



Hydrocracker and Base Oil Process

Course Introduction:

This comprehensive course offers participants a fundamental understanding of hydrocracking technology and its role in producing high-quality base oils. This course covers the principles, equipment, and operational aspects involved in hydrocracking and base oil production, equipping attendees with essential knowledge for further exploration in the refining industry.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the basic principles and significance of hydrocracking in oil refining.
 - Identify the key components and processes involved in base oil production.
 - Describe the operational parameters and conditions affecting hydrocracking.
 - Recognize safety and environmental considerations in hydrocracking operations.
 - Apply fundamental concepts to practical scenarios in hydrocracker and base oil processing.
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Who Should Attend?

This course is intended for engineers and technicians in the refining and petrochemical industries, operations and maintenance personnel involved in hydrocracking units, safety and compliance professionals focused on refining processes.

Course Outline:

Day 1: Introduction to Hydrocracking and Base Oil Production

- Overview of Oil Refining Processes
- Importance of Hydrocracking in Refining
- Types of Base Oils and Their Applications
- Overview of Hydrocracker Technology

Day 2. Process Fundamentals

- Mechanisms and Reactions in Hydrocracking
- Key Equipment Used in Hydrocracking
- Feedstock Selection and Preparation
- Product Quality Specifications for Base Oils

Day 3: Hydrocracking Process Design and Operation

- Process Flow Diagrams and Mass Balances
- Operating Conditions: Temperature, Pressure, and Hydrogen Consumption
- Catalyst Selection and Management
- Control Strategies for Hydrocracking Operations

Day 4: Safety and Environmental Considerations

- Safety Standards and Best Practices in Hydrocracking
- Environmental Impact of Hydrocracking Processes
- Emergency Response and Contingency Planning
- Regulatory Requirements for Hydrocracker Operations

Day 5: Future Trends and Course Wrap-Up

- Innovations in Hydrocracking Technology
- Market Trends in Base Oil Production

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

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| 08:00 - 08:20 | Morning Coffee / Tea |
| 08:20 - 10:00 | First Session |

10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session

