



ऑयल एंड नेचुरल गैस कॉर्पोरेशन लिमिटेड  
OIL AND NATURAL GAS CORPORATION LTD  
वेधन प्रौद्योगिकी संस्थान, कौलागढ़ रोड, देहरादून-248195  
INSTITUTE OF DRILLING TECHNOLOGY  
Kaulagarh Road, Dehradun-248195

## FROM THE DESK OF ED-HOI, IDT



IDT is a premier training and R&D institute in the field of Drilling, Well Control, Cementation, Drilling Fluid and Completion Fluid Engineering with ISO 9001:2015, ISO 14001:2015, & ISO 45001:2018 QHSE Certification. Over the years, the Institute has emerged as a premier R&D center, providing advance technical knowledge through training and offering solution to field problems. Institute has a team of well qualified and experienced professionals with Offshore and Onshore field experiences. Institute has been awarded twice Nation's most prestigious award, IOD's Golden Peacock National Training Award in 2003 and 2007, ISTD's "Certificate of Merit" for 'Innovative Training Practices' in 2010 and also awarded with CMD award for best R & D institute of ONGC for the year 2017-18.

IDT extended reach through its critical courses like 'Stuck Pipe Prevention', 'Mud Loss Prevention and Control', 'Safety in Drilling', 'Basic course in Drilling Practices' and IWCF & IADC accredited Well Control Courses for rotary drilling and well servicing, thus enhancing competency of executives working in the operational areas. In the process of continual improvement, DTS had introduced field visit of participants to a plant in Dehradun for the hands on practice on BOP accumulator and casing tongs in its course "Maintenance of Accumulator Unit and BOP System" which has received appreciation by all the participants. Well Control School introduced IADC accredited Well Servicing Introductory well control course.

Due to the outbreak of COVID-19 pandemic situation, IDT could not continue the trend of the previous years through regular classroom courses. As envisioned by the honorable Director (T&FS), IDT switched over to online mode from the conventional Classroom mode for most of the courses by redesigning all the course material suitable for online mode. Well Control School got the accreditation from IWCF and IADC for running all the Well Control Courses in online mode for theory and Simulator practical classes in online mode through i-DrillSim online Simulator from M/s DrillSim Systems Ltd.

IDT conducted total 114 courses and trained 2237 participants in various courses till 15<sup>th</sup> Feb 2022. Apart from the planned courses Drilling Technology School also conducted new designed course “Mitigating Drilling Complications”, “Applied Drilling Geo-mechanics” and “Fishing Technology and Practices”. Apart from the regular courses, Well Control School conducted total 5 weekend courses to fulfil the recent requirement from Assets/Basins which include special weekend for Drilling Services, Floater Rig-Mumbai. WCS also conducted total 12 doorstep courses (few with portable simulator) for Assets/Basins.

With a sense of achievement and in our pursuit of excellence, I am extremely pleased to place the new training calendar for the year 2022-23 before you. I entreat you to make the best use of the valuable training programs that the institute offers, for making competent field professionals.

With best wishes & Season’s greetings.

*G. Venkateswaram.*

# 2022 April



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
28	29	30	31	01	02	03	
04	05	06	07	08	09	10	Casing and Cementing Technology(B-03) IWCF Rotary Drilling Well Control(S-01) IWCF Well Intervention Pressure Control S-03
11	12	13	14 MAHAVIR JAYANTI	15 GOOD FRIDAY	16	17	Stuck pipe prevention(A-05)
18	19	20	21	22	23	24	Safety in Drilling(B-07) IWCF Rotary Drilling Well Control(S-01)
25	26	27	28	29	30	01	Tool Pusher course (A-01) IWCF Rotary Drilling Well Control(S-01)
02	03						

# 2022 May



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
25	26	27	28	29	30	01	
02	03	04	05	06	07	08	Fishing Technonology & Practices(B-06) IWCF Rotary Drilling Well Control(S-01)
	ID-UL-FITR						
09	10	11	12	13	14	15	Drilling fluid technology(A-02) IWCF Rotary Drilling Well Control(S-01) IWCF Well Intervention Pressure Control (S-03)
16	17	18	19	20	21	22	Basic Course in Directional Drilling(B-02)
BUDHA PURNIMA							
23	24	25	26	27	28	29	Refresher Course in Drilling Practices(B-01) IWCF Rotary Drilling Well Control(S-01) IADC Well Sharp Well Servicing Workover Course (S-04)
30	31	02	03	04	05	06	IWCF Rotary Drilling Well Control(S-01)

# 2022 June



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
30	31	01	02	03	04	05	IWCF Rotary Drilling Well Control(S-01)
06	07	08	09	10	11	12	Maintenance of Accumulator Unit and BOP System(B-04) IWCF Rotary Drilling Well Control(S-01)
13	14	15	16	17	18	19	Advanced Cementing Technology(A-03) IWCF Rotary Drilling Well Control(S-01) IWCF Well Intervention Pressure Control S-03
20	21	22	23	24	25	26	Drilling Awareness for Non Drilling Professionals(B-05) IWCF Rotary Drilling Well Control(S-01)
27	28	29	30	01	02	03	Mitigating Drilling complications (A-06) IWCF Rotary Drilling Well Control(S-01)
04	05						

# 2022 July



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
27	28	29	30	01	02	03	Mitigating Drilling complications (A-06) IWCF Rotary Drilling Well Control(S-01)
04	05	06	07	08	09	10	Safety in Drilling(B-07) IWCF Rotary Drilling Well Control(S-01) IADC Well Sharp Well Servicing Workover Course (S-04)
						ID-UL-ZUHA	
11	12	13	14	15	16	17	Well Planning (A-07) IWCF Rotary Drilling Well Control(S-01)
18	19	20	21	22	23	24	IWCF Rotary Drilling Well Control(S-01)
25	26	27	28	29	30	31	Tool Pusher course (A-01) IWCF Rotary Drilling Well Control(S-01)
01	02						

# 2022 August



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
01	02	03	04	05	06	07	Refresher Course in Drilling Practices(B-01) IWCF Rotary Drilling Well Control(S-01) <del>IWCF Well Intervention Pressure Control S-</del>
08	09 MUHARRAM	10	11	12	13	14	Stuck pipe prevention(A-05)
15 INDEPENDENCE DAY	16	17	18	19 JANAMASHTMI	20	21	
22	23	24	25	26	27	28	IWCF Rotary Drilling Well Control(S-01)
29	30	31	01	02	03	04	Mud loss prevention & control(A-08) IWCF Rotary Drilling Well Control(S-01)
05	06						

# 2022 September



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
29	30	31	01	02	03	04	IWCF Rotary Drilling Well Control(S-01)
05	06	07	08	09	10	11	Familiarization and Application of DFand Cementing Labs(B-08) IWCF Rotary Drilling Well Control(S-01) IADC Well Sharp Well Control Course - S-02
12	13	14	15	16	17	18	IWCF Rotary Drilling Well Control(S-01) IWCFWell Intervention Pressure Control S-03
19	20	21	22	23	24	25	Applied Drilling Geomechanics(A-04) IWCF Rotary Drilling Well Control(S-01)
26	27	28	29	30	01	02	IWCF Rotary Drilling Well Control(S-01)
03	04						



# 2022 October



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
26	27	28	29	30	01	02 MAHATAMA GANDHI'S BIRTHDAY	
03	04	05 DUSSEHRA	06	07	08	09 ID-E-MILAD	
10	11	12	13	14	15	16	Tool Pusher course (A-01) IWCF Rotary Drilling Well Control(S-01) IWCF Well Intervention Pressure Control S-02
17	18	19	20	21	22	23	Safety in Drilling(B-07) IWCF Rotary Drilling Well Control(S-01) IWCF/IADC-RD Well Control Course S-05/S-06
24 DEEPAVALI	25 GOVARDHAN PUJA	26	27	28	29	30	
31	01						WCF Rotary Drilling Well Control(S-01)

# 2022 November



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
31	01	02	03	04	05	06	Basic Course in Directional Drilling(B-02) IWCF Rotary Drilling Well Control(S-01)
07	08 GURU NANAK'S BIRTHDAY	09	10	11	12	13	
14	15	16	17	18	19	20	Casing and Cementing Technology(B-03) IWCF Rotary Drilling Well Control(S-01)
21	22	23	24	25	26	27	Well Planning (A-07) IWCF Rotary Drilling Well Control(S-01) IWCF Well Intervention Pressure Control S-03
28	29	30	01	02	03	04	Stuck pipe prevention(A-05) IWCF Rotary Drilling Well Control(S-01)

# 2022 December



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
28	29	30	01	02	03	04	Stuck pipe prevention(A-05) IWCF Rotary Drilling Well Control(S-01)
05	06	07	08	09	10	11	Refresher Course in Drilling Practices(B-01),IWCF Rotary Drilling Well Control(S-01), IADC Well Sharp Well Servicing W/O (S-04) .IADC Well Servicing Intro (S-07)
12	13	14	15	16	17	18	Maintenance of Accumulator Unit and BOP System(B-04) IWCF Rotary Drilling Well Control(S-01)
19	20	21	22	23	24	25	Mud loss prevention & control(A-08)
						CHRISTMAS	
26	27	28	29	30	31	01	
02	03						

# 2023 January



## Training Calendar Institute of Drilling Technology, Kaulagarh Road. Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
26	27	28	29	30	31	01	
02	03	04	05	06	07	08	Applied Drilling Geomechanics(A-04) IWCF Rotary Drilling Well Control(S-01)
09	10	11	12	13	14	15	Drilling fluid technology(A-02) IWCF Rotary Drilling Well Control(S-01) IWCF Well Intervention Pressure Control S-03
					MAKAR SANKRANTI		
16	17	18	19	20	21	22	Familiarization and Application of DF and Cementing Labs(B-08) IWCF Rotary Drilling Well Control(S-01) IWCF/IADC-ROD Well Control Course S-05/S-06
23	24	25	26	27	28	29	Fishing Technology & Practices(B-06)
			REPUBLIC DAY				
30	31	01	02	03	04	05	Mitigating Drilling complications (A-06) IWCF Rotary Drilling Well Control(S-01)

# 2023 February



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
30	31	01	02	03	04	05	Mitigating Drilling complications (A-06) IWCF Rotary Drilling Well Control(S-01)
06	07	08	09	10	11	12	Drilling Awareness for Non Drilling Professionals(B-05) IWCF Rotary Drilling Well Control(S-01) <del>IWCF Well Intervention Pressure Control S-</del>
13	14	15	16	17	18	19	Stuck pipe prevention(A-05) IWCF Rotary Drilling Well Control(S-01)
					MAHASHIVRATRI		
20	21	22	23	24	25	26	Advanced Cementing Technology(A-03) IWCF Rotary Drilling Well Control(S-01) IADC Well Servicing Introductory (S-07)
27	28	01	02	03	04	05	Safety in Drilling(B-07) IWCF Rotary Drilling Well Control(S-01) IADC Well Sharp Well Control Course - S-02
06	07						

# 2023 March



## Training Calendar Institute of Drilling Technology, Kaulagarh Road, Dehradun



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Courses
27	28	01	02	03	04	05	<b>Safety in Drilling(B-07)</b> <b>IWCF Rotary Drilling Well Control(S-01)</b> <b>IADC Well Sharp Well Control Course - S-02</b>
06	07	08 HOLI	09	10	11	12	
13	14	15	16	17	18	19	<b>Refresher Course in Drilling Practices(B-01)</b> <b>IWCF Rotary Drilling Well Control(S-01)</b> <b>IADC Well Sharp Well Servicing Workover Course (S-04)</b>
20	21	22	23	24	25	26	<b>Tool Pusher course (A-01)</b> <b>IWCF Rotary Drilling Well Control(S-01)</b> <b>IWCF Well Intervention Pressure Control S-03</b>
27	28	29	30	31	01	02	
03	04						

## Details of Basic level Courses for 2022-23

Sl No	Course Code	Course name	Qualification	Level	Decipline	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	B-01	Refresher Course in Drilling Practices	Q1	Non Executive-E4	Drilling, Drilling fluid, Cementing		23rd to 27th			1st to 5th				5th to 9th			13th to 17th
			Q2	Non Executive-E4													
			Q3	E2-E4													
2	B-02	Basic Course in Directional Drilling	Q1	Non Executive-E4	Drilling, Drilling fluid, Cementing		17th to 20th						1st to 4th				
			Q2	Non Executive-E4													
			Q3	E2-E4													
3	B-03	Casing and Cementing Technology	Q1	Non Executive-E4	Drilling, Mechanical, Electrical & Well Services	4th to 8th							14th to 18th				
			Q2	Non Executive-E4													
			Q3	E2-E4													
4	B-04	Maintenance of Accumulator Unit and BOP System	Q1	Non Executive-E4	Drilling, Drilling fluid, Cementing			6th to 10th						12th to 16th			
			Q2	Non Executive-E4													
			Q3	Non Executive-E4													
5	B-05	Drilling Awareness for Non Drilling Professionals	Q1	Non Executive-E4	All Non Drilling Deciplines			20th to 24th								6th to 10th	
			Q2	Non Executive-E4													
			Q3	Non Executive-E4													
8	B-06	Fishing Technonology & Practices	Q1	Non Executive-E4	Drilling, Drilling fluid, Cementing		4th to 6th								23th to 25th		
			Q2	Non Executive-E4													
			Q3	E2-E4													
6	B-07	Safety in Drilling	Q1	Non Executive-E4	All site going personnel	18th to 22nd			4th to 8th			17th to 21st				27th Feb to 3rd Mar	
			Q2	Non Executive-E4													
			Q3	Non Executive-E4													
7	B-08	Familiarization and Application of DFand Cementing Labs	Q1	Non Executive-E4	Drilling, Drilling fluid, Cementing						5th to 9th				16th to 20th		
			Q2	Non Executive-E4													
			Q3	Non Executive-E4													

## Details of Advanced level Courses for 2022-23

Sl No	Course Code	Course name	Qualification	Level	Decipline	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	A-01	Tool Pusher course	Q1	E1-E6	Drilling,Cementing , Drilling Fluid	<b>25th to 29th</b>			<b>25th to 29th</b>			<b>10th to 14th</b>					<b>20th to 24th</b>
			Q2	E1-E6													
			Q3	E2-E5													
2	A-02	Drilling fluid technology	Q1	E1-E6	Drilling,Cementing , Drilling Fluid		<b>9th to 13th</b>								<b>9th to 13th</b>		
			Q2	E1-E6													
3	A-03	Advanced Cementing Technology	Q1	E1-E6	Drilling,Cementing , Drilling Fluid			<b>13th to 17th</b>								<b>20th to 24th</b>	
			Q2	E1-E6													
8	A-04	Applied Drilling Geomechanic	Q1	E1-E6	Drilling,Cementing , Drilling Fluid,Geology						<b>20th to 22nd</b>				<b>4th to 6th</b>		
			Q2	E1-E6													
4	A-05	Stuck pipe prevention	Q1	Non Exe-E6	Drilling,Cementing , Drilling Fluid	<b>12to 14th</b>				<b>10th to 12th</b>			<b>30th Nov to 2nd Dec</b>			<b>14th to 16th</b>	
			Q2	E1-E6													
			Q3	E2-E5													
5	A-06	Mitigating Drilling complications	Q1	E1-E6	Drilling,Cementing , Drilling Fluid			<b>27th Jun to 1st July</b>							<b>30th Jan to3rd Feb</b>		
			Q2	E1-E6													
6	A-07	Well planning	Q1	E1-E6	Drilling,Cementing , Drilling Fluid				<b>11th to 15th</b>				<b>21st to 25th</b>				
			Q2	E1-E6													
7	A-08	Mud loss prevention & control	Q1	E1-E6	Drilling,Cementing , Drilling Fluid					<b>29th to 31st</b>				<b>19th to 21st</b>			
			Q2	E1-E6													
			Q3	E2-E6													





# Drilling Technology School Planned Courses for 2022-23

**B-01**

## Refresher Course in Drilling Practices

### Category: Basic Course

### Objective:

To sensitize the fresh joiners about the SOPs to be followed during handling of various tools/ Drilling operations and as refresher course to the rig personnel.

### Contents:

- Drill String.
- Drill bits
- Rig Instrumentation
- Tripping/ Reaming Practices
- Hydraulics & Hole cleaning
- Casing
- Cementing
- LOT,CIT,SIT,PIT
- Well Head and BOP fitting and BOP testing
- Wire rope
- Safety in Drilling
- Drilling fluid functions and properties
- Drilling fluid additives and treatment
- Care and Maintenance of Rig equipment
- Practices to avoid Drill string failure
- Complications in Drilling operations

Course No	I	II	III	IV
Dates	23-27 May 2022	01-05 Aug 2022	05-09 Dec2022	13-17 Mar2022
	<i>Additional unplanned courses of 3 days duration to be conducted in Assets / Basins of ONGC on mutually agreed dates with at least 20 participants</i>			
Fee	₹37,000/- / \$520/- (Classroom Mode)			
	₹20,000/- / \$280/- (Online Mode)			
Duration	5 Days			
Venue	IDT, Dehradun/Online			
Seats	20 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1/Q2/Q3 (Non-Executive- E4), (Drilling, Drilling fluid, Cementing disciplines)		Assistant Drillers / Drillers, Chemists	



# Drilling Technology School Planned Courses for 2022-23

**B-02**

## Basic Course in Directional Drilling

### Category: Basic Course

### Objective:

Discussion on Directional Drilling Techniques, Equipment with their working principles and latest developments in the field.

### Contents:

- Basic of geometrical planning
- NMDC & BHA Selection
- KOP & KOP techniques
- PDM, steerable motors
- MWD & RSS
- Rheology & hydraulics of drilling fluid
- Hole cleaning & cutting beds
- Cementation in deviated wells
- Dogleg severity & other problems
- Borehole instability
- Placement in horizontal wells
- Use of Software in Directional Drilling.

Course No	I	II
Dates	17-20 May 2022	01-04 Nov 2022
	<i>Additional unplanned courses of 3 days duration to be conducted in Assets / Basins/SDCs on mutually agreed dates with at least 20 participants</i>	
Fee	₹37,000/- / \$520/- (Classroom Mode)	
	₹20,000/- / \$280/- (Online Mode)	
Duration	5 Days	
Venue	IDT, Dehradun/ Online	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(Non-Executive- E4), Q2 (Non-Executive-E4), Q3(E2-E4), (Drilling, Drilling fluid, Cementing)	Drillers / Drilling Engineers/ Drilling Fluid Engineers / Cementing Engineers



## Drilling Technology School Planned Courses for 2022-23

**B-03**

### Casing & Cementing Technology

#### Category: Basic Course

#### Objective:

A freshers'/refresher program about casing and cementation technology & latest developments on the subject.

#### Contents:

- Casing- Types and functions
- Casing seat selection
- Safe casing running practices
- Casing design
- Expandable casing
- Casing failure
- Classification of cement and additives
- Primary casing and liner cementing
- Secondary cementing
- Cementing calculations
- Planning of cementing jobs
- Cementation of deviated/horizontal wells
- Cement classification and additives
- Slurry design

Course No	I	III
Dates	04-08 April 2022	14-18 Nov 2022
Fee	₹37,000/- / \$520/- (Classroom Mode)	
	₹20,000/- / \$280/- (Online Mode)	
Duration	5 Days	
Venue	IDT, Dehradun/Online	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(Non-Executive- E4), Q2 (Non-Executive-E4), Q3(E2-E4), (Drilling, Cementing and Chemistry)	Drillers / Drilling Engineers/ Drilling Fluid Engineers / Cementing Engineers



## Drilling Technology School Planned Courses for 2022-23

**B-04**

### Maintenance of Accumulator Unit & BOP System

#### Category: Basic Course

#### Objective:

To impart practical technical knowledge on operation and maintenance of Accumulator unit and BOP system.

#### Contents:

- Introduction to accumulator unit
- Functions & installation of unit
- Remote control panel
- Sub-sea Accumulator unit
- Bladder changing procedures
- Sizing of accumulator unit
- Maintenance and troubleshooting of Accumulator unit
- Annular and Ram BOP
- Inside BOP, FOSV, & C&K Manifold
- Function & pressure test – BOP
- Basics of Well Control
- Practical demonstration on rig

Course No	I	II
Dates	06-10 June 2022	12-16 December 2022
Fee	₹37,000/- / \$520/- <b>(Classroom Mode only)</b>	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(Non-Executive- E4), Q2(Non-Executive-E4) Q3(E2-E4) Drilling, Drilling fluid, Mechanical disciplines	Assistant Drillers / Drillers/Rig Mechanic



# Drilling Technology School Planned Courses for 2022-23

**B-05**

## Drilling Awareness for Non Drilling Professionals

### Category: Basic Course

### Objective:

This program provides the drilling vocabulary required by the professionals of oil companies working in disciplines other than drilling i.e. Finance, Material Management, Logistics, Human Resource, Instrumentation, HSE etc. to understand the complicated procedures of drilling an oil well. The course provides a fundamental and basic knowledge of the intricacies of on land and offshore drilling operations, drilling fluid, drill string, well complications etc.

### Contents:

- Where to find oil
- Onshore rigs
- Offshore rigs
- Major drilling equipment
- Drilling operations
- How to drill a well
- Casing
- Cementing
- Drilling fluid
- Well complications
- Directional drilling
- Well control
- Safety in drilling
- Visit to IDT Rig, Well Control Simulator and ONGC

Course No	I	II
Dates	20-24 June 2022	06-10 February 2023
Fee	₹37,000/- / \$520/- <b>(Classroom Mode only)</b>	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(E1-E4) Q2(E1-E4) Q3(E1-E4) All Non drilling personnel	Non drilling personnel



# Drilling Technology School Planned Courses for 2022-23

**B-06**

## Fishing Technology and Practices

### Category: Basic Course

### Objective:

This program provides the basic knowledge required to support the fishing expert at Drilling and Workover rigs during fishing operations using different tools.

### Contents:

- Fishing job Introduction
- Classification of Fishing tools
- Reasons for Fishing
- Fishing Economics
- Limiting Factors in Fishing
- Free Point Location
- Procedures for Back-Off
- Calculations for Oil Spotting
- Planning and Execution of Open and Cased Hole Fishing
- Jars – Operation and Working
- Jarring Guidelines during Stuck-ups
- Casing Cutting and Retrieval
- Latest Technologies in Fishing

Course No	I	II
Dates	04-06 May 2022	23-25 January 2023
Fee	₹37,000/- / \$520/-	(Classroom Mode)
	₹20,000/- / \$280/-	(Online Mode)
Duration	3 Days	
Venue	IDT, Dehradun/Online	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(Non-Executive- E4), Q2(Non-Executive-E4) Q3(E2-E4) Drilling, Drilling fluid, Production(Workover) disciplines	Drillers / Drilling Engineers/ Drilling Fluid Engineers / Workover Engineers



# Drilling Technology School Planned Courses for 2022-23

**B-07**

## Safety in Drilling

### Category: Basic Course

### Objective:

To enhance the professional competency and knowledge up-gradation of the participants in various aspects of safety at drilling rigs

### Contents:

- Safety at rig-General concept
- Hazard in first aid
- Communication
- Rig building & Derrick floor safety
- Safe operation- Mechanical equip
- Safe operation- Electrical equip
- Pre spud safety inspection checklist
- OMR
- Safety in mud handling & Chemicals
- Safety during cementing operation
- PPE & Occupational Health
- International safe practices
- Accident investigation & near misses
- Legal issues
- Environment protection issues

Course No	I	II	III	IV
Dates	18-22 April 2022	04-08 July 2022	17-21 October 2022	27 Feb-03 March 2023
	Additional unplanned courses of 3 days duration to be conducted in Assets / Basins of ONGC on mutually agreed dates with at least 20 participants			
Fee	₹37,000/- / \$520/- (Classroom Mode) ₹20,000/- / \$280/- (Online Mode)			
Duration	5 Days			
Venue	IDT, Dehradun/Online			
Seats	20 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1/Q2/Q3 (E1-E5) Drilling, Cementing, Chemistry, Electrical and Mechanical		Tool Pushers/ Tour Pushers/ Drilling Engineers/ Driller/ Asstt Driller	



# Drilling Technology School Planned Courses for 2022-23

## B-08 Familiarization & Application of DF and Cementing labs. Labs

### Category: Basic Course

### Objective:

To enhance the professional competency and knowledge up-gradation of the participants in various aspects of instruments used for measurement of parameters of Drilling Fluids at Drilling rigs and Laboratories.

### Contents:

- Concept of Drilling Fluids
- Types of Drilling Fluids
- Preparation of Water Base & Oil Base Drilling Fluids
- Concept of various additives.
- Principle and measurement of :
  1. Mud weight
  2. Rheology of Drilling Fluids
  3. API Fluids Loss
  4. HPHT Fluid Loss
  5. Sand content.
  6. Total solids
  7. Electrical Stability
  8. pH
  9. Mud & Filtrate Alkalinity
- Linear Swell Meter Studies
- Dispersion Studies
- CST Studies

Course No	I	II
Dates	05-09 September 2022	16-20 January 2023
Fee	₹37,000/- / \$520/- (Classroom Mode only)	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1/Q2/Q3 (Non-Executive-E4) Chemistry, Drilling, Cementing,	Shift Chemist/Drilling Engineers/ Driller/ Asstt. Driller





# Drilling Technology School Planned Courses for 2022-23

**A-01**

## Toolpusher's Course

### Category: Advanced Course

### Objective:

The course is designed for engineers and drilling personnel involved in field operations on drilling rigs. This course includes recommended drilling practices for reducing non-productive time on drilling rigs.

### Contents:

Recommended practices for

- Drill bit
- Drill string
- Reaming & tripping
- Casing running & Landing
- Cementing
- Prevention of stuck pipe
- Prevention of mud loss
- Directional drilling
- Hydraulics & hole cleaning
- Drilling fluid-stuck pipe & mud loss
- Drilling fluid- maintenance & review
- Fishing
- Rig building

Course No	I	II	III	IV
Dates	25-29 April 2022	25-29 July 2022	10-14 October 2022	20-24 March 2023
Fee	₹40,000/- \$570/- (Classroom Mode)			
	₹22,000/- \$310/- (Online Mode)			
Duration	5 Days			
Venue	IDT, Dehradun			
Seats	20 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1(E1-E6), Q2(E1-E6), Q3 (E2-E6) Drilling, Cementing & Drilling fluid Engg.		Asstt. Drillers/ Drillers/ Drilling Engineers/ Tool Pushers/ Tour pushers	



# Drilling Technology School Planned Courses for 2022-23

**A-02**

## Drilling Fluid Technology

**Category: Advanced Course**

**Objective:**

To familiarize the participants with recent advancements in mud systems and their implementation in drilling operations.

**Contents:**

- Functions, properties and rheology of mud
- Volume & velocity calculations
- Well Bore Problems-Instability & Mud loss
- Hole cleaning & solid control
- NDDF, Sub hydrostatic mud & HGS
- Water based mud- Amines
- High performance mud systems
- Non-Aqueous drilling fluid
- Drilling Fluids- HPHT, NIF, Formate
- Environment friendly substitute to OBM
- Environment assessment of drilling & production (work over operations)
- Case Studies

Course No	I	II
Dates	09-13 May 2022	09-13 January 2023
Fee	₹40,000/-/ \$570/- (Classroom Mode) ₹22,000/-/ \$310/- (Online Mode)	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1/Q2 : (E1-E6) Q3(E2-E6) Drilling, Cementing & Chemistry	Drilling Engineers/ Tool Pushers/ Tour pushers/ Drilling Fluid Engineers



# Drilling Technology School Planned Courses for 2022-23

**A-03**

## Advance Cementing Technology

**Category: Advanced Course**

**Objective:**

To familiarize the participants with recent advancements in cementing technology and its implementation in cementing operations

**Contents:**

- Review of inter-relationship between different factors affecting cement job
- Cement job planning
- Slurry design parameters & procedures- Latest advancements
- Techniques for highly deviated/horizontal wells And special cementing conditions
- Special cement slurry-Recent advancements
- Deep water cementing
- Cement sheath evaluation
- Remedial cementing
- Cement job simulation
- Recent advancement in plug jobs
- Lab visit( In Classroom mode only)

Course No	I	II
Dates	13-17 June 2022	20-24 February 2023
Fee	₹40,000/-/ \$570/- (Classroom Mode)	
	₹22,000/-/ \$310/- (Online Mode)	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1/Q2: (E1-E6) Q3:(E2-E6) Cementing Drilling & Chemistry	Tool Pushers/ Tour pushers/ Cementing Engineers/ Drilling Fluid Engineers



# Drilling Technology School Planned Courses for 2022-23

**A-04**

## Applied Drilling Geomechanics

### Category: Advanced Course

### Objective:

To familiarize the participants with the application of Drilling Geomechanical studies for drilling a healthy well.

### Contents:

- Fundamentals of Solid Mechanics: Stress, Strain, Principal stresses, Deviatoric stresses, Failure criterion-Mohr coulomb criterion, Rock properties- UCS, Cohesive strength, Tensile strength, Poisson's ratio, Friction angle
- Fundamental of Rock Mechanics: Far field stresses, Borehole stresses, In-situ stress, Horizontal stress (Max and Min) Stress anisotropy (Anderson theory), Strength anisotropy, Pore pressure, Effective stress, Vertical stress, Rock strength, Rock failure-Fracture pressure
- Inputs for wellbore stability analysis, Steps for wellbore stability analysis, Mud weight window, Collapse pressure.
- Determination of Rock properties.
- Case History
- Geomechanical events in
  - a) Lost circulation,
  - b) Effect of Oil base mud on LOT
  - c) Sub hydrostatic formation
  - d) Abnormal pressure formation
- Approaches to ensure wellbore stability
- Role of different type of mud systems for stabilizing borehole

Course No	I	II
Dates	22-22 September 2022	04-06 January 2023
Fee	₹40,000/- / \$570/- (Classroom Mode) ₹22,000/- / \$310/- (Online Mode)	
Duration	3 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1/Q2:(E1-E6) Drilling, Cementing, Chemistry & Geology	Well planners/ Drilling Engineers/ Cementing Engineers/ Drilling Fluid Engineers



# Drilling Technology School Planned Courses for 2022-23

**A-05**

## Stuck Pipe Prevention

### Category: Advanced Course

### Objective:

To meet the requirement of Assets and Basins to enhance the technical knowledge and competence of field personnel for prevention of stuck pipe related problems

### Contents:

- Stuck Pipe-Causes and mechanisms
- Stick Pipe Identification work sheet
- Sticking due to Differential, Geometrical and Pack-off/ Bridging
- Drilling Jars
- Well bore instability & shale problems
- Mud system – Imp factors to avoid pipe sticking
- Hole Cleaning
- General guidelines to avoid pipe sticking
- Case studies
- Teamwork, team games & team exercises

Course No	I	II	III	IV
Dates	12-14 April 2022	10-12 Aug 2022	30 Nov-2 Dec 2022	14-16 Feb 2023
	Additional unplanned courses of 3 days duration to be conducted in Assets / Basins of ONGC on mutually agreed dates with at least 20 participants			
Fee	₹40,000/-/ \$570/- (Classroom Mode)			
	₹22,000/-/ \$310/- (Online Mode)			
Duration	3 Days			
Venue	IDT, Dehradun			
Seats	20 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1(Non Executives-E6), Q2(E1-E6), Q3 (E2-E6) Drilling, Cementing, Drilling Fluid Eng.		Drillers/ Tool Pushers/ Tour Pushers/ Rig Suptdt/ Drilling Fluid Engineers	



# Drilling Technology School Planned Courses for 2022-23

**A-06**

## Mitigating Drilling Complications

### Category: Advanced Course

### Objective:

To sensitize participants about the recent complications encountered with data compiled by Operations Monitoring group of IDT, use of different tools to mitigate the complications, complication management with case studies. Recent advancements in technologies. SOPs related to different complications.

### Contents:

- New Challenge in Drilling, Complication Management & Complication Data
- Key Seat Wiper, Drilling Jar, Jar Intensifier, PBL Circulation Sub, CBI Tool, Hydro-Clean D/p, Introduction to the concept of "Auto tally"
- Different Stuck Mechanisms- Operational Practices to Prevent Stuck-up, Stuck pipe Mechanism Identification Sheet-SOP for identified Stuck Mechanism
- Drilling Operational Practices to Prevent Mud Loss
- Practices to Prevent Mud Loss and Stuck-up: Drilling Fluid aspects
- Drilling Fluid with Recent field Implementations & Case studies
- Reporting ,Data Gathering and Digitalization Company wide
- CWD and LWD for Mud Loss Prevention with Recent Implementation Case studies
- MPD for Narrow Mud Weight Window with Recent Implementation: Case studies
- Complication Management : Well Monitoring
- Cementation with Recent field Implementation: Case studies
- Complication Handling: Case Studies for String Failure, Simultaneous Loss-Gain situation, Mud Loss, Stuck-Pipe, etc.
- Well control issues and ways of mitigation in WBM and OBM
- Discussions on Case Studies presented by Participants

Course No	I	II
Dates	27 June-01 July 2022	30 Jan-03 Feb 2023
Fee	₹40,000/-/ \$570/- (Classroom Mode)	
	₹22,000/-/ \$310/- (Online Mode)	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1:(Non Executives-E6), Q2:(E1-E6), Q3: (E2-E6) Drilling, Cementing, Drilling Fluid Eng.	Drillers/ Tool Pushers/ Tour Pushers/ Rig Suptdt/ Drilling Fluid Engineers



# Drilling Technology School Planned Courses for 2022-23

**A-07**

## Well Planning

### Category: Advanced Course

#### Objective:

Well planning is crucial for successful drilling and completion of a well to meet the desired objective. It plays important role in optimizing well cost and providing alternate solutions for unexpected complications

#### Contents:

Design aspects its impact on drilling cost will be covered in the course of the following modules::

- Casing seat selection and Casing design
- Directional Well profile
- Bit selection & optimization
- Drill string and Rig hydraulics
- Drilling fluid systems and mud policy design
- Cementing job design
- Cement slurry design
- Resource planning for prevention and mitigation of complications

Courses	I	II
Dates	11-15 July 2022	21-25 November 2022
Fee	₹40,000/- / \$570/- (Classroom Mode)	
	₹22,000/- / \$310/- (Online Mode)	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	20 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1:(E1-E6) Q2:(E1-E6) Q3: (E2-E6) Drilling/ Cementing/ Chemistry	Drillers/ Drilling Engineers/Tool Pushers/ Tour Pushers/ Rig Suptdt/ Drilling Fluid Engineers



## Drilling Technology School Planned Courses for 2022-23

**A-08**

### Mud Loss Prevention and Control

#### Category: Advanced Course

**Objective:** To meet the requirement of Assets and Basins to enhance the technical knowledge and competence of the field personnel for prevention and control of mud loss

#### Contents:

- Type and causes of mud loss
- Drilling practices to prevent loss circulation
- Well planning to avoid mud loss
- Cementing system for preventing loss during drilling
- Cementing system for preventing loss during primary cementing
- Preventing mud loss (Drilling fluid aspect)
- Controlling mud loss (Drilling fluid aspect)
- Case studies- Drilling, cementing and chemistry
- Team exercises and consolidation

Courses	I	II
Dates	29 - 31 August. 2022	19-21 Dec 2022
	<i>Additional unplanned courses of 3 days duration to be conducted in Assets / Basins of ONGC on mutually agreed dates with at least 20 participants</i>	
Fee	₹40,000/-/ \$570/- (Classroom Mode)	
	₹22,000/-/ \$310/- (Online Mode)	
Duration	5 Days	
Venue	Outside IDT at ONGC Work Centers	
Seats	25/30 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1/Q2: (E1-E6) Q3: (E2-E6) Drilling/ Cementing/ Chemistry	Drillers/ Drilling Engineers/Tool Pushers/ Tour Pushers/ Rig Suptdt./ Drilling Fluid Engineers



# Well Control School, Institute of Drilling Technology, ONGC Ltd.

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## WELL CONTROL TRAINING SCHEDULE FROM APRIL 2022 TO MARCH 2023

IWCF ROTARY DRILLING WELL CONTROL (S-01)						IADC WELL SHARP WELL SERVICING WORKOVER COURSE (S-04)				
APRIL 2022		04-08	18-22	25-29		(EQUIPMENT OPERATOR)				
MAY 2022	02-06	9-13		23-27	30 -03 Jun	MAY 2022	23-27		DECEMBER 2022	05-09
JUNE 2022		06-10	13-17	20-24	27-01 Jul	JULY 2022	04-08		MARCH 2023	13-17
JULY 2022		04-08	11-15	18-22	25-29				TOTAL COURSES: 4	
AUGUST 2022	01-05			22-26	29-02 Sept	IWCF/IADC-RD WELL CONTROL COURSE INTRO LEVEL (S-05/S-06)				
SEPTEMBER 2022	05-09	12-16	19-23	26-30		OCTOBER 2022	17-21		JANUARY 2023	16-20
OCTOBER 2022		10-14	17-21		31-04 Nov					
NOVEMBER 2022			14-18	21-25	28-02 Dec				TOTAL COURSES: 2	
DECEMBER 2022	05-09	12-16				IADC WELL SERVICING INTRODUCTORY COURSE (S-07)				
JANUARY 2023	02-06	9-13	16-20		30-03Feb	DECEMBER 2022	05-09		FEBRUARY 2023	20-24
FEBRUARY 2023		06-10	13-17	20-24	27-03 Mar					
MARCH 2023		13-17	20-24			TOTAL COURSES: 2				
				TOTAL COURSES: 40		IADC WELL SHARP INTRODUCTORY LEVEL DOORSTEP COURSES (DRILLING AND WORKOVER)				
IADC WELL SHARP WELL CONTROL COURSE (DWOC) (S-02)										
(DRILLER & SUPERVISOR LEVEL)						DRILLING		WORKOVER		
SEPTEMBER 2022	05-09		MARCH 2023	27FEB – 03 March		APRIL 2022	DRILLING	MAY 2022	WORKOVER	
				TOTAL COURSES: 2		JUNE 2022	DRILLING	JULY 2022	WORKOVER	
						AUGUST 2022	DRILLING	SEPTEMBER 2022	WORKOVER	
IWCF WELL INTERVENTION PRESSURE CONTROL (S-03)						OCTOBER 2022	DRILLING	NOVEMBER 2022	WORKOVER	
APRIL 2022	04-08		OCTOBER 2022	10-14		DECEMBER 2022	DRILLING	JANUARY 2023	WORKOVER	
MAY 2022	09-13		NOVEMBER 2022	21-25		FEBRUARY 2023	DRILLING	MARCH 2023	WORKOVER	
JUNE 2022	13-17		JANUARY 2023	09-13		TOTAL COURSES: 06		TOTAL COURSES: 06		
AUGUST 2022	01-05		FEBRUARY 2023	06-10						
SEPTEMBER 2022	12-16		MARCH 2023	20-24		ANNUAL TOTAL COURSES: 72				
				TOTAL COURSES: 10						

CONTACT DETAILS: S BHATTACHARJEE, CGM (D), IN-CHARGE WELL CONTROL SCHOOL, CPF No. 51510, Mobile: 09410390915, 0135-2794220

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### WELL CONTROL TRAINING COURSE FEE in INR w.e.f. 06.07.2020

SN	Course Name (course code)	Fees (INR)	Base Price (INR)	18% GST (INR)
1.	IWCF-RD L3 & L4 Level (S-01)	70000	59322	10678
2.	IWCF-WIP L3 & L4 Level (S-03)	62000	52542	9458
3.	IADC Driller and Supervisor Level (S-02,S-04)	56000	47458	8542
4.	IWCF / IADC Introductory Level (S-05/S-06)	41000	34746	6254
5.	IADC Well Servicing Introductory course (S-07)	34000	28814	5186
6.	Resit Charges IADC/IWCF for all level	20000	16949	3051

### Course fee in USD for foreign participants (w.e.f. 06.07.2020):

SN	Course Name (course code)	Fees in USD	Base Price (USD)	18% GST (USD)
1.	IWCF-RD L3 & L4 Level (S-01)	1200	1017	183
2.	IWCF-WIP L3 & L4 Level (S-03)	1000	847	153
3.	IADC Driller and Supervisor Level (S-02,S-04)	900	763	137
4.	IWCF / IADC Introductory Level (S-05/S-06)	700	593	107
5.	Resit Charges IADC/IWCF for all level	350	297	53

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