



In association with EPA



presents a 4 ½ day course

on

URBAN ROAD STORMWATER DRAINAGE

in

NAMIBIA

7 – 11 MARCH 2011

APPLICATION FORM

**CPD VALIDATION No.
SAICEtr09/00583/12
4 ½ Credits**

COURSE DESCRIPTION

The South African Road Federation will be holding a 4 ½ day practical course on:

URBAN ROAD STORMWATER DRAINAGE

The course content is applicable to the design of road stormwater drainage systems and appurtenant structures. The course caters for Engineers and Technicians with up to 3/5 years experience involved in the design of roads and streets in the urban environment.

PRESENTERS

Peter Pearse PrEng	SARF
Chris Brooker PrEng	Chris Brooker & Ass
Alaster Goyns	Consultant
Matt Braune PrEng	SRK

WORKSHOP SESSIONS

These are problem solving exercises undertaken by the delegates which cover the practical aspects of design and management as dealt with in the various lectures.

VENUE

The course will be held at

**Safari Hotel and Conference Centre
Cnr. Auas & Aviation Strs. Windhoek
Tel +264-61-2968000 Fax +264-61-235652**

Accommodation

There is accommodation available at the venue. Delegates are required to make their own arrangements with regard to accommodation and travelling to and from the venue. Ample parking will be available

COURSE FEE

The fee includes teas, daily finger lunches. The fee also includes a bound set of lecture material. Delegates are advised to bring their own calculators.

A 10% increase in course fees will be applicable for all payments received after the completion of the course.

CONDITIONS OF REGISTRATION

- Applications will be dealt with on a 'first come, first served' basis. Priority will be given to applications for which payment is received before the course starts.
- Registration form can be faxed or emailed to us. If payment is made electronically please fax the deposit slip to (011) 403 7736. Cheques must be made out to South African Road Federation.
- A 10% increase in course fees will be applicable for all payments received after completion of the course.
- SARF Members only qualify for the Membership fees if their annual subscriptions are paid up-to-date.
- Cancellation of delegate registration will be accepted up to two weeks prior to commencement of the course. A levy will be charged to cover the administration costs. Cancellation at a later stage will not qualify for a refund of fees, except in exceptional circumstances. Substitute delegates are acceptable.
- The SARF reserves the right to cancel the course in the event of unforeseen circumstances. All applicants will be informed and only course fees paid will be refunded.
- Delegates should advise us if they have any special preference regarding meals, eg .Halaal, Vegetarian.
- Delegates must sign the attendance register each day of the course to get the full CPD validation points.

COURSE CONTENT

Urban stormwater management.

Introduction to stormwater management.
A systems approach to urban stormwater management.
Planning and design criteria for stormwater management.

Hydrology & runoff.

Design storm (recurrence interval, intensity, duration, risk),
Catchment (size, response, infiltration)
Catchment discharge (rational & other methods).

Flood Control

Flood routing,
On & off channel storage
Retention and detention ponds

Computer applications

Hydrology - (Hydrosim.): River
Channel flow - (HEC-RAS, CFP, and HEC 2):

Roadway drainage

Recurrence intervals for small drainage structures.
Catchpits, kerb and grid inlets.
Capacity (Zwambourne, Forbes, Rooseboom)
Alternative designs.

Dissipation of energy

Stilling basins,
Baffles

Open channels

Hydraulic Calculations

Culverts

Culvert and gravity pipe systems - planning and design
Culvert hydraulics, inlet & outlet control, sizing of culverts.
Precast concrete portal culvert design and selection.
Installation requirements for precast culverts.

Bridges

High level, low level, causeways
Bridge hydraulics

Legal aspects

To be announced

Workshops

Exercises will be sent to the delegates in order to illustrate the practical aspects of the course material.

In view of the expected popularity of this course, it is recommended that the application form be completed and returned to:

South African Road Federation

P O Box 31577, Braamfontein

Tel: 011 403 5603

Fax 011 403 7736

Email: administrator@sarf.org.za

Web Site www.sarf.org.za

DELEGATE REGISTRATION

URBAN ROAD STORMWATER DRAINAGE NAMIBIA

1. Name & Surname:

ID No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

2. Name & Surname:

ID No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Organization:

Postal Address:

Tel: Fax :

E-Mail:

Signature:

COMPANY VAT REGISTRATION NO

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Fees:

Members (SARF/EPA) N\$/R 7 000 =

Non-SARF Members N\$/R 7 500 =.....

Subtotal 1 =

VAT @ 14% (where applicable) =

TOTAL DUE =

Closing Date 25 February 2011