Education Subcommittee Update

Mahmoud ElGizawy

K&M Technology Group

Schlumberger

Mission Statement

- ISCWSA Education Subcommittee is an advisory body dedicated to raising awareness of wellbore positioning practices and challenges within the drilling industry through workshops, webinars, eBooks, public lectures, and other media.

Agenda

- SPE Live
- Special Session Updates
- Drillbotics Competition (DSATS)
- PetroBowl
- Distinguished Lecture
- eBook Updates
- ISCWSA Course update and certification handing over

SPE Live

- Held on September 19th
- 30 minutes on Linkedin Channel and SPE stream
- David Gibson – Moderator
- John Hudson and Ross Lowdon – Speakers
- Around 80 attended online and with almost 400 views
- SPE live stream:

https://streaming.spe.org/spe-live-pre-atce-how-to-drill-reservoir-sections-that-drive-life-cycle-value

ATCE Special Session

- Joint with DSATS
- Tuesday 4 October 2022,
- **Title:** How can we define a holistic set of common industry well parameters for reservoir sections that drive life cycle value?
- **Moderators:**
  - John Hudson, Shell & Ross Lowdon, SLB
- **Speakers:** Key Industry leaders covering
  - Completion: Vicky Nielsen, HESS
  - Drilling: Katie Mills, CoP
  - Reservoir: Shaid Haq, SLB
  - Subsurface: Rocky Mottadeh, UOGC

SS11 How Can We Define a Holistic Set of Common Industry Well Parameters for Reservoir Sections that Drive Lifecycle Value?

372 B/E | 1545 – 1700

Reservoir well sections are critical to the value proposition of wells. The drilled form of wells have a significant impact on their cost and production, and thus is a direct driver of life cycle valu ...

Session Chairperson(s)

Mahmoud Elgizawy, Drilling Survey Domain Manager - K&M TECHNOLOGY GROUP

Speaker(s)

Katie Mills, Well Support Center, Analytics and Performance Manager - ConocoPhillips Co

Vicky Jackson Nielsen, Director, Drilling and Completions - Bakken - Hess Corp.

Shahid Haq, Reservoir Engineering Advisor and Reservoir Domain Head - Schlumberger

Rocky Mottahedeh, CEO - United Oil & Gas Consulting Ltd.

Moderator(s)

Ross Lowdon, Domain Head - Schlumberger

John Hudson, Development Digital Advisor - Shell Exploration & Production Co

Student Awareness – How to Attract Young Generation

- Members to reach out to their universities (Tim Paton)
- How to raise awareness in high schools – even for geothermal
- Drillbotics
- PetroBowl
- SPE Student Chapters reach out (Benny Poedjono)

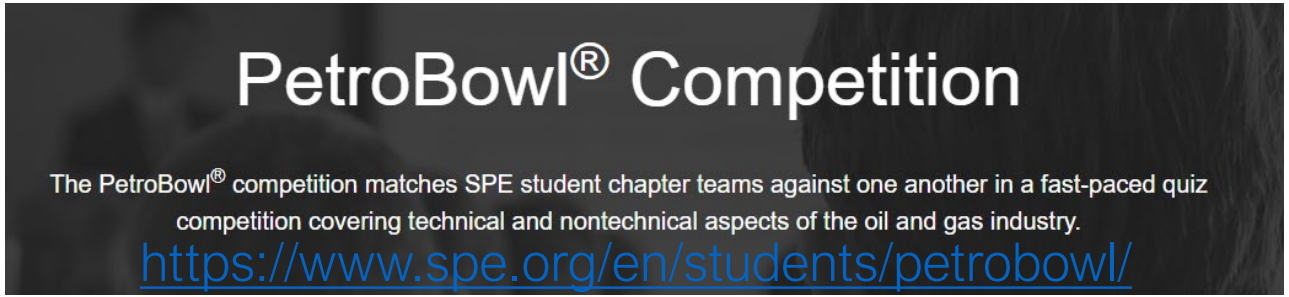
Drillbotics Competition
What is it?

- Drillbotics® is an international competition for universities to design and build a small drilling rig that uses sensors and control algorithms to autonomously drill a rock sample provided by SPE's Drilling Systems Automation Technical Section (DSATS).
  - Group A will not require any rig construction; it requires a model of the rig, the well, and a directional drilling technique.
  - Group B will build and operate a physical rig.
- In the 2022 competition, there is a directional component that will require steering and surveying to hit specified X/Y target coordinates. Drilling system must be able to switch between steering modes (slide/rotate) and survey mode (on/off bottom) autonomously.
  - Calculating survey intervals & trajectory be automated.
  - DLS required to hit targets & distance/direction to plan automatically calculated at each survey station & shown on rig floor display.

Drillbotics Volunteers for ISCWSA

- Competition Judges
  - Requirements:
    - Judge (remote or in-person) both Group A & B competition performances in Houston (May 21) or Celle (June TBD)
    - Primary contribution is expected to be in directional requirement & surveying practices
  - Time Commitment:
    - Read & familiarize self with Drillbotics Guidelines (~1 hr)
    - Competition judging (1 day)
- Volunteers
  - David Gutierrez
  - Robert Estes
  - Timothy Paton
  - Harald Bolt
- Documentary
  - David Gibson
- Requesting short videos on directional surveys
  - Steps to take the surveys
  - Why drilling has to stop
  - What is the magnetic surveys and magnetic interference

PetroBowl



- Connect with PetroBowl competition team to include questions on WBS (David Gutierrez)
- Questions are needed. Please submit your questions via the link

ISCWSA - PetroBowl Q&A Submittal

ISCWSA - PetroBowl Q&A Submittal

The PetroBowl is an international competition hosted by the SPE that pits student chapter teams against each other in a series of quick-fire Q&A rounds related to the Oil & Gas industry. This is a great opportunity for the ISCWSA to continue spreading the message of the importance of wellbore positioning.

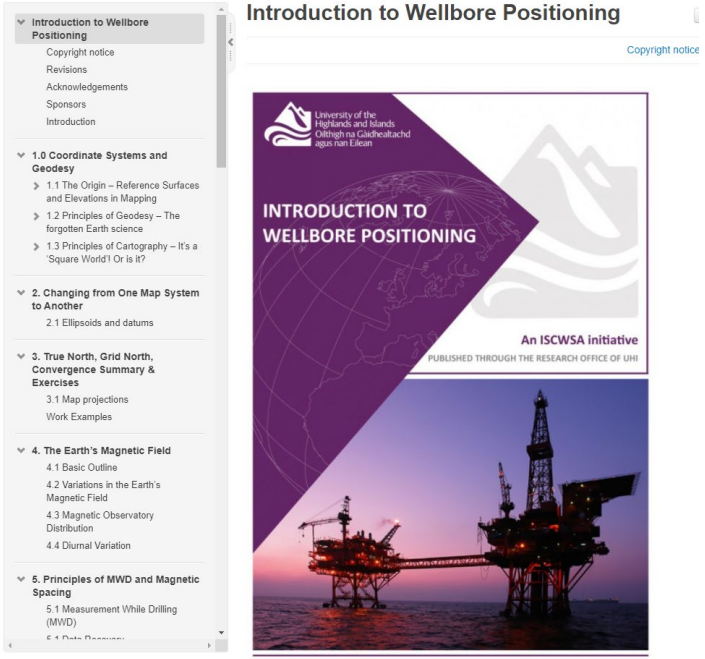
Distinguished Lecturer Program

Benny Poedjono

Good Practice in Well Control Intervention via Relief Well Subsurface Interception

eBooks Update

- ISCWSA hosting/copy right of eBooks
  - Introduction to WBP
  - Well Interception
  - Survey QC (Work-On-Progress)
- WBP eBook cover update (remove UHI)
- WBP eBook Web version is available
  - Online searchable
  - Easy access by any device
  - Allow readers to provide feedback
  - Track topic views, rating and searches
- eBook Well Interception possible transition to the web version



https://www.manula.com/manuals/iscwsa-ebook/iscwsa-ebook-introduction

eBooks Update

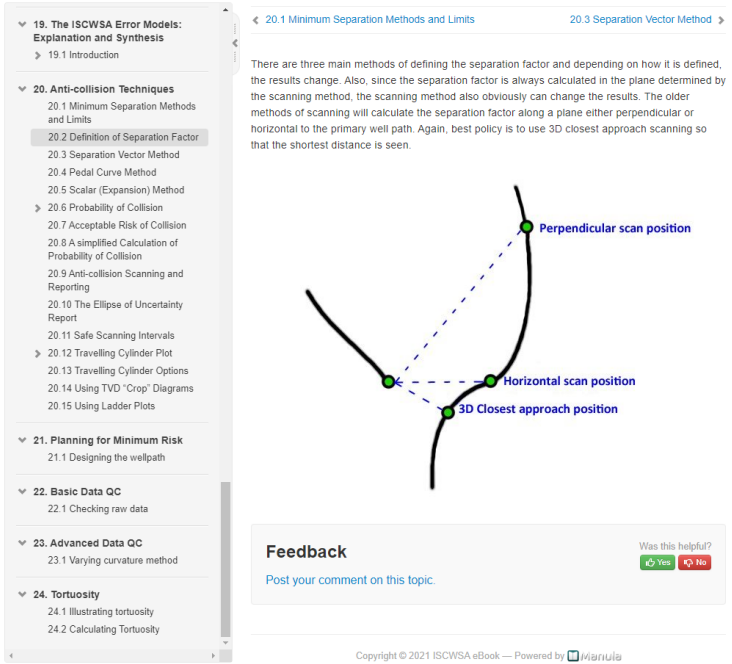
- Call for content updates eBook Introduction to WBS
  - Please contact:

    Prof. Angus at
    Angus.Jamieson@hptech.com

    or

    Mahmoud at

    Melgizawy@slb.com
- Possible to provide feedback directly on the web version



https://www.manula.com/manuals/iscwsa-ebook/iscwsa-ebook-introduction

Acknowledgement

- Education SC members are acknowledged for their participation and contribution to the SC activities
- 17 Participants in last meeting

- Carol Mann
- David Gibson
- Tim Paton
- Nancy Kenmogne
- Ryan Kirby
- David Gutierrez
- Mike Long
- Mark Fraser

- Will Lanigan
- Robert Estes
- Barry Smart
- Benny Peodjono
- John Hernandez
- Ben Hawkinson
- Nicholas Zachman
- Robert Wylie

ISCWSA Course Presentation

Update :
ISCWSA Online Training Course

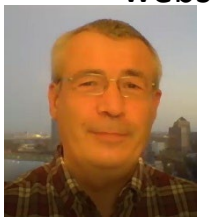
"Introduction to Wellbore Positioning"

Robert Wylie

6th October, 2022

x^nDrilling, Inc

- ISCWSA took over the ISCWSA eBook based “Introduction to Wellbore Positioning” training course from the UHI, and converted the course to run under a modern Learning Management System (edX) through the ISCWSA website.
- It now includes a series of videos lectures, readings, problems, exercises, and simulation examples, with Continuous Assessment grading.
- Registration for the course is through the iscwsa.net website, and it runs on an iscwsa.net Training Server



Week 0: Introduction – Connections

Week 1: Mapping and Geodesy
- Week 1-1 : Mapping, Projections, and Datums
- Week 1-2 : North References and Scale Factor

Week 2: MWD, Earth's magnetic field, QC, and Corrections
- Week 2-1 : MWD and Earths Magnetic Field
- Week 2-2 :Basic QC and Survey Corrections

Week 3: Drilling Rigs, Well Planning, and BHA design
- Week 3-1 : The Drilling Rig
- Week 3-2 : Introduction to Well Planning
- Week 3-3 : Introduction to BHA Design
- Week 3-4 : Directional Drilling Simulator

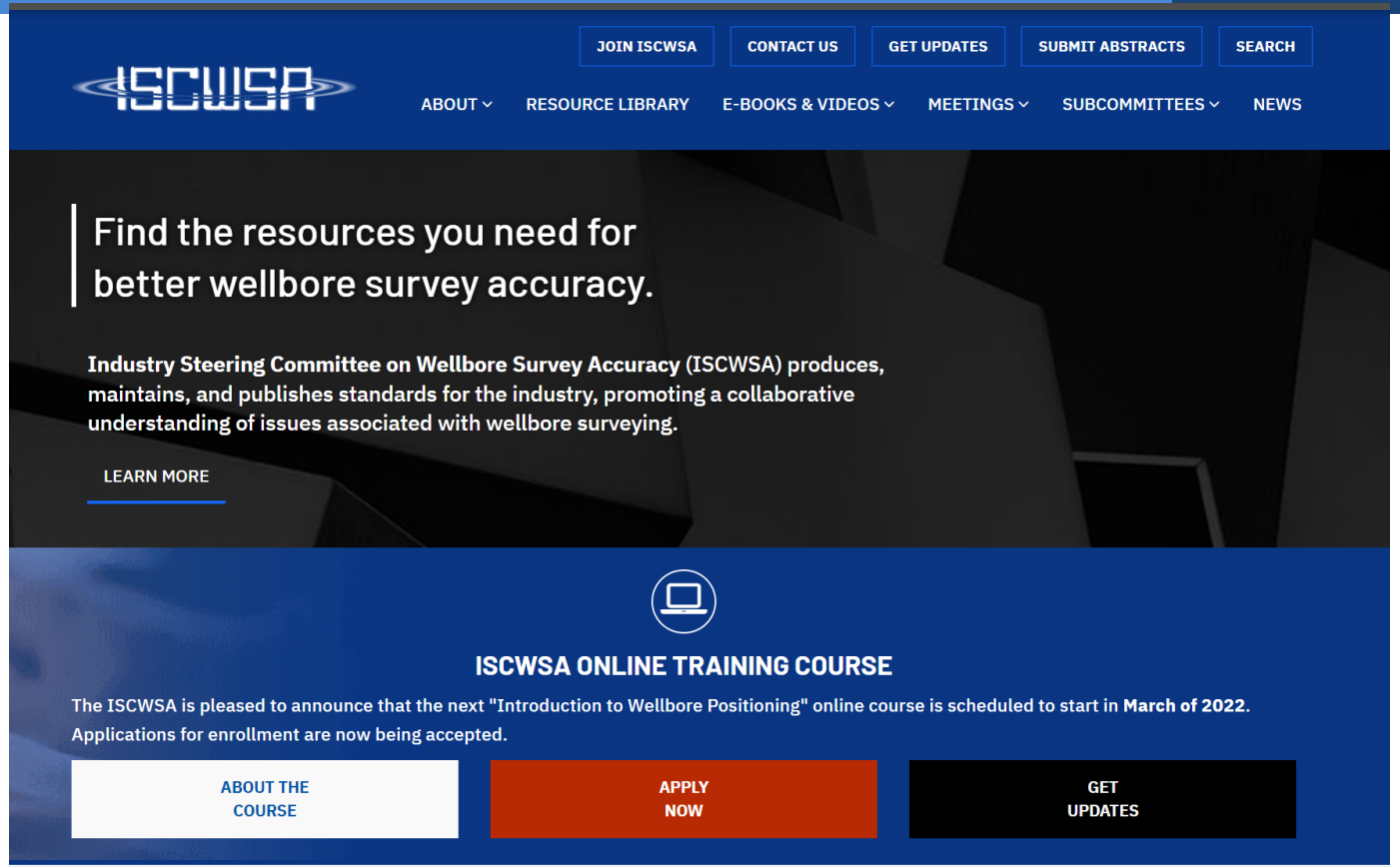
Week 4: Data Management, Quality Control, and Depth
- Week 4-1 : Data Management and Data Audits
- Week 4-2 : Depth Measurement, Uncertainty, and Corrections

Week 5: Survey Tools and Survey Calculations
- Week 5-1 : Survey Tool Types
- Week 5-2 : Survey Calculations

Week 6: Survey Uncertainty and Collision Avoidance
- Week 6-1 : Uncertainties and how they propagate
- Week 6-2 : Survey Uncertainties and Error Models
- Week 6-3 : Anti-collision terminology, planning and operations

Week 7: High Accuracy Drilling
- Week 7-1 : Survey Corrections for High Accuracy Drilling
- Week 7-2 : Introduction to Ranging Technologies
- Week 7-3 : Exercise - Drill Relief Well

Week 8: Revision Time and Examinations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Find the resources you need for better wellbore survey accuracy.
Industry Steering Committee on Wellbore Survey Accuracy (ISCWSA) produces, maintains, and publishes standards for the industry, promoting a collaborative understanding of issues associated with wellbore surveying.
LEARN MORE
ISCWSA ONLINE TRAINING COURSE
The ISCWSA is pleased to announce that the next "Introduction to Wellbore Positioning" online course is scheduled to start in March of 2022.
Applications for enrollment are now being accepted.
ABOUT THE COURSE
APPLY NOW
GET UPDATES

THE ISCWSA WELLBORE POSITIONING COURSE

STARTS SEP 2022 APPLICATIONS ARE NOW BEING ACCEPTED.

This course is based on the ISCWSA free eBook "Introduction to Wellbore Positioning".
Using a mixture of videos, training exercises, and self-study material, it covers subjects such as Mapping, directional drilling, surveying, survey uncertainties, and high accuracy...

APPLY NOW

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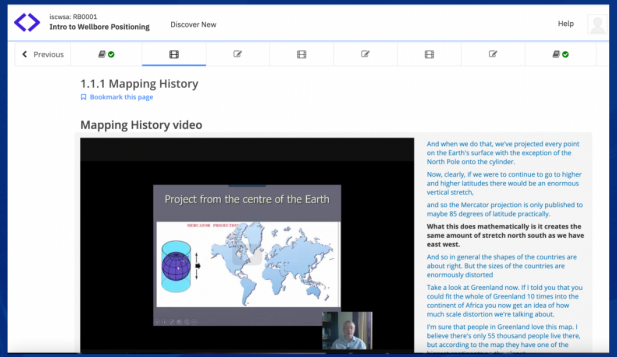


STARTS SEP 2022

APPLICATIONS ARE NOW BEING ACCEPTED.

ENDS NOV 2022

TUITION FEE $1,200

APPLY NOW

Course Benefits

- Industry recognized certificate
- Be more informed in your work
- Expert instructors
- Paced to fit working students

FAQs & Support Help

How do I earn this course's Certificate?

How long do I keep the course?

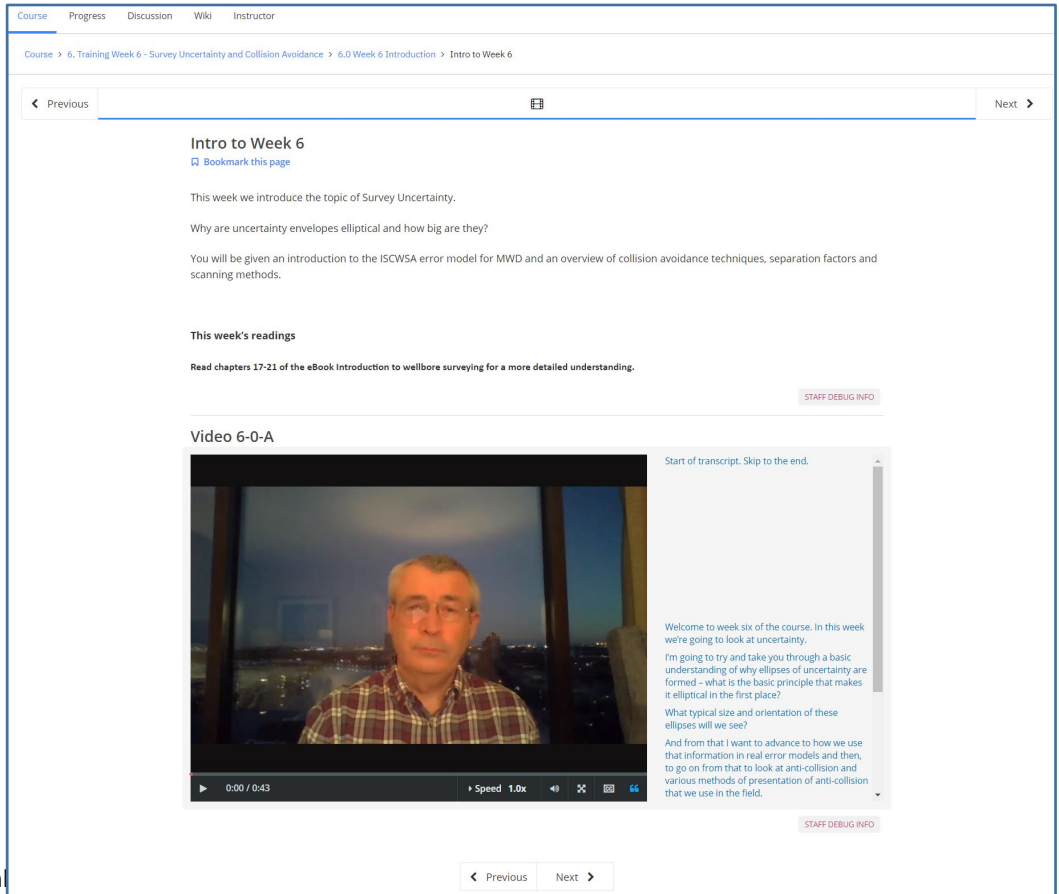
What daily hours are recommended?

What's in this course?

The course has 7 main teaching modules, in addition to introductions and reviews. It is expected that 2 modules will be completed every three weeks. Click on each "Week" Module to for an overview of what is included.

Course Features

- Easy Navigation
- Full video transcripts
- Progress tracking
- Variety of learning techniques
- Student interactions and discussion boards
- Practical exercises on useful topics



- Currently running the third group (cohort) of students through the course
- Cohort #1 ran from Sep 21 to Jan 22, with 11 of 17 graduating
  - A couple dropped back to cohort #2
- Cohort #2 ran from Feb 22 to June 22, with 10 of 14 graduating
- Cohort #3 starting in September and will run to December, with 23 students on 4 different continents
- Cohort #4 will start in January, and already has several students lining up

Cohort #1

RB010101	Abdelrahman Afify
RB010102	Teddy Chen
RB010103	Glenna Crookston
RB010104	David Gutierrez
RB010105	Saleel Kolakkodan
RB010106	Andrew Pare
RB010107	James Powell
RB010108	Georgy Rassadkin
RB010109	Nicholas Robertson
RB010110	Joseph Sanders
RB010111	Tyler Trammell

Cohort #2

RB010201	Josh Albright
RB010202	Alec Berarducci
RB010203	Andres Diaz
RB010204	Joel Dunn
RB010205	Timothy Gee
RB010206	Mike Long
RB010207	Paul Reynerson
RB010208	Sheldon Schmidt
RB010209	Kevin Sutherland
RB010210	zackary whitlow

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RB010205	Timothy Gee
RB010206	Mike Long
RB010207	Paul Reynerson
RB010208	Sheldon Schmidt
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