

# Fluid Catalytic Cracking Process Fundamentals, Monitoring and Optimization

Consultant / Trainer

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The **Petrogenium**. FCC course offers a comprehensive introduction to a broad range of topics related to Fluid Catalytic Cracking. It is tailored to accelerate the learning curve for new engineers and operators while also reinforcing and expanding the knowledge of more experienced participants. The course aims to build a practical, working understanding of key elements of the FCC process, including:

- The impact of process variables
- Fundamentals of FCC catalysts
- Unit monitoring
- Process equipment design and operation
- Strategies for process optimization

In addition, the course provides practical tools such as rules of thumb and real-world examples, equipping participants with the knowledge needed to support safe, reliable, and profitable FCC unit operations.



### Participants

This **Petrogenium**. course can be tailored for the specific needs of a refinery. Target audience includes Process Engineers, FCC Unit Operators, Refinery Planners and HSE Specialists. The course is classroom-based.

The option for post-course consultancy/help-desk support is also available.



### Learning Objectives

Heat balance, pressure balance, FCC chemistry, process variable effects, rules of thumb, fluidization, FCC catalyst fundamentals, Process Equipment, Unit Monitoring and Optimization, Process Safety

# Programme

## DAY 1

- FCC Process Fundamentals
    - Introduction and FCC overview
    - Heat balance and Pressure balance
    - FCC feed properties and reaction chemistry
    - Fluidization and catalyst circulation
  - Process Variable Effects
    - Independent and dependent variables
    - Effects of process variables, feed properties, catalyst properties
    - Rules of thumb
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## DAY 2

- Fundamentals of FCC catalyst
    - Activity control and metals management
    - FCC catalyst formulation basics
    - Catalyst additives
  - Troubleshooting Common FCC Problems
  - FCC Process Safety
    - Inherent Process Risks in FCC
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## DAY 3

- Process Equipment Design and Operation
  - Regenerator and Flue Gas System
  - Riser / Reactor
  - Product Recovery System
- Unit Monitoring and Optimization
  - Test runs and data collection
  - Use of process simulation models
  - Strategies for process optimization

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### Why select Petrogenium.?

The above support will be provided by principal consultants with 30+ years world-class experience in the technology and hands-on know-how from operation of refinery units.

### Contact Petrogenium.:

Email: [training@petrogenium.com](mailto:training@petrogenium.com)

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***Because Experience Matters***