li> <li>• Creating structured and unstructured mesh</li> <li>• Setting up flow models with (confined/unconfined aquifers), mass transport models and groundwater age models</li> <li>• Steady-state and transient models</li> <li>• Usage of GIS-/CAD- geological models, etc.</li> </ul>
	<b>FEFLOW</b> Advanced groundwater modelling	This two-day course aims to provide you with the skills for advanced groundwater modelling. Depending on the needs of the participants, a selection of topics is offered.	<ul style="list-style-type: none"> <li>• Unsaturated, density-dependant and fracture flow</li> <li>• Heat transport (geothermics) and multi-components mass transport</li> <li>• Introduction to IFM programming</li> <li>• Parameter estimation and sensitivity analysis with FePEST</li> <li>• More topics available on request</li> </ul>
	<b>FEFLOW/ FePEST</b> Introduction to model calibration, uncertainty analysis and predictive analysis	In this three-day course you are provided with an introduction to FePEST. You learn about the basic PEST definitions required for understanding the FePEST interface and achieving FePEST best practice.	<ul style="list-style-type: none"> <li>• Introduction to PEST and FePEST</li> <li>• Definition of observations/parameters, parallelisation settings and FePEST Server</li> <li>• Pilot points, regularisation techniques and prior information</li> <li>• Analysis and interpretation of results in FePEST and FEFLOW (sensitivity maps, parameter, identifiability)</li> <li>• Monte Carlo methods, predictive analysis and advanced FePEST operations</li> </ul>
	<b>WATER RESOURCES INFORMATION MANAGEMENT</b> Introduction to information management using MIKE INFO	This two-day, hands-on course gives you a sound knowledge of information management “Best Practices” and how to configure systems to support your specific needs and the decision support processes.	<ul style="list-style-type: none"> <li>• Data and information management Best Practices</li> <li>• Integration with water resources management practices</li> <li>• Configuration of systems to support specific needs and the decision support process</li> </ul>
	<b>REMOTE SENSING</b> Get the full picture using satellite images	This one-day course provides you with the insight into remote sensing technology based on earth observation satellites in orbit. You learn how remote sensing information can be integrated into MIKE or GIS software.	<ul style="list-style-type: none"> <li>• Remote sensing and digital image processing</li> <li>• Remote sensing of water resources</li> <li>• Remote sensing of urban environments</li> <li>• Remote sensing of marine environments</li> <li>• Digital Elevation Models from satellite</li> </ul>
	<b>HYDROLOGICAL MODELLING IN MINING CATCHMENTS</b> Introduction to using MIKE SHE in mine impacted catchments	This three-day course provides you with the skills you need for applying MIKE SHE for fully integrated hydrologic modelling in mine impacted catchments.	<ul style="list-style-type: none"> <li>• Integrated hydrology in mining catchments</li> <li>• MIKE SHE and its graphical user interface</li> <li>• Detailed discussion of catchment processes</li> <li>• Data requirements and calibration</li> <li>• Typical applications in mine impacted catchments</li> </ul>
CLIMATE CHANGE AND FLOODING	<b>FLOOD FORECASTING AND EARLY WARNING</b> Introduction to real-time forecasting systems using MIKE OPERATIONS	This one-day course gives you an introduction to flood forecasting, focussing on how they are built and how they are used by managers and operators during emergency situations.	<ul style="list-style-type: none"> <li>• Real-time operational flood forecasting and early warning Best Practices</li> <li>• Real-time data and information management Best Practices</li> <li>• Key features and functionality of a flood forecasting system</li> </ul>
	<b>FLOOD FORECASTING AND EARLY WARNING</b> Configuring real-time forecasting systems using MIKE OPERATIONS	This two-day, hands-on course teaches you how to create powerful forecasting and early warning system and how you can configure a system to meet your specific needs.	<ul style="list-style-type: none"> <li>• Key features and functionality of a flood forecasting system</li> <li>• Configuration of systems to support specific needs, including creating data interfaces to external data sources</li> </ul>
	<b>WATER RESOURCES AND CLIMATE CHANGE</b>	This three-day course introduces you to climate change, climate change estimations and assessment of uncertainties. The course also focusses on the identification of adaptation measures with particular emphasis on flood and droughts.	<ul style="list-style-type: none"> <li>• Identification of climate projection data</li> <li>• Scenario simulations and mitigation scenario</li> <li>• Environmental, social, and economic indicators</li> </ul>
ENVIRONMENT	<b>ENVIRONMENTAL IMPACT ASSESSMENT</b> EIAs and supporting tools	The duration of this course can be one to three days depending on your needs. The course gives you an overview of the various types of environmental impacts and their supporting tools. You are also introduced to the Rapid Impact Assessment Matrix (RIAM - developed by DHI).	<ul style="list-style-type: none"> <li>• Fundamentals of EIA</li> <li>• EIAs and legislation</li> <li>• Pitfalls</li> <li>• Learning the steps of EIA</li> <li>• Introduction to the RIAM package</li> </ul>
URBAN	<b>OPTIMISING NON-REVENUE WATER MANAGEMENT</b> Tools and techniques	This two-day course gives you an understanding of the principles, procedures and tools available for designing and managing a Non-Revenue Water (NRW) Programme in the most efficient and cost-effective way.	<ul style="list-style-type: none"> <li>• Introduction to NRW; concepts and approaches</li> <li>• Modelling in NRW &amp; DHI’s approach to NRW</li> <li>• Measurement campaigns and field activities</li> <li>• Pressure optimisation</li> <li>• Delineate District Meter Areas</li> <li>• Asset management - network reconstruction</li> <li>• Tool for technically and economically optimised NRW control</li> </ul>



Every year thousands of water professionals all over the world attend THE ACADEMY by DHI courses and events. THE ACADEMY courses are available both as standard as well as tailored courses designed according to your specific requests and based upon your own data.

THE ACADEMY by DHI offers an umbrella of standard and tailored training courses of various duration and targeting different levels of water professionals, including managers/decision makers, mid-level professionals and technicians.

#### **MIKE Powered by DHI courses**

Our MIKE 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**

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

#### **Trainers**

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

#### **Tailored courses**

Our tailored courses are designed specifically according to your needs and given at the time and location of your choice (in-house at your company, at our office or elsewhere). The content can be a near copy paste of an existing course - or a complete tailored training based upon your own data and designed according to your specific needs.

Should the public enrolment course of your interest not be on the list in our Course Schedule for 2017, please feel free to contact us. Thus we can arrange for future courses, including thematic courses, or do a one-to-one course at your office!

#### **Online courses & training seminars**

Don't have time to travel? Would like to expand your horizon and learn more? Join us for our online courses and training seminars! Read more about our online activities [here](#)

**THE ACADEMY by DHI** offers a palette of training courses and capacity building packages in the field of water as well as in chemicals regulation and toxicology. Please consult our website for the complete listing as well as latest updates of our Courses & Events Calendar: [www.theacademybydhi.com](http://www.theacademybydhi.com)

#### **Dates, venue and location**

Our scheduled courses are held in Johannesburg, South Africa. Venue to be advised.

#### **Computers**

A number of courses require computers. All participants are asked to bring their own lap tops.

#### **Language**

The course language is English. All training material is provided in English.

#### **Our standard course prices**

**Per day:** R 4 000.00

All prices are exclusive of 14% VAT.

#### **Discounts**

- 10 % if valid Service Maintenance Agreement (SMA)
- 25% for third and fourth attendees from same company
- 50% for additional attendees from the same company
- 50% for Academics
- 75% for Students
- 20% for attending two or more courses back to back

*Note: Only possible to make use of 1 offer of discount - discounts cannot be accumulated.*

#### **What is included?**

Course fees include training material, training certificates, lunch and refreshments.

#### **Registration and contact**

Deadline for registration is three weeks before commencement of course. A minimum of participants is required for courses to proceed. DHI reserves the right to reschedule courses up to one week prior to the commencement of a course.

You can register through our website

<http://worldwide.dhigroup.com/za> or contact us at [mike.za@dhigroup.com](mailto:mike.za@dhigroup.com)

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