

Petrogenium. Academy

Training Brochure
2025 /2026



- Safety
- Renewables
- Performance Improvement
- LNG
- Process Technology
- Asset Management
- Project Management

For further information, please contact:
training@petrogenium.com
www.petrogenium-academy.com

Petrogenium. Academy

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About Petrogenium. and Petrogenium. Academy

Petrogenium is a global independent consultancy, founded in 2015. For more than a decade, we've been supporting asset owners in refineries, petrochemicals, gas, and clean fuel companies improve margins, optimize operating and energy costs, digitize, reduce waste, trouble shoot, decarbonize, and participate in the energy transition.

Our consultants are independent, world-class experts with many years of industry experience in asset owner management, business unit responsibility, and expert roles. They all work at mastery level and support our clients on an individual basis or in project teams.

Petrogenium Academy is the training arm of our consulting business. Our Academy aims to empower professionals through experience – by delivering a comprehensive curriculum, tailored to your needs, taught by renowned industry experts, based on world-class owner experience. Petrogenium Academy delivers open courses, in-house and remote training.

CPD Accreditation

Petrogenium is a CPD-accredited company, and many of our courses carry Continuing Professional Development (CPD) accreditation. This mark of quality ensures our training is relevant, well-structured, and valuable for ongoing professional growth.



THE CPD STANDARDS OFFICE
CPD PROVIDER: 22579
2023-2025
www.cpdstandards.com

CPD Points reflect the time and effort a participant invests in learning new skills and developing them. Typically, one CPD point is equivalent to one hour of learning. Accumulating these points not only helps professional maintain their registration, it also demonstrates their commitment to continuous improvement and excellence in their field.

Dear Reader,

Thank you for reading the latest edition of our Academy Training Brochure. We're delighted to share with you no less than 64 courses in the areas of safety, renewables, performance improvement, LNG, process technology, asset management, and project management.

The **Petrogenium** Academy empowers professionals through experience. We bridge knowledge and performance gaps within your organization – improving productivity, quality, and efficiency.

Our experts, who have all worked from the trenches for many years, provide course participants with an unparalleled learning experience – empowering them to tackle the complex challenges they face.

All our courses can be taught on-site, tailored to the awareness and experience levels of your staff. Courses can be customized for a specific refinery, plant, or unit. Many courses can be adapted for online participation, saving travel costs and offering flexibility.

On top of that, we teach from inspiring locations around the world.

Multiple times per year, we conduct open courses in Asia and Europe. Convenient, if you only have a small number of participants within your organization or if you'd like to facilitate learning and networking between peers.

Don't hesitate to contact us and discuss the best options for your organization! We look forward to hearing from you.



Anna Kryzhanovskaya
Client Director, **Petrogenium** Academy



Stefan Kardos
Director, **Petrogenium**

Safety

Incident Investigation with Tripod Beta



Consultant / Trainer:
Jan Pranger

This course teaches you how to investigate and analyse incidents systematically to prevent recurrence and enable organizational learning. You'll learn how to collect evidence, identify failed or missing barriers, and uncover the human and organisational factors behind incidents.

Accredited by the Stichting Tripod Foundation, this Tripod Beta training leads to Bronze Practitioner Accreditation upon passing the final assessment. All participants receive a certificate of attendance.



Safety

Safety in Process Design



Consultant / Trainer:
Ronald Holleboom & Louk Kuijten / Johan Jainudin

With rising energy demand, tighter regulations, and growing scrutiny, process safety has never been more critical. Explosions, toxic releases, and shutdowns still make headlines—could your design hold up?

The CPD-accredited Safety in Process Design course helps engineers design inherently safer systems through real-world case studies, proven techniques, and expert instruction.

Minimize risk. Enhance reliability. Ensure compliance.



Renewables

A Critical Review of Renewable Resources

Consultant / Trainer:

Colin Schaverien & Charu Ehrenreich

Explore the full spectrum of renewable energy solutions—from advanced biofuels, renewable diesel and Sustainable Aviation Fuel and green chemicals to hydrogen, e-fuels, and carbon abatement strategies. This two-day course offers a clear, critical understanding of current technologies, their commercial readiness, and the economic and environmental challenges they face. Designed for professionals across the energy value chain,

it provides the knowledge needed to make informed decisions in a rapidly evolving energy landscape.



Renewables

Biofuels & e-Fuels

Consultant / Trainer:

Colin Schaverien

As the demand for low-carbon energy solutions grows, businesses face critical hurdles in scaling up biofuels, integrating new technologies, and complying with evolving regulations. This course equips participants with the technical knowledge and strategic insights needed to address these challenges effectively. Taught by renowned industry leader **Dr. Colin Schaverien**, an expert in the field of biofuels research, refinery operations, and technology deployment.



Performance Improvement

Crude Oil Fundamentals, Acceptance, Valuation & Flexibility

Consultant / Trainer:

Danny Peferoen / Frans van den Berg

Understanding crude oil quality is key to smarter decisions across trading, supply, and refining. This training builds a clear foundation in crude assay and its impact on valuation, processing, and product yields. It connects technical and commercial perspectives, showing how different roles use assay data to guide acceptance, scheduling, and margin optimization.

Participants gain insight into the value of crude flexibility and how it can unlock profit in a changing market. Designed for professionals across the oil value chain, the course brings clarity to complexity—equipping teams to act faster, reduce risk, and improve performance.



Performance Improvement

Essentials of Refining

Consultant / Trainer:

Danny Peferoen

This course delivers a solid understanding of the fundamentals in oil refining—from crude characteristics to product output and unit interactions. The course clarifies core refining processes, energy utilization, and product quality, bridging technical operations with commercial understanding.

Participants gain a clear view of how refining units impact overall plant performance and profit margins. Ideal for operators, process engineers, schedulers, and commercial professionals, the program turns operational complexity into actionable insight—enabling better decision making and cross functional alignment.



Performance Improvement

Fuel Oil & Fuel Oil Blending



Consultant / Trainer:

Frans van den Berg / Paul van Oers

As fuel oil specifications become increasingly stringent, blending processes face rising complexity.

This course provides professionals with the skills to optimize blend recipes, improve compatibility, and troubleshoot quality issues before impacting profitability.

Participants gain strategies to reduce re-blending, boost consistency, and increase value.

Designed for technical staff, supervisors, and managers, the program delivers a practical approach to blend quality challenges, cutter stock selection, margin loss reduction, and consistent, specification compliant fuel oil production.



Performance Improvement

Fuels Quality Management



Consultant / Trainer:

Paul van Oers

In today's market, delivering consistent, compliant fuel quality is critical—not only for customer satisfaction but also for meeting regulatory compliance and brand reputation. This course guides you through managing fuel quality from crude feedstock to final product delivery. Key focus areas include refining processes, product specifications, biofuel integration, and quality assurance across the supply chain.

Designed for operational staff, laboratory technicians, schedulers, and technical teams, the program combines real-world case studies with hands-on exercises to build confidence and expertise. With flexible delivery options and post-training support participants are equipped to implement learnings immediately in their work environment.



Performance Improvement

Hydrocarbon Economics and Upgrading



Consultant / Trainer:
Selwyn Maduro

This course demystifies refinery operations and economics for non-engineers across upstream, midstream, and support functions. Learn how crude properties, refining processes, and product specs affect profitability, and gain practical insight into heavy oil upgrading, blending, sulfur management, and environmental impacts. Ideal for analysts, schedulers, and professionals in sales, marketing, finance, and other support roles, it builds cross-functional understanding and empowers smarter strategic decisions.



Performance Improvement

Introduction to Oil Refining

Consultant / Trainer:
Selwyn Maduro

This course offers a comprehensive introduction to the oil refining industry, covering the entire value chain from crude oil extraction to finished products. Participants will gain a solid understanding of refinery configurations, key processes like distillation and cracking, and the economic drivers influencing refinery operations. Through practical exercises and case studies, the course provides insights into crude oil valuation, product blending, and refinery economics.

Designed for professionals new to the refining sector or those seeking a broader understanding, this training equips participants with the knowledge to navigate the complexities of the industry and make informed decisions.



Performance Improvement

Introduction to Petrochemicals

Consultant / Trainer:

Cherng-Jih (CJ) Ho

Dive into the essentials of the petrochemical industry with this practical, jargon-free course. Gain a solid understanding of key feedstocks—natural gas, petroleum, coal, and bio-based resources—and explore the primary building blocks: syngas, olefins, and aromatics. Learn how these components interconnect across the petrochemical value chain, from production processes to end-product applications.

Designed for professionals in sales, marketing, business development, procurement, and finance, this course offers a clear overview of industry trends, market/pricing dynamics, and sustainability developments. Whether you're new to the sector or seeking to deepen your knowledge, this training equips you to make strategic business decisions that drive performance and profitability.



Performance Improvement

Introduction to Process Control

Consultant / Trainer:

Clive Beeby

Struggling with unstable processes or operational inefficiencies? This course provides a foundational understanding of process control, covering PID tuning, base layer control, multivariable predictive control, and troubleshooting techniques.

Designed for professionals in hydrocarbon industries, the program equips participants with practical skills to enhance operational stability and efficiency. Led by expert **Clive Beeby**, the training includes simulation exercises and scenarios to reinforce learning.



Performance Improvement

Operational Excellence

Consultant / Trainer:

Han Gesink

The **Petrogenium Operational Excellence** course is a high intensity workshop for members of the leadership of a refinery or petrochemical plant who are aiming for better performance and control within their operations operations, both in terms of Safety, Health, and Environment as well as Production performance. Since the workshop aims at jointly developing a view on what Operational Excellence can potentially bring to the company, participants should be in the position to develop a follow

up to the workshop. Operational Excellence is all about competent people, working together in teams with an 'enterprise first' mind-set in a structured way with truly committed leadership.



Performance Improvement

Operational Readiness (Commissioning & Startup) Workshop

Consultant / Trainer:

Han Gesink

Transitioning from project to operational readiness is critical and often challenging. This customized workshop prepares owner's representatives, commissioning teams, and contractors to move from construction to efficient operations smoothly. Led by experienced consultant **Han Gesink**, it focuses on owner involvement, cross-team collaboration, and risk mitigation for successful commissioning. Tailored to your refinery, plant, or unit, it delivers practical methods for a startup without surprises. Post-course consultancy and support are also available.



Performance Improvement

Opportunity Framing for Technology Projects



Consultant / Trainer:

Andreas Nowak

Framing is the critical process of defining core assumptions of an opportunity at the outset of any project. The “Petrogenium Opportunity Framing for Technology Projects” workshop is specifically designed to address technology-driven opportunities, using a structured, facilitated approach that brings together key stakeholders and, when needed, external experts.

The outcome is a dynamic premises document that stays active throughout the project lifecycle and is updated continuously during development. This ensures alignment across the entire project team and simplifies onboarding for newcomers.

Additionally, a summarized version provides management with a clear high-level overview of the opportunity.

This workshop also serves as effective training for developing in-house framing facilitators.



Performance Improvement

Project Management of Fuels

Consultant / Trainer:

Mae Ascan

Managing fuel quality across the supply chain—from crude oil to end-user vehicles—is becoming increasingly complex. This course provides a clear overview of gasoline, diesel, and biofuels, focusing on refining processes, specifications, engine compatibility, and product performance.

Ideal for professionals in quality, technical services, procurement, and customer-facing roles, it equips teams to align on fuel standards, troubleshoot issues, and enhance product offerings.



Performance Improvement

Refinery Economics



Consultant / Trainer:

Eric-Hans Wolff / Peter Bost / Tom Brumfield / Roberto Ulivieri

The **Petrogenium Refinery Economics** course will provide insight into many aspects of operating the modern refinery as a business, including technical information on refining processes, crude oils and processing options, the place of the refinery in the value chain, refinery cost structure and management, optimization and profit margin, energy and oil loss reduction, management tools and techniques used for economic evaluations in refineries and future trends.



Performance Improvement

Refinery Performance & Cost Improvement



Consultant / Trainer:

Eric-Hans Wolff

This course provides a solid and broad awareness of the refinery business. It gives a global perception of the refinery as a business, by providing basic technical information on refining processes, the place of the refinery in the value chain and future trends. Planning and optimization of your refinery margin is included as is the gaining of awareness of the basic tools and techniques used for economic evaluations in refineries.

This course can be given face-to-face or remotely. The presentations are interactive, supported with slides that also serve as a dedicated course manual (PDF file). The course includes interactive discussions and participant topics (on demand, aided by short videos, exercises and a Q&A session). Learning assessment is through a written examination (if required).

The course also contains topics like Investment Analysis and Contracts & Prices.



Performance Improvement

Refinery & Petrochemicals Hydrocarbon Mass Balance & Loss

Consultant / Trainer:

Eric-Hans Wolff



This course will support you not only with developing proper mass balances around your refinery and/or petrochemicals plant, but also to identify losses. This comprehensive course will help you to mitigate your losses with a lot of practical hands-on information. No high-level consultancy speak, but the real thing!

This course can be given face-to-face or remotely. The presentations are interactive, supported with slides that also serve as a dedicated course manual (PDF file.)

The course includes interactive discussions and participant topics (on demand, aided by short videos, exercises and Q&A sessions).

Learning assessment is through a written examination (if required).



Performance Improvement

Refinery Planning

Consultant / Trainer:

Anwar Tatariya



Misaligned strategies, siloed teams, and volatile markets can quietly erode refinery value—if your planning process fails to integrate longterm strategy with daily operations. This course delivers deep insight into key planning tools, covering linear programming (LP) fundamentals, crude and product evaluation, and multi-period, multi-site models to optimize planning systems and safeguard gross refinery margins. Designed for planners, strategists, schedulers, economists, and operational teams, the course connects technical LP modelling with practical economic decision-making in refinery environments.

Site-specific customization and post-training consultancy are also available to help organizations transform planning insight into sustained performance and improved gross margins.



Performance Improvement

Refinery Scheduling & Logistics



Consultant / Trainer:

Anwar Tatariya

Refinery bottlenecks, inventory imbalances, and misaligned scheduling can quietly eat into profitability. This three-day course delivers practical tools to optimize feedstock and product scheduling, streamline logistics operations—from tanks to docks—and align cross-functional teams for seamless execution

Ideal for refinery schedulers, logistics managers, planners, and operations staff, it blends real-world case studies with hands-on insights into commercial scheduling software and best practices—so you can reduce downtime, improve communication, and boost operational efficiency.



Performance Improvement

Refinery & Supply Economics



Consultant / Trainer:

Danny Peferoen / Peter Bost

The **Petrogenium Refinery & Supply Economics** course will provide insight into many aspects of operating the modern refinery as a business, including technical information on refining processes, crude oils and processing options, the place of the refinery in the value chain, refinery cost structure and management, optimization and profit margin, energy and oil loss reduction, management tools and techniques used for economic evaluations in refineries and future trends.



Performance Improvement

Special Problems Operator Response Training (SPORT)



Consultant / Trainer:

Jan Zander

Petrogenium developed the *SPORT* package (*Special Problems Operator Response Training*) that consists of interactive training sessions to improve the insight and skills of operators with respect to their own operating units.

The feedback obtained during the training sessions can be used as input to a Vulnerability Analysis of the relevant utility units.

The training sessions are face-to-face and highly interactive with relevant scenarios and questions that aim to actively engage operators, technologists, and engineers involved with the utility units, Management of Change (MOC) and maintenance planning.



LNG

LNG Benchmarking Gap Closure Workshop

Consultant / Trainer:

Jannes Regterschot / Rene Verburg

Benchmarking sets the baseline for LNG facility performance—measuring output, safety, reliability, cost, and efficiency against industry peers. But translating those insights into clear, focused improvement plans is often where progress stalls.

This Petrogenium workshop bridges that gap. Designed for teams post-benchmarking, it aligns stakeholders on key findings, identifies priority gaps, and applies a structured model to uncover root causes and define actionable performance improvements—turning data into measurable results.



Process Technology

Amine Treating & Sour Water Stripping



Consultant / Trainer:

Egbert van Hoorn

Efficient removal of acid gases like H₂S and CO₂ is critical for safe, compliant refinery operations, but upsets in amine units or sour water strippers can cause downtime, corrosion, and higher costs. This course gives engineers, operators, and maintenance teams practical troubleshooting skills and theoretical knowledge—covering solvent chemistry, equipment operation, process control, degradation, and salt management.

Led by experienced trainer **Egbert van Hoorn**, sessions use real-world case studies to help participants optimize performance, prevent upsets, and boost energy efficiency. Tailored to each refinery or unit, with optional post-course consultancy, this training turns operational challenges into measurable gains.



Process Technology

Boiler & Cooling Water Treatment



Consultant / Trainer:

Jan Zander

It's only water, what could possibly go wrong? This **Petrogenium** course deals with the theory and practical examples of requirements for reliable water treatment around your utilities systems. The Petrogenium expert has been involved in numerous Root Cause Analysis studies in which the water treatment was outsourced. This two-day course is therefore designed to enable you to be a serious discussion partner with your Water Treatment company representatives. Basic Water Chemistry, Pretreatment Clarifiers, Demineralisation & Softening Plants, Cooling Water Chemistry & Biocides and Boiler & Condensate treatment are the main subjects in this course.

This two day course is usually paired with the Energy & Utilities Systems course. Water..... Treat it well!



Process Technology

Bulk Liquid Movements & Product Quality



Consultant / Trainer:

Michael Conway Nunn & Paul van Oers

Handling bulk liquids safely and efficiently is vital—but achieving seamless coordination across storage, pipelines, loading, blending, and sampling remain ongoing operational challenges. This course equips engineers and operational teams with industry-proven best practices to master process safety, logistics planning, transfer systems, and quality assurance.

Led by seasoned experts **Michael Conway Nunn** and **Paul van Oers**, you'll explore troubleshooting techniques, product acceptance tools, and strategies for minimizing product loss and environmental risk.

Tailored modules adapt to experience level and unit configuration—and optional post-course support translates learning into immediate operational gains.



Process Technology

Catalytic Residue Upgrading - Ebullated Bed Process

Consultant / Trainer:

Woodrow Shiflett

Petrogenium's specialized one-day training on the Ebullated Bed Catalytic Residue Upgrading process provides refinery teams with the expertise needed to efficiently process heavy residues and optimize unit performance. This course addresses critical challenges such as catalyst management, operational troubleshooting, and maximizing product yields from difficult feedstocks like vacuum residues that conventional reactors struggle to handle.

Provide your team with the expertise to maximize ebullated bed unit performance and achieve optimal results.



Process Technology

Catalysis in the Refinery

Consultant / Trainer:

Bob Scheffer / Eelko Brevoord / John Baric

This course will guide the participants to develop key concepts and techniques to operate, select and optimize refinery catalytic processes. These key concepts can be utilized to make design and operating decisions. Training and development give yourself and your employees the keys to success.

The course covers Hydroprocessing Processes in a Refinery, such as Hydrotreating and Hydrocracking.

Each Catalytic Process will be reviewed including; process description, reaction chemistry, catalyst properties and handling.



Process Technology

Caustic & MEROX Treatment

Consultant / Trainer:

Egbert van Hoorn

This course on *Caustic & MEROX Treatment* equips refinery teams with essential skills to optimize sulfur removal from LPG, gasoline, condensate, and kerosene fractions. It covers the operation and troubleshooting of systems like MEROX®, THIOLEX®, MINALK®, and MERICAT®, including caustic handling, extraction efficiency, and disposal strategies. Designed to reduce chemical consumption, prevent corrosion, and ensure compliance, the training provides practical, site-relevant solutions to improve unit reliability and product quality.



Process Technology

Combustion, Fired Heater Operation & Flue Gas Treatment



Consultant / Trainer:

Dirk-Jan Treur & Louis Jacobs / Edwin Voeten

This course will provide an introduction into a wide range of topics related to traditional Fired Heaters, Heat Recovery Units and Boilers. Apart from combustion theory this course will also emphasize on the specific process side of the heater as well as on treatment of flue gasses. Control & Safeguarding, efficient operation, start-up/shut-down, emergencies and maintenance/inspection are subjects covered in this course. In addition, the trainers will introduce the participants into the latest developments on burners, transition to electrical heaters and the consequences for fired heaters when moving towards Carbon Capture.



Process Technology

Compressor Control

Consultant / Trainer:

Jan van Opstal

Petrogenium's *Compressor Control* training equips engineers and operators to optimize axial and centrifugal compressor performance across various drivers. The course covers surge prevention, capacity control, PID tuning, start-up and shutdown safety, and integration with safety standards like HAZOP and IEC-61511. With practical simulations and real-world case studies, participants gain the skills to reduce downtime, prevent failures, and ensure reliable, efficient compressor operation.



Process Technology

Distillation Technology



Consultant / Trainer:

Jari Marci & Charu Ehrenreich / Eugen Hofmann / Johan Jainudin

The **Petrogenium** Distillation course is the basic building block to provide awareness on the fundamentals of Distillation and its application in oil refining. The course will introduce the fundamentals and theory behind distillation as well as provide an overview of industrial distillation equipment. The key focus of the course is on the most important distillation processes of the (atmospheric) crude oil distillation unit and the vacuum distillation unit. Secondary applications like 2-cut splinters and stabilizers will also be addressed.



Process Technology

Energy & Utility Systems



Consultant / Trainer:

Jan Zander / Gilles Thevenet

In this **Petrogenium** course, the non-water treatment utilities subjects will be dealt with: Instrument Air, Steam distribution, Steam turbines, Cogeneration, Energy Management, Condensate collection, Fire Water, Fuel Systems, Dynamics and Reliability of utilities. In this course, theory and practical examples of what could go wrong are mixed. Effective strategies of “greening” the utilities will be dealt with as well. Typically this course is of most value to people working at a petrochemical site with a steam system (Refineries, Chemical & LNG Plants).

This two day course is usually paired with the Boiler and Cooling Water treatment course.

Utilities.... Full Steam Ahead (and as reliable and efficient as possible).



Process Technology

Ethylene Cracking Technology

Consultant / Trainer:

Anand Sundarrajan

This in-depth, practical training course delivers practical expertise on the complete ethylene plant—from cracking furnaces and recovery systems to compression, cold trains, hydrogenation, contaminants and decoking control, and key economic drivers. Covering essential aspects such as pyrolysis chemistry, furnace operation, quench and cosystems, cold box design, cracking gas compression, fractionation, hydrate control, support systems, and coke management, this four-day intensive program prepares engineers to design robust crackers, optimize operational performance, troubleshoot performance issues, and evaluate design bases for new projects.

Participants will leave with the technical insight needed to enhance plant reliability, maximize C2/C3 yield, minimize downtime, and drive economic efficiency for their ethylene units.



Process Technology

Fired Equipment

Consultant / Trainer:

Louis Jacobs & Dirk-Jan Treur / Edwin Voeten



This course delivers a comprehensive understanding of fired equipment—covering combustion theory, burner design, heat transfer (including two-phase flow), flue gas handling, and control and safeguarding systems. Participants also learn boiler and heat recovery unit applications, emission reduction techniques, tube inspection, failure mechanisms, and maintenance best practices. Through practical case studies and exercises, the course empowers teams to optimize efficiency, prevent failures, and transition to low-carbon technologies like electrification and carbon capture.



Process Technology

Fluid Catalytic Cracking



Consultant / Trainer:

Eelko Brevoord / King Yen Yung

Enhance your refining expertise with **Petrogenium's** *Fluid Catalytic Cracking (FCC)* course—designed for engineers seeking practical knowledge to optimize FCC unit performance. Learn core principles, catalyst technology, and advanced troubleshooting from industry experts to improve operational efficiency and profitability. Join this hands-on training to tackle common challenges in FCC and elevate your refinery's output.



Process Technology

Hydrocracking



Consultant / Trainer:

Bob Scheffer / John Baric

Optimize your hydrocracking operations with **Petrogenium's** comprehensive course designed for engineers and operational staff. Gain practical knowledge of reaction kinetics, catalyst technology, feedstock management, corrosion prevention, and troubleshooting. This training equips you to improve unit performance, tackle common challenges like catalyst deactivation, and optimize product yields—strengthen operational reliability and profitability.



Hydrotreating Fundamentals



Consultant / Trainer:

John Baric

Tackle Today's Hydrotreating Challenges with Proven Process Expertise

Hydrotreating remains a critical unit operation in modern refineries, directly influencing product compliance, unit uptime, and margin performance. Engineers tasked with designing, operating, or optimizing hydrotreaters face increasingly complex challenges—ranging from variable feedstocks and stringent sulphur specifications to catalyst deactivation and corrosion control.

This course equips professionals with the technical knowledge and practical tools required to optimize hydrotreating operations across Naphtha, Distillate, and VGO units.



Mastering Fluid Catalytic Cracking

Consultant / Trainer:

Steven Kalota

This course is ideal for personnel involved in refinery process engineering, FCC Unit operations, company internal technical services positions, and catalyst sales. Process engineers from design and construction companies and those providing services to Fluid Catalytic Cracking Units in the petroleum refining industry would also find this course beneficial.

This course provides an extensive and detailed knowledge of FCCU fundamentals through specifics. It provides the attendee with instruction and interaction with the trainer and other attendees to significantly improve their FCCU operations performance and stability, on-stream efficiency, mechanical reliability, operating margin, and profitability.



Process Technology

Petrochemicals Product Pricing Strategies

Consultant / Trainer:

Cherng Jih (CJ) Ho

The course will support you with in-depth understanding of different petrochemical pricing mechanisms, leveraging them as well as hedging tools. This comprehensive course will help you to deploy appropriate pricing strategies to grow profitability and mitigate pricing risks with a lot of practical hands-on information. No high-level consultancy speak, but the real thing!

This course can be given face-to-face or remotely. The presentations are interactive, supported with slides that also serve as a dedicated course manual (PDF file). The course includes interactive discussions and participant topics (on demand, aided by short videos, exercises and Q&A sessions). Learning assessment is through a written assessment (if required.)



Process Technology

Sulphur Recovery & Tail Gas Treating

Consultant / Trainer:

Frank Oehlschlaeger

Environmental regulations are tightening. Refinery efficiency is under pressure. The demand for skilled engineers and operators in Sulphur Recovery and Tail Gas Treating has never been higher. A single misstep in SRU operations can mean compliance violations, costly shutdowns, or even catastrophic failures.

This course is led by **Frank Oehlschlaeger**, industry veterans with 30+ years of real-world experience in process technology, gas treatment, and emissions control. Their expertise comes from working inside refineries and gas plants, tackling complex operational challenges first-hand, and they'll share practical, field-tested strategies you won't find in textbooks.



Process Technology

TEMA & HTRI Heat Exchanger Design & Cost Saving Management

Consultant / Trainer:

Bert Boxma

The course provides in-depth practical understanding of major proven heat exchanger technologies and “state of art” fouling mitigation technologies. Pro’s and Con’s of several heat exchanger types are explained with life operational examples. This course provides a good mix of theory and common practices using highly interactive case studies where attendees are encouraged to use in-house heat exchanger type selection software and rigorous design/rating world-class software from HTRI.



Process Technology

TEMA & HTRI Heat Exchanger Design & Cost Saving Masterclass

Consultant / Trainer:

Bert Boxma



This Masterclass can be tailored to a specific client’s needs. Built from a series of chosen modules, the Masterclass can provide an in depth practical understanding of major proven heat exchanger technologies and “state of art” fouling mitigation technologies. Pro’s and Con’s of several heat exchanger types can be explained with life operational examples. The Masterclass will mix theory and common practices using highly interactive case studies where attendees are encouraged to use in-house heat exchanger type selection software and rigorous design/rating world-class software from HTRI.



Thermal Cracking Process



Consultant / Trainer:
Jari Marci

Enhance Your Thermal Cracking Expertise

Petrogenium's *Thermal Cracking Process* course offers engineers and operations staff a comprehensive understanding of thermal conversion technologies, including visbreaking and Thermal Gasoil Units. Gain practical insights into feedstock properties, unit operations, equipment constraints, and troubleshooting techniques. The course also covers fuel oil blending and process economics, with an interactive clinic workshop to address real-world challenges. Ideal for professionals seeking to optimize unit performance and reliability.



Asset Management

Acquisition, Divestment & Joint Venture Masterclasses

Consultant / Trainer:
Julienne Baron

Every deal carries opportunity—and risk. These interactive two-day courses give you a clear framework to manage acquisitions, divestments, and joint ventures with confidence. Focusing on the full transaction lifecycle, you'll learn how to anticipate risks, ask the right questions, and apply best practices to protect and create value. Through case studies and practical insights, the masterclasses equip you to navigate complexity, avoid common pitfalls, and deliver successful outcomes across diverse transactions.



Asset Management

Atmospheric Storage Tanks

Consultant / Trainer:

Muthu Subramanian

Gain the essential knowledge to select, design, operate, and maintain atmospheric storage tanks with confidence. This three-day course covers design principles, safety considerations, corrosion mechanisms, inspection management, and repair strategies—empowering participants to optimize performance, extend asset life, and reduce lifecycle costs. Suitable for engineers, operators, and technical specialists across the refining and process industries, it blends practical insights with core engineering theory to support safe, efficient, and compliant operations.



Asset Management

Corrosion Control in Crude Units

Consultant / Trainer:

Henk Helle

Crude units seem simple and straightforward, but the feedstocks they process may not be so benign. This course aims to provide insight and guidance by systematically exploring the many complications and threats that may exist in crude units, or can be the unintended consequence of unfortunate choices. That, and the remedies against such threats.

Over many years the **Petrogenium** experts have collected and mobilized extensive expertise in the control of corrosion and fouling in crude units and associated equipment. The course is highly interactive and should be valuable for staff at all refineries, especially for those working in refineries with perennial corrosion issues.



Asset Management

Corrosion Control in Refineries & Risk-Based Integrity Management

Consultant / Trainer:

Henk Helle

The **Petrogenium** course on *Corrosion Control and Risk-based Integrity Management* provides knowledge and background of the corrosion threats that may exist in refineries and it gives guidelines how to design, quantify and organize the response to those threats. The course will deal with all the main refinery processes: crude & vacuum, hydroprocessing, FCCU, amine, SWS and Claus units as well as the role of feedstock in these units.



Asset Management

Corrosion Management in the Oil & Gas Industry

Consultant / Trainer:

Ali Morshed



Corrosion in the oil and gas industry is more than just an engineering challenge—it's a major threat to asset integrity, safety, and operational efficiency. Traditional approaches often fall short, leading to costly failures and unplanned downtime. This *Corrosion Management Training* course equips you with modern, risk-based strategies to enhance asset integrity and preempt corrosion failures before they occur. Learn how to optimize costs, implement best-in-class corrosion control measures, and safeguard your operations.



Asset Management

Defect Elimination

Consultant / Trainer:
Francisco Amarra

Defect elimination is often seen as the little brother of root cause analysis. Or, is it? While RCA efforts are usually prioritized around big show stoppers — the most critical defects threatening plant operations — RCA has one fundamental flaw: it is reactive. Defect elimination involves a different team and a different culture in a parallel, supplemental effort to improve asset productivity by reducing the cumulative impact of hundreds, if not thousands, of minor defects before they grow bigger. In this sense, DE is the smarter, faster little brother of RCA.

This training course provides a unique, structured approach for a defect elimination culture to take hold within an organization.



Asset Management

Extending Turnaround Interval Workshop

Consultant / Trainer:
Francisco Amarra

The frequency and duration of turnarounds (TA) can make the difference between healthy profits and painful losses for facilities like oil refineries. TA frequency depends on the performance of critical equipment, and once performance drops below acceptable levels, a turnaround becomes inevitable.

This workshop helps organizations assess and reduce TA frequency by systematically reviewing historical performance, deterioration rates, operational practices, spares, and more.

Duration varies based on the number of critical equipment analyzed, typically ranging from 2 to 6 weeks.



Asset Management

Introduction to Reliability for Engineers

Consultant / Trainer:
Francisco Amarra

Unexpected equipment failures. Costly downtime. Maintenance decisions based on guesswork. Sound familiar? In today's competitive industrial landscape, reliability isn't just an option—it's a necessity.

This course will equip you with the principles and modern techniques of maintenance and reliability, helping you shift from reactive fixes to proactive strategies. Learn how to extend equipment life, mitigate failures, and optimize maintenance costs using proven methodologies like RCM, IPF, and RBI.

Join industry experts with 30+ years of hands-on experience and gain the skills to transform your approach to reliability.



Asset Management

Introduction to Reliability for Managers

Consultant / Trainer:
Francisco Amarra

This is a focused one-day (6–8 hr) training designed for managers and executives across maintenance, operations, engineering, and support functions. It provides a clear overview of reliability principles, failure patterns, maintenance policies, and reliability-centered maintenance (RCM), using real-world case studies to demonstrate practical application. Tailored to different experience levels and client sites, the course empowers decision-makers to adopt proactive strategies, optimize asset uptime, and ultimately enhance organizational performance.



Asset Management

M&A Integration Masterclasses

Consultant / Trainer:

Julienne Baron

Mergers and acquisitions can create significant growth—but too often, deals fail to deliver their full potential due to poor integration. This two-day course provides a practical framework to plan and manage integrations effectively, helping you protect value and achieve results. Through real case studies and interactive sessions, you'll learn how to align stakeholders, manage risks, and turn complex challenges into successful outcomes.



Asset Management

Maintenance Planning & Scheduling

Consultant / Trainer:

Francisco Amarra

Petrogenium's five-day onsite course equips maintenance planners and schedulers with proven reliability-based techniques and SAP Plant Maintenance (PM) tools to enhance workflow prioritization, optimize workpack development, and apply Critical Path Method (CPM) scheduling effectively. Through hands-on case studies and KPI driven analysis, participants learn to enhance operational efficiency, minimize downtime, and strengthen asset reliability across maintenance, operations, and support functions.



Asset Management

Microbiologically Influenced Corrosion (in the Oil & Gas Industry)



Consultant / Trainer:
Ali Morshed

Engineers in oil and gas face growing challenges in managing asset integrity under harsh conditions, especially with undetected microbial activity causing localized corrosion in critical systems.

The lack of standardized monitoring and mitigation strategies increases risks and operational costs. Corrosion management is often poorly integrated into broader asset integrity frameworks, and delays in identifying root causes are worsened by inconsistent use of modern microbial analysis methods.

Additionally, limited understanding of design and material selection impacts proactive prevention efforts.



Asset Management

Root Cause Failure Analysis

Consultant / Trainer:
Francisco Amarra

Equipment failure is a recurrent industry problem and its mitigation is often a case of trial-and-error, even for experienced plant engineers – especially those engineers who presume common sense combined with rudimentary failure analysis skills may sail them through, only to meet the same problem soon again, perhaps in an evolved form. To overcome those shortcomings, this novel *Root Cause Failure Analysis (RCFA)* course reinforces traditional RCA methods with selected lessons from systems thinking, reliability engineering, and cognitive psychology, among other domains, to provide a deep, unique insight into how equipment failures and their root causes may be better understood, if not entirely eliminated.



Asset Management

Routine Maintenance Work Process Development Workshop

Consultant / Trainer:
Francisco Amarra

Some organizations feel that they don't have an efficient work process for their routine maintenance system. This **Petrogenium** *Workshop for Routine Maintenance Work Process Development* delves into the issues that plague the maintenance and operations organizations with regards to a best-in-class work process.

The following are the pre-requisites for this course:

- A documented work order/work prioritization process and in place
- SAP-PM in place
- Company Risk Matrix in place

This workshop is conducted for 5 days on client site.



Asset Management

Structured Problem Solving & Root Cause Analysis (RCA)

Consultant / Trainer:
Peter Bitter



The **Petrogenium** *Structured Problem Solving & Root Cause Analysis (RCA)* course is a customized, high-intensity workshop to understand and fix operational issues and find root causes of incidents effectively. **Petrogenium** shares its operating experience and best practices to help identify and solve incidents and resolve operational problems using a tried and tested methodology.



Asset Management

Technical Integrity Management in Refineries

Consultant / Trainer:

Henk Helle

Refinery owners increasingly recognize that strong Asset Integrity Management—particularly Technical Integrity—is key to operational excellence. **Petrogenium's** *Technical Integrity Management in Refineries* course offers practical guidance by exploring threats to refinery units and how to manage them through Risk-Based Integrity Management, Compliance, and Management of Change.

Built on years of field experience, this interactive course is especially valuable for staff at refineries facing ongoing integrity challenges.



Asset Management

Well, Reservoir & Facility Management

Consultant / Trainer:

Frans ter Laan

How can production be increased by 10-20%? How can reserves be increased? How can costs be reduced? How can performance be optimized to minimize GHG emissions? The **Petrogenium** *Advanced WRFM* course is an interactive course for Upstream oil and gas companies who want to maximize the value of their assets. The WRFM course will provide, from reservoir to sales point, industry best practices for teams to understand that, when followed, will deliver WRFM opportunities that maximize an asset value, typically against marginal additional costs or resources. The course will cover all key activities and resources required for performing WRFM successfully and will show how to close the gap to the Asset's potential. The course is highly interactive with several exercises that can be tailored to the asset challenges.



Project Management

Creating and Updating a Field Development Plan Execution Strategy



Consultant / Trainer:

Laurent Spring

The **Petrogenium** *Field Development Plan Execution Strategy* course will offer practical guidance to participants on how to create and update this business-critical document. Too often, Oil & Gas companies undertake FDP studies under a stage gate process, starting typically in the ASSESS Stage, where the technical team has the task to develop a full life-cycle development plan whilst carving out a smaller project scope for start-up. Often, this results in an FDP document that is very long on subsurface descriptions and very short on full life-cycle field development logic and sectionalization. This approach dissociates FDP studies from Projects by approving the FDP execution Strategy prior to initiating projects.



Project Management

Managing Capital Projects in the Front-End

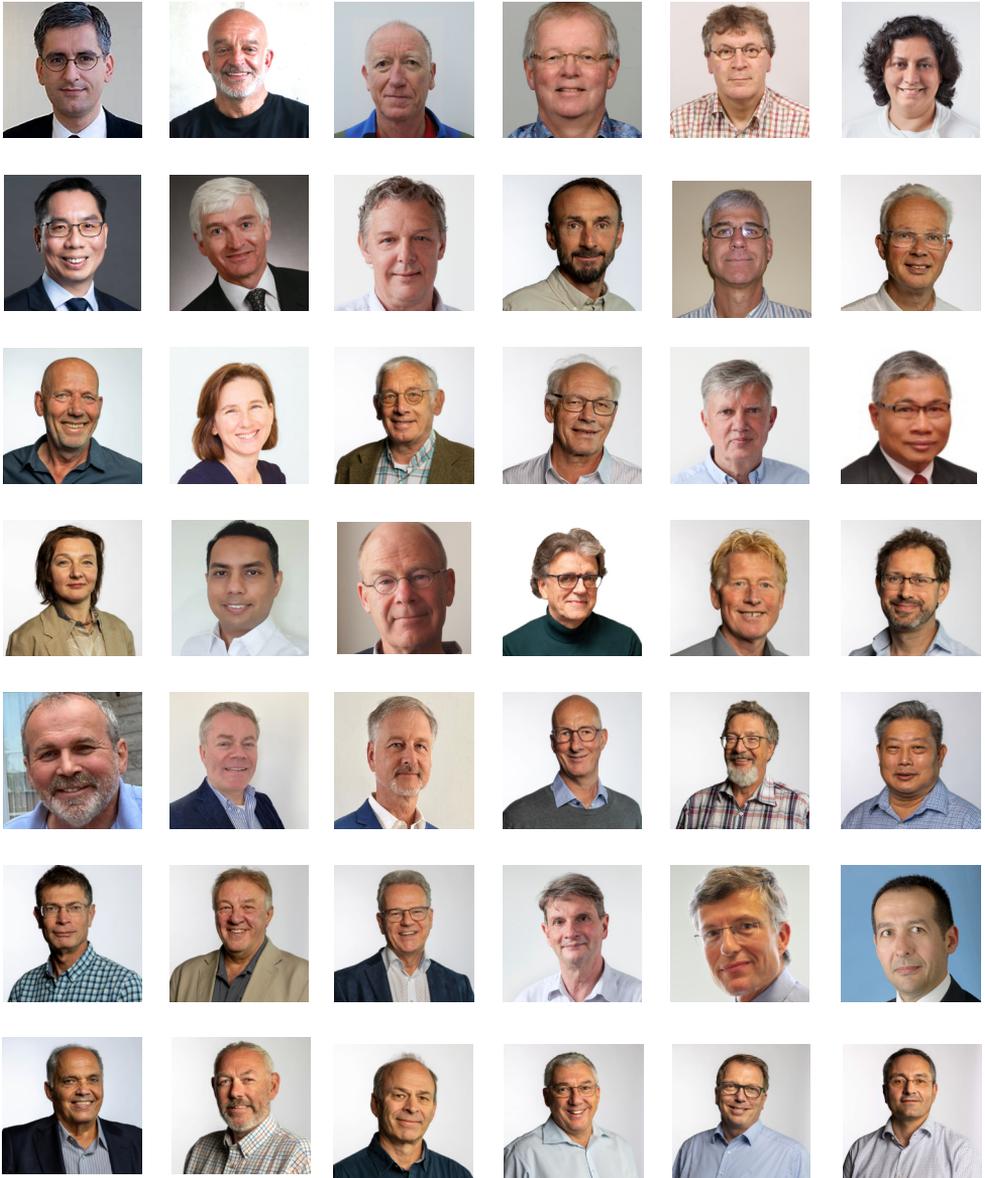


Consultant / Trainer:

Laurent Spring & Stuart Arnot

The **Petrogenium** *Managing Capital Projects in the Front-End* course will offer practical guidance to participants on how to manage and approve multi-disciplinary and multifunctional projects in the front-end, from project kick-off to Final Investment Decision. Application of this course will enable participants to effectively reduce the project cycles, delivery delays and increased costs that have negative impacts on overall economics and resulting in loss of credibility in delivering projects as per promises. This objective is achieved through the implementation of industry-leading practices in Front-End Loading, Integrated Project Management, and Governance decision-making.





Because Experience Matters