



MANUFACTURING AND PRODUCTION

Extrusion of Pipe, Profile and Sheet

3 day course

Classroom, online or in-house

Course overview

An extrusion line makes a continuous product, which means a fault is not one rejected part but metres of scrap produced while somebody works out what changed. This course concentrates on holding the line steady. Delegates work through screw design, compression ratio and the melting behaviour a given polymer needs. Barrel temperature profiles and their effect on melt quality follow. Die design and flow balance are covered, including the die swell and draw down that decide final dimensions. Calibration and cooling are addressed for pipe, where vacuum tank and sizing sleeve control wall thickness and ovality. Profile and sheet lines follow with their own take off and cooling arrangements. Haul off, cutting and coiling are covered. Dimensional control is treated as continuous measurement rather than end of run inspection. Common defects are diagnosed: surging, melt fracture, gels, wall variation and internal stress. The course closes on start up, purging and changeover losses.

What you will learn

- Match screw design and compression ratio to the polymer
- Set barrel temperature profiles for melt quality
- Balance die flow and allow for die swell and draw down
- Control pipe wall thickness and ovality through calibration and cooling
- Run profile and sheet take off and cooling
- Measure dimensions continuously rather than at end of run
- Diagnose surging, melt fracture, gels and wall variation, and cut changeover loss

Who should attend

- Extrusion line operators and setters
- Process engineers on pipe, profile and sheet lines
- Production supervisors in plastics extrusion
- Quality staff controlling extruded dimensions
- Maintenance staff supporting extrusion equipment

Course outline

- 01 Metres of scrap while you work it out
- 02 Screw design and compression ratio
- 03 Barrel temperature profiles and melt quality
- 04 Die design, flow balance and die swell
- 05 Pipe calibration, vacuum tank and ovality
- 06 Profile and sheet take off
- 07 Continuous dimensional control
- 08 Surging, melt fracture, gels, start up and changeover

Upcoming dates



Dates	Venue	Format	Fee per delegate
21 to 23 September 2026	Cape Town, South Africa	Classroom	R14,950
9 to 11 December 2026	Maputo, Mozambique	Classroom	USD 995
14 to 16 December 2026	Johannesburg, South Africa	Classroom	R14,950
23 to 25 December 2026	Online	Online	R6,500

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**.

AfriScience Group | +27 61 536 6531 | info@afriScience.co.za | Pretoria, Gauteng, South Africa