



EMERGING TECHNOLOGIES TRAINING

Digital Twins for Industrial and Infrastructure Applications

3 day course

Classroom, online or in-house

Course overview

A digital twin is often sold as a three dimensional model of an asset, which is a visualisation; a twin is a model that is connected to the real thing and used to answer a question the real thing cannot be asked safely. This course builds toward that. Delegates work through defining the question first, since the required fidelity follows from it and nothing else. Model types are covered: geometric, physics based, data driven and hybrid, with what each can and cannot answer. Data connection follows, including sensing, sampling rate and the latency the use case tolerates. Calibrating a model against real behaviour and keeping it calibrated as the asset ages are addressed, since drift is the usual reason twins are abandoned. Simulation and what if analysis are covered. Integration with maintenance and operations systems follows. The course closes on cost, on ownership and on judging a vendor claim.

What you will learn

- Define the question the twin exists to answer
- Derive required fidelity from that question
- Select geometric, physics based, data driven or hybrid modelling
- Connect data at a sampling rate and latency the use case needs
- Calibrate against real behaviour and manage drift as the asset ages
- Run simulation and what if analysis that informs a decision
- Integrate with operations systems and judge vendor claims on cost and ownership

Who should attend

- Plant engineers
- Maintenance managers
- Infrastructure asset managers
- Industrial IT managers
- Operations directors

Course outline

- 01 A visualisation is not a twin
- 02 Defining the question first
- 03 Fidelity follows the question
- 04 Geometric and physics based models
- 05 Data driven and hybrid models
- 06 Sensing, sampling rate and latency
- 07 Calibration and drift over asset life
- 08 Simulation, integration, cost and vendor claims

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 23 September 2026	Online	Online	R6,500
7 to 9 October 2026	Cape Town, South Africa	Classroom	R14,950
18 to 20 November 2026	Nairobi, Kenya	Classroom	USD 995
28 to 30 December 2026	Pretoria, South Africa	Classroom	R14,950



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** 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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