



MANUFACTURING AND PRODUCTION

Mould and Die Design, Maintenance and Trials

3 day course

Classroom, online or in-house

Course overview

A mould is a capital asset that determines what a process can ever achieve, and a plant that treats it as a consumable spends the difference every day in cycle time and scrap. This course covers looking after it. Delegates work through mould construction and what each element does: cavity, core, runner, gate, venting, ejection and cooling. Gate type and position are addressed as decisions that constrain the process permanently. Cooling layout is covered in detail, since cooling is most of the cycle. Venting is treated as the cause of burn marks and short shots that operators usually blame on pressure. Die construction for extrusion follows. Mould trials and qualification are addressed, including what to record so the trial is worth repeating. Preventive maintenance schedules are covered, along with cleaning, corrosion protection and storage. Wear, damage and repair decisions follow. The course closes on spare parts, on mould history records and on knowing when a tool should be replaced.

What you will learn

- Explain the function of each mould element
- Judge gate type and position and the constraints they impose
- Design cooling layout to reduce cycle time
- Diagnose venting problems behind burn marks and short shots
- Run and document a mould trial that can be repeated
- Maintain, clean, protect and store tooling properly
- Decide between repair and replacement using mould history

Who should attend

- Toolroom technicians and mould makers
- Process engineers running mould trials
- Maintenance planners responsible for tooling
- Production managers in moulding and extrusion
- Buyers procuring tooling

Course outline

- 01 A capital asset treated as a consumable
- 02 Mould construction element by element
- 03 Gate type and position
- 04 Cooling layout and cycle time
- 05 Venting and the defects it causes
- 06 Extrusion die construction
- 07 Mould trials and qualification records
- 08 Preventive maintenance, wear, repair and replacement

Upcoming dates

Dates	Venue	Format	Fee per delegate
25 to 27 January 2027	Maseru, Lesotho	Classroom	R14,950
22 to 24 February 2027	Accra, Ghana	Classroom	USD 995
24 to 26 March 2027	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