

## Directional Drilling & Borehole Surveying Training Courses

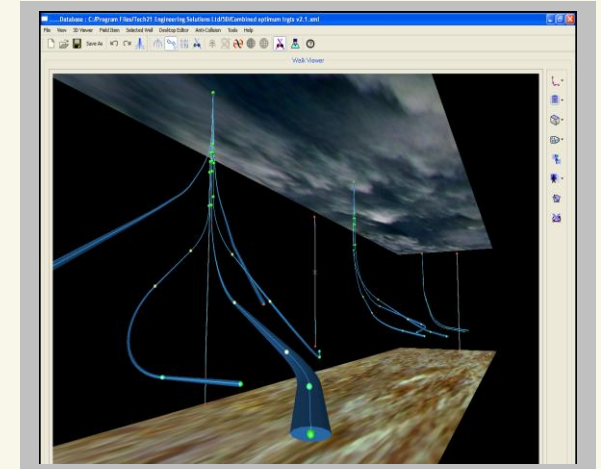
- Mapping
- Drilling Equipment
- IFR
- MWD
- Deviated Drilling
- Well Planning
- Anti collision
- Error models
- QC

Longer courses are available and bespoke courses can be provided to your requirements.

Please contact Tech21 to discuss your needs at: enquiries@tech21.co.uk

## 3 DAY DIRECTIONAL DRILLING & BOREHOLE SURVEYING COURSE

This 3 day introductory course is designed for well engineers, drilling engineers, geologists, petro physicists and technical staff who wish to have a better understanding of the methods and equipment used in the drilling of highly deviated well paths. Lectures will also cover the main elements of borehole surveying and understanding wellbore position uncertainty and how it affects well placement.



## INSTRUCTOR

### Prof Angus L Jamieson

Angus Jamieson is an internationally known consultant and lecturer in the drilling industry with over 30 years experience. He is best known as the original author of the Compass directional drilling suite. Twice voted top lecturer at the Shell International Drilling School in The Hague, Angus' lectures are informative and amusing.

## COURSE OUTLINE

- Introduction
- Understanding Mapping, Geodesy, Datums and projections
- MWD – strengths and limitations
- Equipment and methods of Deviated Drilling
- Well Planning from Field Layout Planning to Individual Trajectories
- Anti-collision considerations
- Borehole Surveying Methods and equipment
- Surface Position uncertainty
- Down-hole Survey uncertainty and Error Models
- Minimising Down-hole error
- Common mistakes and how to avoid them
- Quality Control and monitoring
- Simulator exercises
- Kicking a well off in top hole using a mud motor
- Drilling a full “S” well to target
- Landing a medium radius horizontal well
- Landing a short radius multi-lateral

### 2012

14<sup>th</sup> – 16<sup>th</sup> May, Inverness

Please contact  
[catriona.chalmer@tech21.co.uk](mailto:catriona.chalmer@tech21.co.uk)  
 for further information

### WHEN

### Inverness:

Kingsmills Hotel,  
<http://www.kingsmillshotel.com>

### WHERE

### BOOKING

**Inverness:**  
[Catriona.chalmer@tech21.co.uk](mailto:Catriona.chalmer@tech21.co.uk)  
 +44 (0)1463 710008

### FEE

**Inverness:**  
 £1,500 per person  
 Includes two night's bed and  
 breakfast in standard room,  
 lunch and refreshments over  
 three days.