

SCOPE

This 3 day course on **Environmental Water Quality Modelling** has been structured to provide the latest and most relevant theory applicable in the field. During the course the application of theory in practise will be dealt with by including sessions with worked examples as well as hands-on computer sessions using easily accessible water quality modelling software. Presenters are drawn from government, university and consulting engineering companies. **Delegates will require a laptop for hands-on computer sessions on day 3 of the course.** The prescribed textbook for this course is “**Surface Water-Quality Modeling**” – by **Steven C. Chapra**. The cost of the prescribed textbook is included in the course fees.

REGISTRATION FORM – ENVIRONMENTAL WATER QUALITY MODELLING *

Kindly complete this registration form and fax it to **fax number +27-21 8084351** or mail the form to:

The Secretary, Institute for Water and Environmental Engineering, Department of Civil Engineering, University of Stellenbosch, Environmental Water Quality Modelling, Private Bag X1, MATIELAND, 7602, SOUTH AFRICA or by email to: **elmienl@sun.ac.za**

On receipt of the completed registration form, an invoice will be faxed to participants within 2 to 3 days. Payment can be made electronically (details will be provided on the invoice) or by cheque, to be made payable to **University of Stellenbosch**. **Please include a blank company letterhead with your registration form.**

To ensure that textbooks are available during the course the deadline for registration and payment is **7 February 2011**. Registration and payment between **7 February 2011 and 25 February 2011** will be accepted, but delegates registering during this period will only receive their textbooks after the course. **The fee for late registration after 25 February 2011 will be 20% more than the course fees.**

Title	<input type="text"/>	Surname	<input type="text"/>	Name	<input type="text"/>
Company	<input type="text"/>				
	VAT registration number:		Business registration number		
	Postal address:		Street address:		
Tel	()		Fax	()	
Email	<input type="text"/>		Delegate	Y/N	
Special dietary requests	<input type="text"/>		Presenter	Y/N	
Name/Email of person regarding payment	<input type="text"/>		Student	Y/N	

FEES: R6400-00 for 3 days (Includes tea, lunch, prescribed textbook & presentations; **R4700-00 for 2 days; R3000-00 for 1 day**

Indicate dates of attendance: 14 March 15 March 16 March

Cancellations will be accepted in writing and without penalty, up to 10 working days prior to commencement of the course. Participants cancelling in writing less than 10 working days prior to commencement of the course will be liable for a 50% cancellation fee. Following registration without attendance and without written cancellation, delegates will be held responsible for the full course cost.

I HAVE READ AND AGREE TO THE CONDITIONS OF REGISTRATION AS STIPULATED ABOVE

Signature: _____

Date: _____

Enquiries can be directed to:

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**Three Day Short Course on
Environmental Water Quality Modelling
14 – 16 MARCH 2011**

Time	Duration	Subject	Speaker	Organisation
DAY 1				
07:30 - 08:30	60	Registration - tea/coffee		
08:30 - 08:35	5	Introduction & welcome		
08:35 - 09:30	55	The importance of water quality in managing water resources in South Africa	TBC	TBC
09:30 - 10:00	30	Introduction to water quality modelling	W Kamish	US
10:00 - 10:30	30	Tea 10:00 to 10:30		
10:30 - 11:15	45	Reaction kinetics in water quality modelling	W Kamish	US
11:15 - 12:00	45	Mass balances - The defining principle of water quality modelling		
12:00 - 12:45	45	Practical session - worked examples	All	
12:45 - 13:45	60	Lunch		
13:45 - 14:30	45	Feed forward and feedback systems of reactors as models for representing the water quality of reservoirs connected in series or pumpback operations between reservoirs	W Kamish	US
14:30 - 15:15	45	Pollutant transport processes in the environment		
15:15 - 15:45	30	Tea 15:15 to 15:45		
15:45 - 16:30	45	Practical session - worked examples	All	
DAY 2				
08:00 - 08:30	60	Late registration - Tea/coffee		
08:30 - 09:15	45	Steady state modelling of rivers and estuaries using idealised PFR and CSTR reactor systems	W Kamish	US
09:15 - 10:00	45	Unsteady pollutant transport modelling of distributed rivers		
10:00 - 10:30	30	Tea 10:00 to 10:30		
10:30 - 11:15	45	Control volume approach for computer simulation of water quality	W Kamish	US
11:15 - 12:00	45	Practical session - worked examples	All	
12:00 - 12:45	45	Water quality environment of rivers and streams	T Coleman	Golder
12:45 - 13:45	60	Lunch		
13:45 - 14:30	45	Water quality environments -Estuaries	TBC	TBC
14:45 - 15:15	45	The modelling environment	W Kamish	US
15:15 - 15:45	30	Tea 15:15 to 15:45		
15:45 - 16:30	45	Practical session - worked problems	All	
DAY 3				
08:00 - 08:30	60	Late registration - Tea/coffee		
08:30 - 09:15	45	Gas transfer and oxygen reaeration in the environment	W Kamish	US
09:15 - 10:00	45	Streeter-Phelps model for oxygen sag in rivers	T Coleman	Golder
10:00 - 10:30	30	Tea 10:00 to 10:30		
10:30 - 11:15	45	Sediment oxygen demand	JN Rossouw	Aurecon
11:15 - 12:00	45	Eutrophication and nutrients - a modelling approach	JN Rossouw	Aurecon
12:00 - 12:45	45	Introduction to water quality modelling in reservoirs using CE-QUAL-W2	W Kamish	US
12:45 - 13:45	60	Lunch		
13:45 - 14:30	45	Practical session - development of bathymetry and input files for water quality modelling in reservoirs	W Kamish	US
14:30 - 15:15	45	Hands on computer session - Hydrodynamic and water quality model configuration and simulation using CE-QUAL-W2		
15:15 - 15:45	30	Tea 15:15 to 15:45		
15:45 - 16:30	45	Hands on computer session - Hydrodynamic and water quality model configuration and simulation using CE-QUAL-W2	W Kamish	US
16:30 - 16:40	10	Closure		