

**MANUFACTURING AND PRODUCTION**

Aluminium Extrusion and Window Fabrication

3 day course

Classroom, online or in-house

Course overview

An aluminium window is assembled from extruded profiles by a fabricator who did not design them, and most window failures, water ingress, sticking sashes and failed corners, come from fabrication rather than from the system. This course covers both ends. Delegates work through extrusion: billet heating, die design, press operation, extrusion speed and the quench that develops properties. Alloy tempers and the ageing that follows are addressed. Surface finishing is covered through anodising and powder coating, with pretreatment and coating thickness. Profile systems and their design logic follow, including thermal breaks, drainage paths and gasket seating. Fabrication is addressed in detail: cutting accuracy, crimping and cleating corners, machining drainage slots and hardware fitting. Glazing and gasket installation are covered. Weather performance is addressed, including water and air testing and the drainage principle a fabricator must not block. Installation interface is covered. The course closes on quality checks, on common failures and on warranty exposure.

What you will learn

- Run extrusion from billet heating through press to quench
- Select alloy tempers and understand ageing
- Anodise or powder coat with correct pretreatment and thickness
- Read a profile system's thermal break and drainage logic
- Cut, crimp and cleat corners accurately
- Machine drainage slots and fit hardware without blocking drainage
- Glaze, seal, test weather performance and manage warranty exposure

Who should attend

- Aluminium extrusion plant operators
- Window and door fabrication supervisors
- Quality staff in fenestration
- Architects and specifiers of aluminium systems
- Installers responsible for weather performance

Course outline

- 01 Failures come from fabrication, not the system
- 02 Billet heating, die design and press operation
- 03 Extrusion speed, quench and alloy temper
- 04 Anodising and powder coating
- 05 Profile systems, thermal breaks and drainage
- 06 Cutting, crimping and corner cleating
- 07 Drainage slots, hardware and glazing
- 08 Weather testing, installation interface and warranty

Upcoming dates



Dates	Venue	Format	Fee per delegate
14 to 16 October 2026	Durban, South Africa	Classroom	R14,950
14 to 16 December 2026	Online	Online	R6,500
27 to 29 January 2027	Windhoek, Namibia	Classroom	R14,950
3 to 5 February 2027	Nairobi, Kenya	Classroom	USD 995

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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