Course Description:	**Applications of Equations of State in the Petroleum Industry**
Course Location	Hydrafact Limited, Edinburgh
Course Description	Equations of state are widely used to predict the phase behaviour and volumetric properties of multi-component systems, these models can be used in reservoir, wellbore multi-phase flow and pipeline modelling, as well as design and operation of surface facilities. In general, EOS models are employed to determine the properties and the amount of equilibrated phases. The most popular equations of state are: • • Soave-Redlich-Kwong EoS • Peng-Robinson EoS • Valderrama-Patel and Teja EoS • Cubic Plus Association EoS **Main topics:** • Reliability and consistency of the experimental test data • EoS data requirements • Simulation of laboratory PVT data by EoS • Effect of number of components on the accurate description of the fluid system • Tuning EoS parameters • The pitfalls of EoS tuning • Heavy fraction (end) characterization • Splitting and lumping of the plus fractions • The inherent limitations of EoS models • Impact of contaminated reservoir fluids samples with oil based mud filtrate • PVT Reports • Uncertainty in the PVT data Our own software, HydraFLASH, and the PETEX software PVTP will be used in the training programme.
Audience	Process, Reservoir, Petroleum and Drilling Engineers
Prerequisites	Previous experience in process engineering or flow assurance issues, familiarity with computers and a basic understanding of chemistry, thermodynamics and general physics would be helpful.
Course Length	5 Days
Course Materials	Hard copies of slides and course supporting materials, including; references and other useful documents. A certificate will be provided by Hydrafact at the end of the course.
Course Contacts	Please email us at info@hydrafact.com