

## Building Expertise



## Training Course Schedule 2008 – DHI UK

Group	Dates	Type	Course Title
Water Resources	8 April & 14 October	River Modelling - Beginner	Introduction to MIKE 11
	9 April & 15 October	River Modelling - Intermediate	Modelling Hydraulics with MIKE 11
	10 April & 16 October	River Flood Modelling - Advanced	Integrated 1D-2D River Flood Modelling with MIKE 11 & MIKE 21
Urban	29-30 April	Urban Modelling – Beginner/Intermediate	Modelling Collection Systems with MIKE URBAN CS
	26-27 November	Urban Modelling – Beginner/Intermediate	Modelling Collection Systems with MIKE URBAN CS
	1 May & 28 November	Urban Flood Modelling - Advanced	Integrated 1D-2D Urban Flood Modelling with MIKE URBAN CS & MIKE 21
Marine	21 October	Coastal Modelling - Beginner/intermediate	Modelling Coastal Hydrodynamics using MIKE 21& MIKE 3 FM
	22 October	Coastal Modelling - Advanced	Spectral Wave Modelling using MIKE 21 SW
	23 October	Coastal Modelling - Advanced	Advection-dispersion, Particle Tracking and Sand Transport Modelling with MIKE 21

### Location

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

### Our standard prices

- ◆ One day: £300/€ 430
- ◆ Two days: £550/€ 790
- ◆ Three days: £790/€ 1,135

(Valid for 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@dhi-group.com](mailto:sm@dhi-group.com)



## COURSE DESCRIPTIONS

<p><b>Introduction to MIKE 11</b></p> <p><b>Dates:</b> 8 April &amp; 14 October</p>	<p>Introduction to the MIKE 11 modelling system including the Graphical User Interface for model preparation and results analysis and presentation. Hands-on exercises in defining a simple river model will be carried out and results analyzed. Additional topics for the day are calibration and verification of river models including options for bed resistance definitions in MIKE 11. Finally, presentations and hands-on exercises on measures for improved model stability are included.</p>
<p><b>Modelling hydraulics with MIKE 11</b></p> <p><b>Dates:</b> 9 April &amp; 15 October</p>	<p>Focus will be on more specific details of hydraulic modelling with MIKE 11. Following a short introduction to the mathematical background of MIKE 11 the subjects will include modelling of hydraulic structures such as weirs, culverts, bridges and advanced control structures. Hands-on exercises will supplement the presentation to improve the understanding on structures implementation in river models. Coupled Rainfall-Runoff (RR) and Hydrodynamic model simulations are introduced using the NAM and FEH RR-models as examples for generating rainfall induced runoff acting as a source to the river model. Last topics of the day is flood modelling and 2D Flood Mapping with MIKE 11.</p>
<p><b>Integrated 1D-2D River Flood Modelling with MIKE 11 &amp; MIKE 21</b></p> <p><b>Dates:</b> 10 April &amp; 16 October</p>	<p>The main topic of this day will be the simulation of combined 1D and 2D flood modelling in rivers using the MIKE FLOOD package. An introduction to the hydrodynamic module of MIKE 21 is given with emphasis on model setup requirements, stability conditions and model outputs. Presentations are followed by hands-on exercises in the use of MIKE 21 HD including simulation executions and analyzing results. An introduction to the MIKE FLOOD system where coupling of 1D and 2D models (MIKE 11 and MIKE 21) is made through different types of linkages. The functionality and applicability of these link-types will be discussed together with recommendations for (improved) stability in model simulations. Hands-on exercises will introduce different tools and features for flood modelling including the possibility for presenting 1D and 2D model results together using more advanced results presentation packages.</p>
<p><b>Modelling Collection Systems with MIKE URBAN CS</b></p> <p><b>Dates:</b> 29-30 April, 26-27 November</p>	<p>A practical introduction to hydraulic modelling of wastewater and storm water networks. You will learn to set up and run MIKE URBAN CS and model outputs into professional presentation material. You will obtain a general understanding of MIKE URBAN and its capabilities, including tabular and graphical data inputs, GIS functionality and GIS integration, simulation capabilities and results presentation tools. The course will also include an introduction to some of the advanced tools for data management, scenario management, automated catchment processing, time series handling, etc. A brief introduction to water distribution modelling with MIKE URBAN may also be given on request.</p>
<p><b>Integrated 1D-2D Urban Flood Modelling with MIKE URBAN CS &amp; MIKE 21</b></p> <p><b>Dates:</b> 1 May &amp; 28 November</p>	<p>The main topic will be combined 1D (river and/or urban) and 2D flood modelling. You will be introduced to tools and features – through hands-on exercises - such as using GIS data like a DEM, automated linking of 1D and 2D model components, combined presentation of 1D and 2D model results and tricks and hints for 2D flood modelling in urban areas and on flood plains.</p>
<p><b>Modelling Coastal Hydrodynamics using MIKE 21 &amp; MIKE 3 FM</b></p> <p><b>Date:</b> 21 October</p>	<p>The MIKE 21/MIKE 3 FM series includes many new and useful features that have been built on the back of user requests and in-house research. The feature list is extensive and includes things like, mixed element mesh generation (triangles and quadrangles), reflection and diffraction in SW, 1<sup>st</sup> and 2<sup>nd</sup> order schemes in MIKE 21 FM, structures in MIKE 21 FM Flow and SW, a new particle tracking module as well as parallelized code to greatly improve computational speed. This course is recommended for anybody seeking to get the most out of all these new features as well as improving their level of competence and knowledge of the FM series in general. The 3 days training can be followed individually or consecutively depending on the needs of the participants. The first day is a useful starting point for beginners as it will focus on mesh generation and basics of the flow models. Topics included:</p> <ul style="list-style-type: none"> <li>◆ Introduction to MIKE FM (theory and applications)</li> <li>◆ Mesh Generation with triangular and quadrangular elements- how to make a 'good' mesh</li> <li>◆ MIKE 21 FM Flow Model- calibration, implementing structures, optimising run-times</li> </ul>
<p><b>Spectral Wave Modelling using MIKE 21 SW</b></p> <p><b>Date:</b> 22 October</p>	<ul style="list-style-type: none"> <li>◆ On the second day we shall focus on:</li> <li>◆ Introduction to spectral wave modelling (theory and applications)</li> <li>◆ Case study: wave transformation or hurricane modelling (depending on participants' preference)</li> <li>◆ Experimenting with new features (structures / diffraction / reflection) using the case study</li> <li>◆ Modelling wave-current interaction with the coupled model FM</li> </ul>
<p><b>Advection-dispersion, Particle Tracking and Sand Transport Modelling with MIKE 21</b></p> <p><b>Date:</b> 23 October</p>	<ul style="list-style-type: none"> <li>◆ The third day we shall proceed to topics including:</li> <li>◆ Introduction to the AD, PT and Sand Transport models</li> <li>◆ Case Studies including the tracking of dredged material from around a typical harbour as well as the infill and long-term morphology of navigation channel.</li> </ul>

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