



PETROLEUM GEOSCIENCE AND PETROPHYSICS

Development Geology and Static Reservoir Modelling

5 day course

Classroom, online or in-house

Course overview

Development wells, facilities sizing and reserves bookings all rest on a three dimensional picture of the reservoir that someone built from sparse wells and imperfect seismic. That picture, the static model, is only as good as the geological reasoning and statistics behind it. Delegates begin with data preparation: well tops, interpreted surfaces and fault sticks. Structural framework and grid construction follow, then facies modelling with sequential indicator, object based and multipoint methods. Petrophysical property distribution using variograms, kriging and Gaussian simulation is conditioned to well data and seismic trends. In place volume calculation, multiple realisations and uncertainty ranking complete the build, with upscaling choices that prepare the grid for dynamic work. Delegates leave able to construct, check and hand over a static model with honest volumetric ranges.

What you will learn

- Prepare and quality control well, seismic and fault data for modelling
- Build a structural framework and three dimensional grid
- Apply variogram analysis to describe spatial continuity
- Model facies using pixel, object and multipoint techniques
- Distribute porosity, permeability and saturation conditioned to wells and seismic
- Calculate in place volumes and generate multiple realisations
- Rank model uncertainty and select cases for upscaling

Who should attend

- Development and reservoir geologists
- Geomodellers
- Petrophysicists supplying modelling inputs
- Reservoir engineers receiving static models
- Asset team leads reviewing development plans

Course outline

- 01 Development geology and the role of the model
- 02 Data preparation and quality control
- 03 Structural framework and gridding
- 04 Geostatistics and variograms
- 05 Facies modelling methods
- 06 Petrophysical property modelling
- 07 Volumetrics and realisations
- 08 Uncertainty analysis
- 09 Upscaling and handover to simulation

Upcoming dates



Dates	Venue	Format	Fee per delegate
12 to 16 October 2026	Johannesburg, South Africa	Classroom	R19,950
14 to 18 December 2026	Pretoria, South Africa	Classroom	R19,950
15 to 19 February 2027	Online	Online	R8,500
22 to 26 March 2027	Maseru, Lesotho	Classroom	R19,950

Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** 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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