



Drilling Technology School



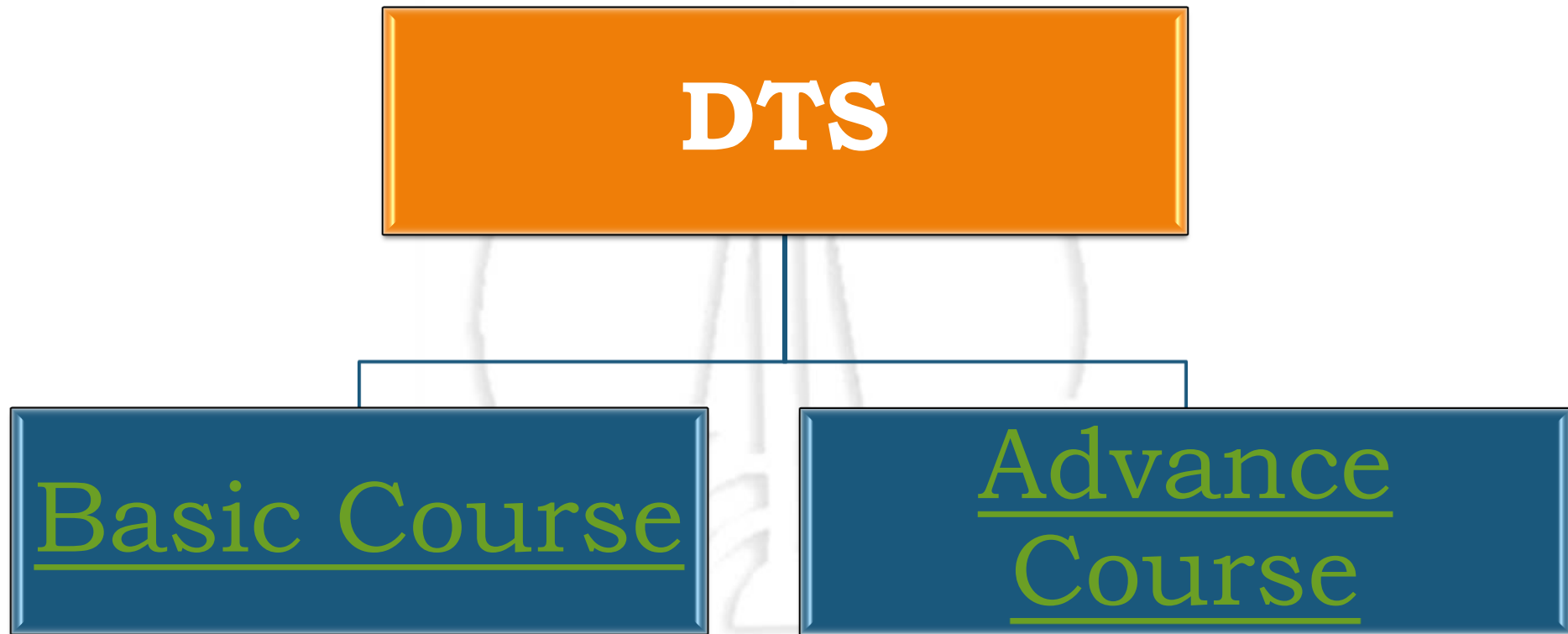
## About Drilling Technology School

- ▶ DTS, an arm of Training Division, Institute of Drilling Technology, Dehradun, which provides training in the field of Drilling, Cementing, Drilling fluid engineering and Safety. In the year 2018-19 DTS has conducted 74 in house & door step training courses for 1486 participants from ONGC and other oil companies which is all-time high. Training Division is equipped with a full scale drilling rig with facilities and fully furnished air conditioned lecture halls equipped with modern audio-visual aids.
- ▶ DTS has well experienced and qualified faculty with 25-30 years of field experience. Faculty is drawn from Drilling, Cementing and Drilling Fluid R&D Technology Groups and Operation Monitoring Group. Participants are imparted practical demonstrations at state of the art drilling fluid and cementing labs equipped with latest equipment.
- ▶ IDT is equipped with a well-established library complete with books, journals and soft copies on all aspects of petroleum technology to fulfil the needs of scientists and engineers.



**DTS Courses**

# COURSES CONDUCTED BY DTS



## In-house Courses with Venue at IDT, Dehra Dun, Uttarakhand, India

S N	Course Code	Course Title	Course Level	Duration	Eligibility	Course No	Course dates	Fee per participant for external trainees	
								Rupees	US \$
1	B-01	<a href="#">Familiarization to Drilling Technology</a>	Basic	5 days	Asst. Drillers/ Fresh Drillers	1	15 – 19 June 2020	42,070	646
						2	15 – 19 Feb' 2020		
2	B-02	<a href="#">Basic Course in Directional Drilling</a>	Basic	5 days	Driller/ Drilling Engineer/ Drilling Fluid Engineer/ Cementing Engineer	1	08 – 12 June 2020	42,070	646
						2	21 – 25 Sep' 2020		
3	B-03	<a href="#">Casing &amp; Cementing Technology</a>	Basic	5 days	Driller/ Drilling Engineer/ Drilling Fluid Engineer/ Cementing Engineer	1	01 – 05 June 2020	42,070	646
						2	14 – 18 Dec' 2020		
4	B-04	<a href="#">Maintenance of Accumulator Unit &amp; BOP System</a>	Basic	5 days	Asst. Drillers / Drillers / Drilling Engineer	1	11 – 15 May 2020	42,070	646
						2	27 – 31 July 2020		
						3	02 – 06 Nov' 2020		
						4	01 – 05 March 2021		
5	B-06	<a href="#">Drilling Awareness for Non- Drilling Professionals</a>	Basic	5 days	Non-drilling personnel	1	27 Apr – 01 May 2020	42,070	646
						2	13 – 17 July 2020		
						3	05 – 09 Oct' 2020		
						4	18 – 22 Jan' 2021		
6	B-07	<a href="#">Safety in Drilling</a>	Basic	5 days	Tool Pusher/ Tour pusher/ Drilling Engineer/ Driller/ Asst. Driller	1	17 – 21 Aug' 2020	42,070	646
						2	22 – 26 March 2021		
7	B-08	<a href="#">Familiarization &amp; application of DF &amp; Cementing Lab</a>	Basic	5 days	Driller/ Drilling Engineer/ Drilling Fluid Engineer/ Cementing Engineer	1	06 – 10 July 2020	42,070	646
						2	04 – 08 Jan' 2021		

**In-house Courses with Venue at IDT, Dehra Dun, Uttarakhand, India**

S N	Course Code	Course Title	Course Level	Course Duration	Eligibility	Course No	Course dates	Fee per participant for external trainees	
								Rupees	US \$
1	A-02	<a href="#">Tool Pusher Course</a>	Advance	5 days	Tool Pusher/ Tour pusher/ Drilling Engineer/ Driller/ Asst. Driller	1	20 – 24 April 2020	43,608	672
						2	24 – 28 Aug' 2020		
						3	23 – 27 Nov' 2020		
						4	01 – 05 Feb' 2021		
2	A-03	<a href="#">Drilling Fluid Technology</a>	Advance	5 days	Tool Pusher/ Tour pusher/ Drilling Fluid Engineer/ Drilling Engineer	1	13 – 17 April 2020	43,608	672
						2	12 – 16 Oct' 2020		
3	A-04	<a href="#">Advance Cementing Technology</a>	Advance	5 days	Tool Pusher/ Tour pusher/ Drilling Fluid Engineer/ Drilling & Cementing Engineer	1	07 – 11 Sep' 2020	43,608	672
4	A-08	<a href="#">Well Planning</a>	Advance	5 days	Rig Suptdt/ Tool Pusher/ Tour pusher/ Drilling Fluid Engineer/ Drilling Engineer/ Driller	1	18 – 22 May 2020	43,608	672
						2	07 – 11 Dec' 2020		



## B-01 Familiarization to Drilling Technology

**IDT**  
Centre of Excellence

### Objective:

To enhance participants' skill for safe and cost efficient drilling

### Contents:

- Onshore rig classification and selection
- Offshore rigs
- Drill string
- Drilling bit
- Casing
- Cementing
- Directional drilling
- Hydraulics
- Drilling complications
- Drilling fluids
- Rig math
- Rig instrumentation
- Safety in drilling
- Solid control equipment
- Wire rope

### Category: Basic Course

Course No	I	II
Dates	15-19 June 2020	15-19 Feb 2020
Fee	Rs. 42070 US \$ 646	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(E1), Q2(E0-E2), Q3 (E0-E3), Non Executive, Drilling, Cementing and Chemistry	Assistant Drillers / Fresh Drillers

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## B-02 Basic Course in Directional Drilling

**IDT**  
Centre of Excellence

### Objective:

A basic course on Directional Drilling Techniques, Equipment and latest developments on the subject.

### 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 Wire rope

### Category: Basic Course

Course No	I	II
Dates	08 - 12 June 2020	21 - 25 Sep 2020
Fee	Rs. 42,070 US \$ 646	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(E1-E4), Q2(E0-E4), Q3 (E2-E4), Non-Executive Drilling, Cementing and Chemistry	Drillers / Drilling Engineers/ Drilling Fluid Engineers / Cementing Engineers





## B-03 Casing & Cementing Technology

**IDT**  
Centre of Excellence

### Objective:

A 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

### Category: Basic Course

Course No	I	II
Dates	01 – 05 June 2020	14 – 18 Dec 2020
Fee	Rs. 42,070 US \$ 646	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(E1-E4), Q2(E0-E4), Q3 (E2-E4), Non-Executive Drilling, Cementing and Chemistry	Drillers / Drilling Engineers/ Drilling Fluid Engineers / Cementing Engineers

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## B-04 Maintenance of Accumulator Unit & BOP System

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Centre of Excellence

### Objective:

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

Category: Basic Course

### 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	III	IV
Dates	11 - 15 May 2020	27 - 31 July 2020	02 - 06 Nov 2020	01-05 Mar 2021
Fee	Rs. 42,070 US \$ 646			
Duration	5 Days			
Venue	IDT, Dehradun			
Seats	12 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1 (E1-E4), Q2 (E0-E4), Q3 (E2-E4), Non-Executive Drilling, Cementing and Chemistry		Assistant Drillers / Drillers	





## B-06 Drilling Awareness for Non Drilling Professionals

**IDT**  
Centre of Excellence

### 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, Transport, 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 Land Rig, Well Control Simulator
- And ONGC Museum

### Category: Basic Course

Course No	I	II	III	IV
Dates	27 April -01 May 2020	13 - 17 Jul 2020	05 - 09 Oct 2020	18 - 22 Jan 2021
Fee	Rs. 42,070 US \$ 646			
Duration	5 Days			
Venue	IDT, Dehradun			
Seats	12 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1(EI-E4) Q2(EI-E4) Q3(EI-E4) Non Executive Non drilling personnel		Non drilling personnel	

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## B-07 Safety in Drilling

**IDT**  
Centre of Excellence

### Objective:

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

Category: Basic Course

### 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	Door Step I (3 Days)	17 - 21 Aug 2020	Door Step II (3 days)	22—26 Mar 2021
Fee	Rs. 42,070 US \$ 646			
Duration	5 Days			
Venue	IDT, Dehradun			
Seats	12 Nos.			
Eligibility Criteria	ONGC			Other Companies
	Q1/Q2/Q3 (Non Executive - E5) Drilling, Cementing, Chemistry, Electrical and Mechanical			Tool Pushers/ Tour Pushers/ Drilling Engi- neers/ Driller/ Asstt Driller





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

**IDT**  
Centre of Excellence

### 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

Category: Basic Course

### 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

Course No	I	II
Dates	06 - 10 July 2020	04 - 08 Jan 2021
Fee	Rs. 42,070 US \$ 646	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1/Q2/Q3 (Non Executive - E4) Chemistry, Drilling, Cementing	Shift chemist/Drilling Engineers/ Driller/ Asstt Driller

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## A-02 Tool Pusher Course

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Centre of Excellence

### 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.

### Category : Advance Course

### 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	20 - 24 Apr 2020	24 - 28 Aug 2020	23 - 27 Nov 2020	01 - 05 Feb 2021
Fee	Rs. 43,609 US \$ 672			
Duration	5 Days			
Venue	IDT, Dehradun			
Seats	12 Nos.			
Eligibility Criteria	ONGC		Other Companies	
	Q1(E1 - E6) Q2(E1 - E6) Q3 (E2 - E6) Drilling/ Cementing/ Chemistry		Asstt. Drillers/ Drillers/ Drilling Engineers/ T ool Pushers/ Tour pushers	





## A-03 Drilling Fluid Technology

**IDT**  
Centre of Excellence

### 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

### Category : Advance Course

Course No	I	II
Dates	13 - 17 Apr 2020	12 - 16 Oct 2020
Fee	Rs. 43,609 US \$ 672	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(E1 - E6) Q2(E1 - E6) Q3 (E2 - E6) Drilling/ Cementing/ Chemistry	Drilling Engineers/ Tool Pushers/ Tour pushers/ Drilling Fluid Engineers

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## A-04 Advance Cementing Technology

**IDT**  
Centre of Excellence

### 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

### Category : Advance Course

Course No	I	
Dates	07 - 11 Sept 2020	
Fee	Rs. 43,609 US \$ 672	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 Nos.	
Eligibility Criteria	ONGC	Other Companies
	Q1(E1 - E6) Q2(E1 - E6) Q3 (E2 - E6) Drilling/ Cementing/ Chemistry	Tool Pushers/ Tour pushers/ Ce- menting Engineers/ Drilling Fluid Engi- neers







## A-08 Well Planning

**IDT**  
Centre of Excellence

### 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

### Category: Advance Course

Courses	I	II
Dates	18 - 22 May 2020	07 - 11 Dec 2020
Fee	Rs. 43,609 US \$ 672	
Duration	5 Days	
Venue	IDT, Dehradun	
Seats	12 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

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