



## Training Course Schedule 2009 – DHI UK

Group	Dates	Product	Course Title
Marine	10-11 March & 21-22 October	MIKE 21 & MIKE 3 Flow Models	Introduction to hydrodynamic modelling
	12 March & 23 October	MIKE 21 & MIKE 3 Transport Models	Introduction to transport modelling
	2-3 April	MIKE 21 & MIKE 3 ECO Lab	2D and 3D water quality and ecological modelling
	4-5 May	MIKE 21 SW	Spectral wave modelling
Water Resources	24-25 March	MIKE 11	Introduction to MIKE 11
	26 March	MIKE 11 GIS	GIS based model development
	6-7 May & 13-14 October	MIKE FLOOD <i>River</i>	Integrated 1D-2D River Flood Modelling with MIKE 11 & MIKE 21
Urban	25-26 February	MIKE URBAN CS	Introduction to data management and modelling of stormwater & wastewater collection systems
	11-12 May & 26-27 November	MIKE FLOOD <i>Urban</i>	Integrated 1D-2D Urban Flood Modelling with MIKE URBAN CS & MIKE 21

### Location

The venue and location of our courses will be posted on our website.

### Our standard prices

- ◆ One day: 530 €
- ◆ Two days: 1050 €
- ◆ Three days: 1330 € (consecutive days only)

### Discounts

- ◆ 10 % discount if valid Service Maintenance Agreement (SMA)
- ◆ 3<sup>rd</sup> and subsequent participants 33% discount

Our course fees include 30 days' free test licence of the software that you are trained in; training materials, DHI training certificates, and refreshments! Clients with valid service maintenance agreements receive special discount. Also discounts for third or more participants from same organisation.

### Registration

Make sure to register as early as possible and no later than 2 weeks before the start date of the course. A minimum number of attendees are required for courses to proceed. DHI reserves the right to re-schedule training courses up to two weeks prior to the scheduled course date.

You can always find our latest course offers on:

[www.dhi-uk.com/Training](http://www.dhi-uk.com/Training)

Our courses cover the water resources, marine and urban areas. Should the training course of your interest not be on the list, please feel free to contact us so we can arrange for future courses or do a one-to-one course at your office.

**Our short standard courses** are designed to introduce you to the application of our various products and modules. Relevant participants for these courses include both new and potential users as well as current users who need an update to our products in a guided way in order to maximise productivity. Our short courses are modular and allow you to build your expertise so as to match the requirements of your job.

**Our tailored courses** within client organisations range from short, dedicated courses in selected topics to longer courses, in which you, with support from relevant DHI experts, are guided through practical applications using your own data.

**Our training methodology** is based upon *learning-by-doing* with a sound blend of speaker sessions and hands-on computer exercises.



For further information, please call  
Simon Matthews on 01694-722795  
or email [sm@dhigroup.com](mailto:sm@dhigroup.com)



## COURSE DESCRIPTIONS

<b>MARINE</b>	<p><b>MIKE 21 &amp; MIKE 3 ECO Lab</b> 2D and 3D water quality &amp; ecological modelling</p> <p><b>Dates:</b> 2-3 April 2009</p>	<p>You will learn about the fundamentals of ecological modelling and be introduced to how to develop your own ecosystem models using the ECO Lab editor and integrate this to MIKE 21/3 ECO Lab. The course provides you with a good basis for using MIKE 21/3 ECO Lab to obtain accurate spatial predictions of aquatic ecosystem response.</p>	<ul style="list-style-type: none"> <li>• Fundamentals of ecological modelling</li> <li>• Introduction to ECO Lab</li> <li>• Dialogue overview MIKE 21/3 ECO Lab</li> <li>• Introduction to existing ECO Lab templates</li> <li>• Guidelines for ecological model development</li> <li>• How to set up the MIKE 21/3 ECO Lab model</li> <li>• Calibration and validation procedures</li> <li>• Interpretation of results</li> </ul>
	<p><b>MIKE 21 SW</b> Spectral wave modelling</p> <p><b>Dates:</b> 4-5 May 2009</p>	<p>An introduction to wave modelling using the DHI Spectral Wave model. The course will help you predict and analyse wave climates in offshore and coastal areas. The course is intended for professionals in offshore and coastal engineering. Participants should have a basic knowledge of wave hydrodynamics.</p>	<ul style="list-style-type: none"> <li>• Application of MIKE 21 SW</li> <li>• How to set up models based on flexible mesh (unstructured grid)</li> <li>• Decision of spectral formulation</li> <li>• Calibration techniques and model validation</li> <li>• Solving practical problems</li> </ul>
	<p><b>MIKE 21 &amp; MIKE 3 Flow Models</b> Introduction to hydrodynamic modelling</p> <p><b>Dates:</b> 10-11 March 2009 &amp; 21- 22 October 2009</p>	<p>Introduction to the basic concepts in hydraulic modelling and processes and factors that are decisive for when to apply a 3D approach. You will learn how to set up and run flow simulations with MIKE 21 and MIKE 3 and to turn model outputs into professional presentation material.</p>	<ul style="list-style-type: none"> <li>• Project definition including choice of model</li> <li>• Selection of geographical coordinate system and bathymetry digitisation</li> <li>• Managing boundary conditions</li> <li>• Data organisation, import, editing, quality control</li> <li>• Using the utility software of MIKE 21/3 Flow Models</li> <li>• Result analysis and visualisation</li> </ul>
	<p><b>MIKE 21 &amp; MIKE 3 Transport Models</b> Introduction to transport modelling</p> <p><b>Dates:</b> 12 March 2009 &amp; 23 October 2009</p>	<p>A practical introduction to the basics of transport modelling for users with some experience in MIKE 21 or MIKE 3 and who want to learn more about dynamic coupling of models. Flow, wave and transport models in 2D and 3D are combined to illustrate use within coastal engineering and morphology as well as environmental applications.</p>	<ul style="list-style-type: none"> <li>• Overview of transport models (SW, ST, MT, PT) including choice of model</li> <li>• Setting up wave and flow conditions</li> <li>• Adding sediments and transport of tracers</li> <li>• Calculating sediment transport</li> <li>• Decoupling, dynamic coupling and morphological changes</li> </ul>
<b>WATER RESOURCES</b>	<p><b>MIKE 11</b> Introduction to river and channel modelling</p> <p><b>Dates:</b> 24-25 March 2009</p>	<p>An introduction course to 1D river modelling. The key focus is to obtain knowledge on the basic features of MIKE 11 to enable you to set up and run simple river models with MIKE 11 and evaluate their results.</p>	<ul style="list-style-type: none"> <li>• Introduction to 1D Hydro Dynamic modelling</li> <li>• MIKE 11 modular structure and Graphical User Interface (GUI)</li> <li>• Data requirements for River modelling</li> <li>• River Models Schematization and dynamic simulation</li> <li>• Results analysis and presentation with MIKE VIEW</li> </ul>
	<p><b>MIKE 11 GIS</b> GIS based model development</p> <p><b>Date:</b> 26 March 2009</p>	<p>A 1-day introduction course to the latest MIKE 11 GIS package (in ArcMap), which provides a range of efficient tools and features primarily for utilizing GIS in the schematisation and preparation of MIKE 11 river model input files.</p>	<ul style="list-style-type: none"> <li>• Schematisation of river model features</li> <li>• Extraction of topographical data from DEM</li> <li>• Import of existing river model data</li> <li>• Export of model input files</li> <li>• Visualisation of model results</li> </ul>
	<p><b>MIKE FLOOD</b> Integrated 1D and 2D river flood modelling with MIKE 11 &amp; MIKE 21</p> <p><b>Dates:</b> 6-7 May 2009 &amp; 13-14 October 2009</p>	<p>You will learn how to model integrated river and flood plain dynamics using MIKE FLOOD. Focus will be on defining efficient coupled 1D and 2D models with emphasis on data requirements, optimal model schematisation and model stability. Preceding knowledge of MIKE 11 is required for this course.</p>	<ul style="list-style-type: none"> <li>• Introduction to 1D and 2D flow modelling components (primary focus is on 2D)</li> <li>• Topographical data handling</li> <li>• Fine scale structures in coarse grids</li> <li>• Floodplain modelling and mapping</li> <li>• Model performance and stability</li> <li>• Result viewing and presentation</li> </ul>
<b>URBAN</b>	<p><b>MIKE URBAN CS</b> Introduction to data management and modelling of stormwater and wastewater collection systems</p> <p><b>Dates:</b> 25-26 February 2009</p>	<p>A practical introduction to hydraulic modelling of wastewater and storm water networks. You will learn how to set up and run MIKE URBAN CS and turn model outputs into professional presentation material.</p>	<ul style="list-style-type: none"> <li>• Project setup including units, coordinate system, etc</li> <li>• Data organisation, import/export of external data</li> <li>• Numerical and graphical editing and quality control</li> <li>• Dynamic simulation of rainfall/runoff and pipe flow</li> <li>• Result analysis and visualisation, including time series plots, longitudinal profiles, thematic maps</li> </ul>
	<p><b>MIKE FLOOD URBAN</b> Integrated 1D and 2D urban flood modelling with MU CS &amp; MIKE 21</p> <p><b>Dates:</b> 11-12 May 2009 &amp; 26-27 November 2009</p>	<p>You will learn how to build urban flooding models using MIKE FLOOD URBAN, MIKE URBAN CS and MIKE 21. The course also covers issues related to the exploitation of the modelling results for making animations, flood risk maps, etc.</p>	<ul style="list-style-type: none"> <li>• Introduction to urban flooding</li> <li>• Building bathymetries including roads &amp; buildings</li> <li>• Input data quality assurance</li> <li>• Coupling MIKE URBAN CS and MIKE 21</li> <li>• Using GIS for model preparation and results</li> <li>• Results analysis and presentation</li> </ul>

{Last updated on 20<sup>th</sup> January 2009}