



SANCOLD

**South African National Committee on Large Dams**

Three day short course and symposium

**Course 1.5 days: BASIC PRINCIPLES OF DESIGN, CONSTRUCTION AND EVALUATION OF SMALL TO MEDIUM DAMS, ESPECIALLY EMBANKMENT DAMS**

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**Symposium 1.5 days: SPECIALIZED DAM ENGINEERING AND RELATED TOPICS**

**Monday 11 to Wednesday 13 October 2010**  
**Venue: CSIR conference Centre, Pretoria, SOUTH AFRICA**

**OPTIONAL SITE VISIT TO DE HOOP DAM (full day on 14 October 2010)**

ECSA Continuing Professional Development (CPD) accredited\*  
**PRELIMINARY PROGRAMME**

11-Oct-10		Monday - Short course (1.5 days)		
		Theme: Basic principles of design, construction and evaluation of smaller dams, especially embankment dams		
Start Time	Duration	Description	Organization	Presenter
07:30		Registration		
08:00	5	Opening	SANCOLD	Danie Badenhorst
08:05	40	Foundation and materials investigations	Knight Piesold	Dawid Mouton
08:45	60	Small dam design based on new ICOLD bulletin	BKS	Danie Badenhorst
09:45	30	Dam Type Selection Studies – BWP Case Study	TCTA	Tente Tente
10:15	30	Tea		
10:45	45	Earth Fill Dams	DWA	Frans Druyts
11:30	30	Bentonite sealing of earth dams	GW Minerals	Ernest Rood
12:00	30	Spillway design (bywash, unlined, hydraulic control, energy dissipation etc.)	US/Aurecon	Prof GR Basson & Dawid van Wyk
12:30	60	Lunch		
13:30	30	Spillway design & Riprap upstream erosion protection based on the Rock Manual	US	Prof Gerrit Basson
14:00	45	Basic instrumentation: Settlement and seepage/leakage monitoring	DWA	Prof Chris Oosthuizen
14:45	30	Tea		
15:15	45	Linings for dams and landfill sites	DWA	Kelvin Legge
16:00	45	Safety Inspections	Hattingh Anderson Assoc	Louis Hattingh
12-Oct-10		Tuesday - short course (continued)		
07:30		Late Registration		
08:00	30	Mechanical engineering aspects of outlet works	DWA	Wally Kohlmeyer
08:30	30	Design aspects of outlet works	BKS	Rudolf Steenkamp
09:00	45	Embankment Dam case studies	Aurecon	Alan Shelly
09:45	30	Doomkop Dam case study	SRK	Adriaan Meintjies
10:15	30	Requirements of dam safety legislation including differences between old and new regulations	DWA	Jan Nortje
10:45	30	Tea		
11:15	45	Water level recorder instrumentation and flow measurement	DWA	Dr Pieter Wessels
12:00	30	Minimum requirements for approval as the approved professional person including responsibilities or challenges	DWA	Jan Nortje
12:30	90	Lunch & Symposium Registration (Lunch for course & symposium delegates)		

Note: \* CPD commenced in January 2006 whereby all professional engineering persons are required to obtain 25 credits over a 5 year cycle, with a minimum of 3 credits per year, for renewal of registration with ECSA from 2007. This course is a Category 1 activity and offers 3.0 credits (4 credits with the De Hoop Dam site visit). A maximum of 4 credits may be accumulated under this category per year. For more details see [www.ecsa.co.za](http://www.ecsa.co.za)

**SCOPE**

**a) Short course:** This 1.5 day course on the BASIC PRINCIPLES OF DESIGN, CONSTRUCTION AND EVALUATION OF SMALL TO MEDIUM DAMS, ESPECIALLY EMBANKMENT DAMS has been structured to address design and construction aspects of small to medium sized dams. Presenters are drawn from

government, universities, consulting engineering companies and industry. This popular course was last presented in 2008.

**b) Symposium:** Specialized aspects of dam engineering will be presented at a 1.5 day symposium. Papers should be submitted by delegates for the symposium and will be reviewed. The topics for the symposium are listed in the symposium programme.

**c) An optional one day De Hoop Dam site visit** is scheduled on 14 October 2010. The dam is currently under construction by DWA near Steelpoort. The size of the group could be limited for logistical reasons and we encourage you to register early for the tour.

A preliminary programme for the symposium is shown below:

12 to 13 Oct 2010	min	Tuesday 12:30 to Wednesday Symposium (1.5 days)		
		<b>Theme: Specialized dam engineering and related topics</b>		
12:30 to 17:00	Tuesday	<i>Lunch &amp; Symposium Registration</i>		
14:00	30	<b>Opening: General State of water resources planning and development in SA</b>	DWA	Dr Cornelius Ruiters
14:30	60	Flag Bashielo Dam	DWA	Various DWA
15:30	30	<b>Tea</b>		
16:00	60	Flag Bashielo Dam	DWA	Various DWA
17.00 to 18.00	60	<b>SANCOLD AGM</b>	SANCOLD	
8:00 to 16:00	Wednesda	<b>Symposium continued</b>		
	25	CASE STUDY DESCRIBING THE ASSESSMENT OF EIGHT BULK WATER STORAGE DAMS in the Port Elizabeth Area AFTER FLOODS OF AUGUST 2006	Aurecon, Cape Town, South Africa	D J Hagen and A J Shelly
	25	The Tailings mega dam: origin and benefits		JS Davel
	25	ENGINEERING GEOLOGY CONSIDERATIONS IN THE DESIGN OF METOLONG DAM	Arcus GIBB, Johannesburg, South	M Wainstein
	25	Isotope Hydrology in Dam Studies related to Dam Safety and Sustainability	Aurecon	M Levin
	45	Massingir Dam outlet failure		
	25	RCC dam construction in adverse weather conditions	ARQ(Pty)Ltd	M van den Berg, QHW Shaw
	25	BRAMHOEK DAM – CONSOLIDATION AND CURTAIN GROUTING OF THE FOUNDATION	Bramhoek Consultants Joint Venture & ROGEL Joint Venture	TT Khotle, MJE Neumann, and J Van Rooyen
	25	Raising Dams: Safety and maintenance issues associated with automatic self regulating gates	AmanziFlow Projects	Peter Townshend
	25	THE EARLY CREEP BEHAVIOUR OF ROLLER COMPACTED CONCRETE IN LARGE DAMS	ARQ (Pty) Ltd	QHW Shaw
	25	STATE OF THE ART THERMAL ANALYSIS FOR LARGE RCC DAMS	ARQ (Pty) Ltd	RP Greyling, and QHW Shaw
	25	Cost of the alternative	Jones & Wagener	Scott Ferreira
	60	RCC case study: De Hoop Dam	DWA	Frans Druyts & Mark Matchett
	5	<b>Closure</b>		
<b>14-Oct-10</b>		<b>Thursday</b>		
Full Day		Visit De Hoop Dam	DWA	

### Important Dates

13 September 2010

Submit final papers & Registration deadline



**REGISTRATION FORM – SANCOLD Dam Engineering short course and Symposium  
Oct 2010**

Kindly complete this registration form and fax it to **fax number +27-21 4130447** or mail the form to:  
**The Secretary, Institute for Water and Environmental Engineering (IWESU), Department of Civil Engineering,  
 University of Stellenbosch, Private Bag X1, MATIELAND, 7602, SOUTH AFRICA.** Or by email to:  
**msb@aspt.co.za**

Payment can be made electronically or by cheque, to be made payable to **University of Stellenbosch.**

**CLOSING DATE FOR REGISTRATION AND PAYMENT: 13 Sep 2010**

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"/>		Course Presenter	Y/N	
Special dietary requests*	<input type="text"/>		Symposium Delegate	Y/N	
Name/Email of person regarding payment	<input type="text"/>		Full Time Student at SA University	Y/N	
			SANCOLD member	Y/N	

Note: \*Extra cost R300/day

**FEES:**

- **Short course R3500-00 for 1.5 days** (Includes tea, lunches, course notes, presentations); (SANCOLD member R3300-00)
- **Symposium R3500-00 for 1.5 days** (Includes tea, lunches, papers, presentations); (SANCOLD member R3300-00)
- **De Hoop Dam visit R1100-00 for 1.0 day** (includes transport and lunch); (SANCOLD member R1000-00)
- Full time MScEng, MEng and PhD students at SA Universities (other than University of Stellenbosch) pay 50% of the above fees.

Indicate your attendance: Short course  Symposium  Site visit

**The fee for late registration after 13 Sep 2010 will be 20 % more than the above fees**

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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