



TRANSNET



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD
ENGINEERING & THE BUILT ENVIRONMENT



freight rail

Bridge and Tunnel Management

UCT, Cape Town, 10 – 13 February 2026



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Introduction



Bridges and tunnels constitute significant and critical discrete components of a transportation system and they are among the most expensive investment asset of any country's civil infrastructure. They also have a long service life compared with most commercial products and are rarely replaceable once they are erected. Therefore effective bridge and tunnel asset management practices are required to obtain the best value from limited resources. The course will provide participants meaningfully guidance to quantify their bridge & tunnel infrastructure deficit and prioritize bridge & tunnel investment. The course will give a broad overview of bridge & tunnel management systems and maintenance strategies. Attention will be paid to the DER method of bridge inspection. This approach is used by a number of national, provincial and municipal authorities in South Africa.

Course Content

- Background: bridge failures
- Overview of Structures Management Systems
- Bridge asset management
- Visual assessment of structures
- Overview of typical defects on structures
- The DER Rating System
- BMS implementation in SA: Case Studies
- Implementing a BMS
- Applying bridge asset management
- Preventative maintenance of structures
- Asset valuation: replacement and current asset value
- Site visit to two concrete bridges (within 100 km from course venue).

Course Outcomes

At the end of this course the participants should be able to:

- Select relevant bridge and tunnel management systems for their environment
- Create bridge and tunnel inventories
- Prioritise maintenance programs based on management systems
- Conduct bridge and tunnel inspection

Who should attend?

Bridge Engineers and Technologists, Agency and Public Sector Bridge Asset Managers, Bridge Maintenance Managers, Bridge Inspection Consultants.

Course Presenters



Prof. Pilate Moyo (PrEng) is Professor of Structural Engineering and Director of the Concrete Materials and Structural Integrity Research Unit (CoMSIRU) in the Department of Civil Engineering at the University of Cape Town. His research and consultancy are on structural health monitoring, condition assessment, structural dynamics, vibration testing, and structural strengthening strategies for civil structures. His research is focused on developing structural assessment technologies integrating finite element modelling, full scale field testing, and advanced data analysis algorithms. He has published widely in these areas.



Mr Pheku Montwedi (PrEng) is a Director of Mmetlakiso Consulting (Pty) Ltd. He has experience in the structural design of bridges (prestressed, incrementally launched, reinforced) and harbour/waterfront structures. Pheku was the Transport Business Leader for the Southern African region at ARUP (Johannesburg office) and was responsible for bridge and harbour design. Before joining ARUP Pheku worked at Protekon (now Transnet Group Capital); a subsidiary of Transnet, doing in-house design. He has worked on several inspiring significant projects during his career, and his involvement in a number of these has required knowledge of relevant international design codes. He is a Registered Professional Engineer and a member of SAICE. He has worked for large international clients such as the World Bank and has travelled extensively in Africa on projects to the following countries: Botswana, Zimbabwe, Mozambique, Tanzania, Liberia, Guinea-Conakry, Namibia, and Ghana. He has also travelled overseas on business to Singapore, Malaysia, the United Kingdom, Hong Kong, the Netherlands, Ireland and to the United States of America

Course Overview

Name	Bridge and Tunnel Management	
Duration	10 – 13 February 2026, 4 days	
Venue	Chemeng Seminar Room, upper campus, UCT, Cape Town	
CPD	4 CPD points, ECSA Validation No: UCTBTM26	
Participants	Bridge Engineers & Technologists, Agency and Public Sector Bridge Asset Managers, Bridge Maintenance Managers, Bridge Inspection Consultants	
Entry requirements	Minimum NQF7 qualification in Engineering, Built environment or relevant sector	
Fees	Standard delegate: R17 278,00	Full-time student: R8 639.00

Registration

Registration and Cancellation

- [Register online](#)
- Registration covers attendance of all sessions of the workshop, teas and lunches, and a set of notes.
- Registrations close one week before the start of the course. Confirmation of acceptance will be sent on receipt of a registration form.
- **Cancellations must be received one week before the start of a course, or the full course fee will be charged.**
- For more information on application and registration procedures, please visit our [website](#).

Certificates and CPD Points

A digital certificate of attendance will be awarded to CPD participants. Participants need to attend 80% of the lectures to qualify for an attendance certificate. For further information on digital certificates please visit [Digital Certificates at UCT](#)

This course is registered with the Engineering Council of South Africa (ECSA) for the award of 4 CPD points. The ECSA course validation code is: UCTBTM26

Contact detail

For more information or details on CPD courses, visit our website or contact us.

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