AGRICULTURE AND AGRIBUSINESS

Soil and Water Conservation Engineering

3 day course Classroom, online or in-house

Course overview

Soil erosion removes the most fertile centimetres of a field first and does its worst damage in the few storms a year that nobody is measuring, which is why the losses are usually underestimated until a gully appears. This course covers preventing that. Delegates work through erosion processes, splash, sheet, rill and gully, and the rainfall energy and slope factors that drive each. Erosion estimation is covered at a practical level. Agronomic measures follow, including cover, residue, contour cultivation and strip cropping, since vegetation is cheaper than structures. Mechanical measures are then addressed: contour bunds, terraces, cut off drains and grassed waterways, with layout, spacing and the survey work each requires. Waterway design and permissible velocity are covered. Gully control follows through check dams, reshaping and revegetation. Water harvesting is addressed for both crop production and livestock. Catchment scale planning and community participation are covered, since conservation fails on maintenance rather than design. The course closes on maintenance and on measuring whether erosion has actually reduced.

What you will learn

- Distinguish splash, sheet, rill and gully erosion and their drivers
- Estimate soil loss at a practical level
- Apply cover, residue, contour cultivation and strip cropping
- Lay out bunds, terraces and cut off drains with correct spacing
- Design grassed waterways within permissible velocity
- Control gullies through check dams, reshaping and revegetation
- Plan at catchment scale with the community, and measure results

Who should attend

- Soil conservation and land husbandry officers
- Agricultural engineers and technicians
- Extension staff working with farming communities
- Catchment and watershed programme staff
- Environmental officers on land degradation

Course outline

01 The most fertile centimetres go first
02 Splash, sheet, rill and gully erosion
03 Rainfall energy, slope and soil loss estimation
04 Cover, residue and contour cultivation
05 Bunds, terraces and cut off drains
06 Grassed waterways and permissible velocity
07 Gully control and revegetation
08 Water harvesting, catchment planning and maintenance

Upcoming dates

Dates	Venue	Format	Fee per delegate
30 September to 2 October 2026	Kampala, Uganda	Classroom	USD 995
12 to 14 October 2026	Pretoria, South Africa	Classroom	R14,950
21 to 23 October 2026	Online	Online	R6,500
23 to 25 November 2026	Mbabane, Eswatini	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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