



THE UNIVERSITY OF
WESTERN AUSTRALIA
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ACLNGF
Australian Centre for LNG Futures

Introduction to Natural Gas Processing Workshop

22 - 23 July 2019 - \$2,100

LNG Production Workshop

24 - 26 July 2019 - \$2,100

Attended both courses at a discounted rate of \$3,000 for 5 days

ABOUT THE WORKSHOP:

The full workshop consists of two related courses that review the physical, chemical and engineering principles used to understand the processing of natural gas and its by-products, the principles and operation of refrigeration systems and liquefaction of natural gas to make LNG. The workshop provides a general overview of gas processing and emphasises the design and operation of gas and LNG plants with the link day involving refrigeration facilities.

INTRODUCTION TO NATURAL GAS PROCESSING:

The following subjects are covered during the first two days:

- Physical properties
- Phase equilibria and vapour liquid equilibrium calculations
- Water hydrocarbon systems
- Gas transport
- Acid gas treating/sweetening
- Dew point control
- Natural gas liquids recovery.

LNG PRODUCTION:

The third day will concentrate on refrigeration systems, which are commonly used in gas processing and LNG plants, starting with the basic principles and then moving into development of multi-stage refrigeration and mixed refrigerant units. The final two days will investigate LNG, the basic principles of LNG plants and then examine the primary processes available and discuss some typical operational problems which may arise.

The course will generally consist of short lectures focusing on specific topics followed by hands-on simulation examples and problem solving sessions using process flowsheet simulation program. The "hands-on" computer exercises will be related to each other as often as possible so that the end result will be process models of gas processing facilities.

Emphasis is placed on the understanding of the underlying concepts and principles as well as the associated applications of simulation to solve real problems.

You may elect to attend the whole course, or the first three days, or the latter three days. As refrigeration is an important feature of natural gas and LNG plants, the common day 3 will cover this content.

REGISTRATION INFORMATION:

Register via our [online](#) shopping cart facility.

Registration Fees (incl. of GST)

- Introduction to Natural Gas Processing Course (2 days): 22 – 23 July 2019 - \$2,100
- LNG Production Course (3 days): 24 – 26 July 2019 - \$2,100
- Full 5 day course discounted fee - \$3,000

Registration fee includes registration, morning and afternoon refreshment breaks, lunch, software download, USB and a hard copy of the course material.

Cancellation policy: Refunds will be made only on cancellation due to special circumstances. 50% of the course fee will be refunded only if cancellation notice is given 2 weeks prior to the event.

Payment method: Mastercard or Visa ONLY. We cannot accept payment by any other card. Confirmation of registration will be emailed to you.

LOCATION:

UWA, Crawley Campus, Entrance 3 Fairway, Computer Science and Software Engineering (CSSE) Computer Lab 2.01

WORKSHOP INSTRUCTORS:



Andrew Vieler B.Sc., M.Sc. (Chemical Engineering) is a Process model development and applied thermodynamics expert. Andrew has been involved in application of thermodynamics to process and pipeline design using both steady-state and dynamic simulation for over thirty years. His work has covered natural gas, oil refining, petrochemicals, oil sands, dairy and food industries and also includes many years of aqueous electrolyte chemistry and its associated processes. He has developed and taught simulation and engineering courses in many countries over the years. He has also been involved in testing and development of many process simulation and engineering programs and pioneered the use of personal computers in engineering in Europe during the early 1980's. Andrew's specialties include development of large simulation models, development of customised simulation and engineering courses for Petronas in Malaysia, training of users of process simulation tools and application of aqueous electrolyte models in many areas.



Eric May is the Chevron Chair in Gas Process Engineering at UWA which, in 2011, was endowed in perpetuity. He is also the Director of the Australian Centre for LNG Futures, and an Australian Research Council Future Fellow. He has been an academic at UWA since 2005, where his research group works closely with industry, conducting projects in LNG production, flow assurance and fluid property prediction. Recently his team released the freeware package, ThermoFAST for predicting cryogenic solids formation in LNG production, endorsed by GPA Midstream. Eric was awarded the Malcolm McIntosh Prize for Physical Scientist of the Year as part of the 2012 Prime Minister's Prizes for Science.

WORKSHOP TIMETABLE:

Registration, welcome and orientation 8:30am Monday, 22 July and Wednesday, 24 July, 2019

| Introduction to Natural Gas Processing LNG Production | | Days 1 - 2: 22-23 July, 2019 | Days 3 - 5: 24-26 July, 2019 |
|---|--|--|------------------------------|
| 8:30 - 10:30am | | Session | |
| 10:30 - 10:45am | | Break | |
| 10:45am - 12:30pm | | Session | |
| 12:30 - 1:30pm | | Lunch | |
| 1:30 - 3:30pm | | Session | |
| 3:30 - 3:45pm | | Break | |
| 3:45 - 5:30pm | | Session | |
| Day 1 subjects covered Fundamentals of Natural Gas Physical Properties Phase Equilibria Gas Transport | | Day 2 subjects covered Gas Dehydration Acid Gas and Gas Treating Hydrocarbon Dew Point Control | |
| Day 3 subjects covered Fundamentals of Refrigeration Refrigeration Cycles Mixed Refrigerant and Multi-Stage Refrigeration | | | |
| Day 4 subjects covered: Basic Principles and History of LNG Cryogenic Extraction of LPGs and NGLs Overview of LNG Processes | | Day 5 subjects covered: Basic LNG Plant Models Operating Problems and Models Summary | |