

SHORT COURSE: FLOOD HYDROLOGY

DEPARTMENT OF CIVIL ENGINEERING • 31 Mar - 02 Apr 2025

COURSE COORDINATOR

Prof JA du Plessis

CO-PRESENTERS

Prof J Smithers
Prof J Gericke
Dr J Pietersen
Dr KA Johnson
Dr D van der Spuy
Mr P Rademeyer
Mr S Dunsmore
Mr M Wiese
Mr R Nel
Mr E Oakes
Mr J Nathanael
Mr B de Klerk

FEES:

3-day course
R 9 000.00

ECSA CPD POINTS

3 points

ONLY DIGITAL CERTIFICATES
ISSUED

LANGUAGE

The course will be presented
in English

CONTACT

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GOALS OF THE COURSE

OBJECTIVE

The objective of this course is to transfer advanced knowledge on flood calculation methods to the practicing engineer from industry and post graduate students. Significant advances have been made to improve/update existing methods and these will be presented by academics, practitioners as well as key staff from the Department of Water and Sanitation.

The opportunity will also be used to provide input towards the National Flood Study Program, to update and improve all flood calculation methods in use in South Africa. Ample opportunity will be available for discussions on practical experiences and lessons learned. All methods will be illustrated with appropriate practical sessions.

It is a must-attend course if you are working in the flood space, given all the new developments. Information on available data sets used in flood calculations will also be shared, as well as progress towards an online portal with all the latest available information available on it.

OUTCOMES

A clear understanding of all flood calculation methods in use, with specific references to practical interpretation of results. The latest research findings on flood related topics from various academic institutions will be presented.

**FREE: Flood Design Software
(Excel-based)**
**for all methods presented in the SANRAL
Road Drainage Manual will be available to all
delegates**

COURSE ARRANGEMENTS

The course will be presented **face-to-face** only. Registration is from 08h00; lectures will start at 08.30

The fee covers all course material, including the user manual for the software.



[Click HERE to register](#)

PLEASE READ THE T's & C's

Registrations close: **14 March 2025**
Payments due: **21 March 2025**

PAYMENT CONFIRMS REGISTRATION



PROGRAMME				
DATE	FROM	SUBJECT	SPEAKER	INSTITUTE
Monday, 31 March 2024	08H00	Registration		US
	08H30	Welcome	JA du Plessis	US
	09H00	Flood management strategy for City of Cape Town	R Nell	CoCT
	10H00	Design Flood Estimation in South Africa: Overview and Developments to date with the NFSP	J Smithers	UKZN
	11H00	Tea: 11H00 - 11H30		
	11h30	Flood Design guideline for municipalities	JA du Plessis	US
	12H30	Catchment characteristics	J Nathanael	DWS
	13H00	Lunch: 13H00 - 13H45		
	13H45	Design Rainfall Estimation in South Africa	J Smithers	UKZN
	14H45	Probably Maximum Precipitation	KA Johnson	UKZN / US
	15H30	Tea: 15H30 - 15H45		
	15H45	Areal Reduction Factors	J Pietersen	CUT FS
	16H15	Data acquisition and Information	P Rademeyer	DWS
	16h45	Graphical Representation and Numerical description of data	D van der Spuy	Consultant
Tuesday, 1 April 2024	08H15	Admin	JA du Plessis	US
	08H30	Deterministic methods: SCS-SA and SCS-SA CSM	J Smithers	UKZN
	09H30	Deterministic methods: Rational	P Rademeyer	DWS
	10H00	Deterministic methods: Direct Runoff Hydrograph	E Oakes	DWS
	10H45	Tea: 10H45 - 11H00		
	11H00	Deterministic methods: Synthetic Unit Hydrograph	E Oakes	DWS
	12H00	Statistical methods and Probability Distribution.	D van der Spuy	Consultant
	12H30	The Z-set Plotting Position	D van der Spuy / JA du Plessis	Consultant / US
	13H00	Lunch: 13H00 - 13H45		
	13H45	A revised statistical flood quantile estimation for SA	D van der Spuy / JA du Plessis	Consultant / US
	14H30	Statistical Analysis – practical deliberations	D van der Spuy	Consultant
	15H15	Tea: 15H15 - 15H30		
	15H30	Midgley and Pitman and Catchment Parameter Method	P Rademeyer	DWS
	16h00	Standard Design Flood	J Gericke	CUT FS
Wednesday, 2 April 2024	08H15	Admin	JA du Plessis	US
	08h30	Assessment of event-based empirical DFE methods at a national scale and updated MIPI method	B de Klerk / JA du Plessis	US
	09H00	Practical (case study)	J Nathanael	DWS
	09H30	Tea: 9H30 - 9H45		
	09H45	Regional Maximum Floods	JA du Plessis	US
	10H30	Flood hydrological modelling in practice	M Wiese / JA du Plessis	Royal Haskoning DHV / US
	11H30	Good practice and best methods - discussion	S Dunsmore	Fourth Element
	12H30	Legal framework for flood determination	JA du Plessis	US
	13H30	Lunch: 13H30 - 14H15		
	14H15	GIS applications for flood calculations	J Pietersen	CUT FS
	15H00	Demonstration of flood calculation software tools	J Gericke & JA du Plessis	CUT FS / US
	16H00	New developments of software and online portal for NFSP	J Smithers	UKZN
	16H30	Closure	JA du Plessis	US

[NFSP Research Workshop – Thursday 3 April: 8h00 till 14h00.](#)