



Blasting Knowledge

DURATION

5 days

CONTACT HOURS

30

LEVEL

Intermediate

FEE PER DELEGATE

US\$1,500

Drill and blast from first principles: energy, fragmentation, and getting the result you designed.

Blasting is the first step in comminution and the cheapest place to break rock, which is why poor fragmentation costs twice, once in loading and again in the mill. This week covers explosive behaviour, blast design geometry, initiation and timing, and the measurement that tells you whether a design worked. Safety and ground vibration run through it rather than sitting in a separate session, because that is how they arise in practice.

Available as classroom, live online, in house.

Who it is for

Drill and blast engineers, mining engineers and supervisors, shotfirers and blasting technicians, and quarry managers.

What you will be able to do

- Explain explosive energy, velocity of detonation, and how rock breaks.
- Design a blast pattern from rock mass and fragmentation targets.
- Select initiation and timing to control fragmentation and movement.
- Predict and control vibration, airblast and flyrock.
- Measure fragmentation and feed it back into the next design.

The outline

DAY 1

Explosives

Detonation, energy partition and gas pressure · ANFO, emulsions and blends · Sensitivity, water resistance and storage

DAY 2

Rock and breakage

Rock mass properties that govern a blast · Structure, jointing, and how it steers a crack · Burden, spacing and stemming

DAY 3

Design

Bench geometry and hole diameter · Powder factor and energy distribution · Decking, presplitting and wall control

DAY 4

Initiation and timing

Detonators, delay and sequencing · Electronic against pyrotechnic initiation · Timing for fragmentation, muckpile shape and vibration

DAY 5

Results and control

Fragmentation assessment · Vibration monitoring and compliance limits · Flyrock, misfires and post blast inspection

What you leave with

- A blast design for a real bench or face.
- A vibration and airblast control plan for a sensitive boundary.
- A fragmentation measurement routine.

Published dates

DATES	WHERE	FEE
23 to 27 November 2026	Kampala, Uganda	US\$1,500
30 November 2026 to 4 December 2026	Cairo, Egypt	US\$1,500
7 to 11 December 2026	Dubai, United Arab Emirates	US\$1,500
14 to 18 December 2026	Nairobi, Kenya	US\$1,500

Fees are per delegate and cover all course materials and meals arranged by the delegate. Reg

Register or ask a question

globalaxistraining.co.za/courses/blasting-knowledge
info@globalaxistraining.co.za
+27 72 337 9234

250 Beyers Naude Drive, Rustenburg, North West, 2999, South Africa

This copy was produced on 30 October 2026.