



CIVIL ENGINEERING AND CONSTRUCTION TRAINING

Road Maintenance and Pavement Management Systems

5 day course

Classroom, online or in-house

Course overview

Road networks lose value fastest when maintenance is deferred until a pavement fails, at which point rehabilitation can cost many times what a timely reseal would have. This course is about managing a network rather than designing a single road. Delegates learn how visual condition assessment, roughness, deflection and rutting data feed a pavement management system, how condition indices are built, and how deterioration models forecast future state. Treatment selection, life cycle costing and prioritisation under a constrained budget follow, using the economic logic behind tools such as HDM 4. Routine, periodic and emergency maintenance are planned for paved and gravel roads, together with drainage and road reserve upkeep. The programme closes on presenting a funded maintenance plan to decision makers. Delegates leave able to run a network level maintenance programme.

What you will learn

- Explain the components and data flows of a pavement management system
- Plan visual condition surveys and roughness, deflection and rut measurements
- Construct condition indices and interpret network condition reports
- Apply deterioration models to forecast pavement condition
- Select maintenance and rehabilitation treatments using decision trees
- Compare options through life cycle cost and economic analysis
- Prioritise a multi year maintenance programme under budget constraints
- Plan routine and periodic maintenance for paved and gravel road networks

Who should attend

- Road authority and municipal maintenance engineers
- Asset managers responsible for road networks
- Planners preparing road maintenance budgets
- Consultants running condition surveys and management systems
- Maintenance contract managers and superintendents

Course outline

- 01 Road asset management principles
- 02 Condition data collection and surveys
- 03 Condition indices and network reporting
- 04 Deterioration modelling
- 05 Treatment selection and decision trees
- 06 Life cycle costing and economic evaluation
- 07 Budget scenarios and prioritisation
- 08 Maintenance of paved and gravel roads
- 09 Presenting the funded maintenance plan

Upcoming dates



Dates	Venue	Format	Fee per delegate
12 to 16 October 2026	Online	Online	R8,500
16 to 20 November 2026	Johannesburg, South Africa	Classroom	R19,950
30 November to 4 December 2026	Kampala, Uganda	Classroom	USD 1,325
18 to 22 January 2027	Lagos, Nigeria	Classroom	USD 1,325

Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriScience.co.za, or WhatsApp us on **+27 63 479 1136**.

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