AGRICULTURE AND AGRIBUSINESS

Drip and Micro Irrigation Design and Management

3 day course Classroom, online or in-house

Course overview

Drip irrigation delivers water at a rate low enough that a blocked emitter starves a plant for weeks before anybody sees it, which makes filtration and maintenance the whole discipline rather than an accessory to it. This course treats them that way. Delegates work through emitter types, discharge exponents and pressure compensation, and the manufacturing variation that limits achievable uniformity. Lateral and manifold hydraulics follow, including allowable pressure variation and the emission uniformity a design must guarantee. Filtration is covered in detail across screen, disc, sand media and hydrocyclone, matched to the water source, since surface water, borehole water and dam water each block emitters differently. Chemical water quality is addressed, particularly carbonate, iron and biological growth. Chemigation and fertigation follow, including injector types and nutrient compatibility. Flushing regimes and acid or chlorine treatment are covered as routine maintenance. Scheduling for high frequency application is addressed. The course closes on system evaluation and on diagnosing a blocked field.

What you will learn

- Select emitters knowing discharge exponent and manufacturing variation
- Design laterals and manifolds within allowable pressure variation
- Guarantee emission uniformity in design
- Match filtration to the specific water source
- Address carbonate, iron and biological blockage chemically
- Apply fertigation with compatible nutrients and correct injection
- Run flushing and treatment regimes, and diagnose a blocked field

Who should attend

- Irrigation designers specifying micro systems
- Farm irrigation managers and technicians
- Agronomists managing fertigation
- Equipment suppliers supporting drip installations
- Extension staff advising smallholder irrigation

Course outline

01 Starved for weeks before anyone sees it
02 Emitter types and pressure compensation
03 Manufacturing variation and uniformity limits
04 Lateral and manifold hydraulics
05 Filtration matched to water source
06 Carbonate, iron and biological blockage
07 Fertigation, injectors and compatibility
08 Flushing, acid and chlorine treatment, and field diagnosis

Upcoming dates

Dates	Venue	Format	Fee per delegate
23 to 25 November 2026	Pretoria, South Africa	Classroom	R14,950
14 to 16 December 2026	Online	Online	R6,500
6 to 8 January 2027	Johannesburg, 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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