This three day overview Course has been designed to be suitable for contractors, engineers, operators and those new to the offshore industry, those transferring from other disciplines within the industry and those who have worked in subsea previously but would benefit from a refresher course.
### Day 1

**9.00 am**

General Introduction to the Subsea Sector - Presented by Stefania Narum, Wood Group Kenny

- **Why subsea?** Components of Subsea Systems - hardware and software issues
- **Subsea Development Options** - Platforms, Floaters, All subsea
- **Well Arrangements** - Single well tieback, Template, Cluster, Daisy Chain
- **Subsea Challenges** - High Pressure and Temperature, Assets in the Abyss, Long distance tie-backs

**12.00 pm**

Flow Assurance - Presented by Steve Henzell, WorleyParsons

- **Introduction to Flow Assurance** - Hydraulics, Hydrates, Wax and the importance of fluid characterisation and thermal management

**1.00 pm**

Lunch

**1.45-5.00 pm**

Subsea Wellheads/Trees - Scott Randall, GE Oil & Gas

- **Getting to know the Technology and Terminology** - Drilling vessels, the basics of drilling a well, An overview of key components and their methods of operation, Completion risers
- **Wellhead systems** - Wellhead system overview, Wellhead installation animation
- **Tea/coffee**
- **Tree Systems** - HXT & VXT system overview, HXT & VST installation and tooling overview, XHT installation

**5.45 pm**

Course dinner: Bluestone, 349 Flinders Lane, Melbourne. **Proudly sponsored by**

### Day 2

**9.00 am**

Subsea Control Systems - Presented by Chris Lee, Origin Energy

- **Types of Control Systems** - Advantages/disadvantages of each type
- **Subsea Production Systems** - Hydraulics, electrics, umbilicals & sensors
- **Tea/coffee**
- **Typical Equipment** - Hydraulic power unit, electrical power unit, master control station, subsea control modules

**11.45 am**

Subsea Control Fluids - Presented by Mohammed Ali, MacDermid Offshore Solutions

The control fluid as a component of the system, Anatomy of a control fluid, Environmental impact

**1.15 pm**

Lunch

**2.00-5.00 pm**

Installation - Presented by Wacek Lipski, Wood Group Kenny

- **Field Architecture** - Subsea tieback, Subsea floater
- **Installation Vessels** - Vessel types, Positioning, Critical success factors
- **Structures** - Structure types, Foundation types, Installation procedures, Critical success factors
- **Tea/coffee**
- **Pipelines, Flexible & Rigid** - Installation methods, Critical success factors

### Day 3

**9.00 am**

Remote Intervention - Presented by David Inggall, DI Design

- **Introduction** - Safety, current environment, technology drivers, water depth
- **ROV Technology** - System types, typical system components, operation systems & capabilities, launch & recovery
- **Tea/coffee**
- **AUV Technology** - Introduction, system components, capabilities, sensors, trials & testing
- **Systems** - Tooling standards, interfacing, replacement systems, Connection systems, driverless repair

**12.00 pm**

Lunch

**12.45 pm**

Operating Subsea System - Presented by Roger Hatten, Tek-Ocean Energy Services

A short overview of operating a subsea system from well start up through the operating phase to well shutdown. What information is readily available, how to interpret it to ensure a safe, smooth and efficient operation.

**2.30 pm**

Vulnerabilities - What could go wrong? - Presented by Paul Georgeson, Wood Group Kenny Services

Explanations of the vulnerability of subsea hardware to the following: Insulation Resistance, Gas Ingress & condensing water, Technology Obsolescence, Reliability, redundancy & flexibility. Dragged & dropped objects Fishing activity, Corrosion/erosion, Marine environmental influences—temperature, internal water motions, marine growth

**4.00 pm**

Course close
Registration Information

Subsea Overview Course - Dec 2014

Should you require further information on this event, please contact Jennifer Maninin on j.maninin@sut.org or Tel +61 8 9446 9903. To register, either e-mail the information required on the registration form to perthevents@sut.org or fax the completed form to +61 8 9446 9905.

Registration Fees
SUT Members - $1,500.00 + GST = $1,650.00
Non Members - $1,800.00 + GST = $1,980.00

Fee Includes: All refreshments during the course including dinner on the first night, handout notes of the presentations & USB containing PDF versions of the presentations and videos available.

Preferred Payment Methods:
Credit Card: Visa, Mastercard, or *AMEX only. We cannot accept payment by any other card.
*Please note if paying by AMEX there will be a 2.75% surcharge.
Cheque: Australian Dollar only, made payable to The Society for Underwater Technology
Send to, SUT, 5/5 Hasler Road, Osborne Park, Perth, WA 6017
Please make sure you reserve a place by e-mail or fax before sending payment.

Invoice: Please tick here to be invoiced

Joining Instructions:
Joining instructions will be e-mailed to the registered delegate (as shown on the registration form). All details of presenters and updates to the programme will be included in the joining instructions.

Course Dinner:
An informal dinner will be held in a local restaurant on the first night of the course (details with joining instructions). Transport During the Course:
Delegates are responsible for their own travel arrangements at the beginning and end of each day.

Cancellations:
Refunds will be made on written cancellation received up to ten working days in advance of the event, but will be subject to a 15% handling charge. 50% will be deducted up to three working days in advance and 100% thereafter up to the start of the event. No refund will be given for non-attendance. Delegates may wish to nominate a substitute in their place.

Please tick box if you do not wish to receive further SUT information

Registration Form

Please e-mail details to Perthevents@sut.org or fax the completed form to +61 8 9446 9905

Please tick to indicate your preferred payment method: SUT Member

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