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## ***Integrated Field Development Analysis, Optimisation and Forecasting Unconventional Systems***

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### **Target Audience:**

This course is intended for those that have (i) recently started working in the production domain and need to become familiar with production tools/analysis, (ii) attended the course already some time ago, and require a refresher, or (iii) unrelated disciplines trying to understand the production context (e.g. accountants, project managers, etc..).

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### **Overall Objectives:**

- 1/ Developing dexterity in using the **IPM** suite
- 2/ Basic understanding of the physics
- 3/ Understanding the limitation of the methods and techniques used

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### **Course Agenda**

- Day 1** Introduction to integrated production system and why an overall approach is necessary  
*Introduction to PROSPER - philosophy and methodology*  
*Pressure loss in the wellbore - gravity and friction terms, slip, holdup*  
*Importance of PVT*  
*VLP flow correlations theory. Important parameters*  
**Workshop** - building a wellbore model, matching PVT and flow correlations, running sensitivities,
- Day 2** Introduction to inflow performance models.  
*Gas lift introduction –design and diagnostics using “Quicklook” for gas lifted wells*  
*Inflow performance models – Steady state modelling*  
*Introduction to RESOLVE and REVEAL – Transient Inflow modelling, PdTd modelling*
- Day 3** Unconventional IPR modelling  
*Importance of production history*  
*PVT transformation*  
*Calculation of FBHP from measured data*
- Day 4** Introduction to **GAP** - theory and capabilities  
*Building a surface network model - linking to PROSPER well models*  
*Generation of VLP and IPR curves*  
*Linking PROSPER, PdTd and GAP for full field optimisation and forecasting*  
*Gas Lift optimisation*  
*Well Cycling*
- Day 5** Integrated modelling  
*Workshop*