

# SHORT COURSE: RIVER & STORMWATER

DEPARTMENT OF CIVIL ENGINEERING • 5-8 SEPTEMBER 2022

## COURSE COORDINATOR

**Dr Adèle Bosman**  
Hydraulics lecturer

## FEES

3.5-day course  
R7,000

## ECSA CPD POINTS

3.5 points

## LANGUAGE

The course will be presented in English.

## PROGRAMME

Detailed programme is attached

## CONTACT

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## OBJECTIVES

The course has been structured to five state-of-the-art theory and practice on stormwater modelling, river hydraulics, and design of stormwater hydraulic structures such as canals, culverts, causeways, bridges, and riverbank protection. Presenters are drawn from government, university, consulting engineering companies and industry. The course includes a tutorial session on the design of SuDS systems. The keynote address, Purpose of Stormwater Management, will be delivered by Prof Neil Armitage. This popular course was last presented in 2017.

## OUTCOMES

The course aims to provide participants with the knowledge base and competencies to plan, design, operate and manage river infrastructure.

## COURSE ARRANGEMENTS

This course will be presented online, using TEAMS. Details will be forwarded to registered delegates once payment has been received.

[CLICK HERE TO REGISTER](#)

## REGISTRATIONS

Registrations close on 29 August 2022 - all payments are due by 2 September.

Payment confirms registration.



## RIVER & STORMWATER HYDRAULICS SHORT COURSE 5 TO 8 SEPTEMBER 2022

### Online Program

#### Design, Management and Maintenance of River & Stormwater

Start Time	Duration	Description	Presenter(s)	Organisation	Lecture
<b>5 September 2022</b>					
<b>DAY 1: Monday - Hydraulics &amp; Legislation</b>					
<b>ZOOM LINK:</b>					
8:15 to 8:30	15	Online registration			
8:30 to 8:40	10	Welcome	Dr Adèle Bosman	Stellenbosch University	
8:40 to 9:40	60	Purpose of Stormwater Management	Prof Neil Armitage	University of Cape Town	1
09:40 to 10:30	50	Legislation of Stormwater Management	Geoff Tooley	eThekweni Municipality	2
10:30 to 11:00	30	Breakout room and tea break			
11:00 to 11:45	45	Environmental considerations	Liz Day	Freshwater Consulting	3
11:45 to 12:15	30	Case study: Environmental aspects	Jane Eagle	City of Johannesburg	4
12:15 to 13:00	45	Flow measurement techniques	Frans le Roux	DWS	5
13:00 to 14:00	60	Breakout room and lunch break			
14:00 to 14:45	45	Catchment, Stormwater & River management in Cape Town	Richard Nell	City Cape Town	6
14:45 to 15:30	45	Case Study: Floods and low flow events of various Cape Town rivers	Dr Mike Shand	Zutari	7
15:30 to 16:15	45	Urban flood attenuation and routing	Timothy Hotchkiss	AECOM	8
<b>6 September 2022</b>					
<b>DAY 2: Tuesday - Flooding</b>					
<b>ZOOM LINK:</b>					
8:15 to 8:30	15	Online Registration			
8:30 to 9:15	45	Floodlines/ Set back lines in estuaries	Lara van Niekerk	CSIR	9
9:15 to 10:00	45	Stormwater outfall structures in the coastal zone	Dr André Theron	Univ Stellenbosch	10
10:00 to 10:30	30	Case study: Great Brak and Klein Brak Estuary floodlines considering the fluvial morphology and climate change	Dr Jeanine Vonkeman	Univ Stellenbosch & DEA&DP	11
10:30 to 11:00	30	Breakout room and tea break			
11:00 to 11:45	45	Effect of climate change on floods	Dr James Cullis	Zutari	12
11:45 to 12:15	30	Case Study: Temporary works constructed to mitigate the risk of increased runoff and sediment loads after various mountain fires	Abdulla Parker	City Cape Town	13
12:15 to 13:00	45	River bank protection by Groynes	Hans King	Hans King SRS	14
13:00 to 14:00	60	Breakout room and lunch break			
14:00 to 14:45	45	Case Study: Selection and installation of flow gauges on rivers in catchments where the TMG aquifer will be exploited	Martin Kleynhans	Zutari	15
14:45 to 15:15	30	Stormwater canal design	Dr Adèle Bosman	Univ Stellenbosch	16
15:15 to 16:00	45	Culvert Hydraulics, energy dissipation and erosion protection	Francis Stoffberg	iX Engineers	17
16:00 to 16:30	30	Conventional stormwater designs	Dr Adèle Bosman	Univ Stellenbosch	18
<b>7 September 2022</b>					
<b>DAY 3: Wednesday - Water quality &amp; Design</b>					
<b>ZOOM LINK:</b>					
8:15 to 8:30	15	Online Registration			
8:30 to 9:00	30	Debris removal stormwater structures	Prof Neil Armitage	University of Cape Town	19
9:00 to 9:45	45	Sustainable Urban Drainage Systems (SuDS) concepts	Prof Neil Armitage	University of Cape Town	20
9:45 to 10:30	45	Case Study: Implementation of SuDS principles in urban areas - Durban	Geoff Tooley	eThekweni Municipality	21
10:30 to 11:00	30	Breakout room and tea break			
11:00 to 11:45	45	Sustainable Drainage Systems (SuDS) designs	Prof Neil Armitage	University of Cape Town	22
11:45 to 12:15	30	SuDS tutorial explanation	Prof Neil Armitage	University of Cape Town	23
12:15 to 13:00	45	SuDS tutorial - Design of a SuDS system	Prof Neil Armitage	University of Cape Town	24a
13:00 to 14:00	60	Breakout room and lunch break			
14:00 to 15:15	75	SuDS tutorial - Design of a SuDS system	Prof Neil Armitage	University of Cape Town	24b
15:15 to 16:30	45	SuDS tutorial - Design of a SuDS system discussion and solution	Prof Neil Armitage	University of Cape Town	24c
<b>8 September 2022</b>					
<b>DAY 4: Thursday - Management &amp; Maintenance</b>					
<b>ZOOM LINK:</b>					
8:15 to 8:30	15	Online Registration			
8:30 to 9:15	45	Rehabilitation of urban streams	Liz Day	Freshwater Consulting	25
9:15 to 10:00	45	Rehabilitation of estuaries	Prof Janine Adams	Nelson Mandela University	26
10:00 to 10:30	30	Catchment coordinated interventions related to stormwater management	Geoff Tooley	eThekweni Municipality	27
10:30 to 11:00	30	Breakout room and tea break			
11:00 to 11:45	45	Maintenance of urban stormwater structures and rivers	Richard Nell	City Cape Town	28
11:45 to 12:30	45	Urban stormwater masterplanning, floodlines and risk	Isak Malherbe	AECOM	29
12:30 to 12:40	5	Closure	Dr Adèle Bosman	Stellenbosch University	