International Sustainable Chemistry Collaborative Centre

Online Training Chemical Leasing Handout

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1. Introduction

In the face of growing environmental challenges, resource constraints, and health concerns, the chemical industry is under increasing pressure to transition towards more sustainable business models. One such model is Chemical Leasing (ChL) – an innovative, service-oriented approach that redefines the way chemicals are purchased and used. Instead of selling chemicals by volume, Chemical Leasing shifts the focus to the function or performance of the chemical, promoting efficiency, cost-effectiveness, and environmental protection.

Chemical Leasing encourages suppliers to provide not only the substance itself but also technical expertise and process optimization services. Customers, on the other hand, pay based on measurable outcomes—such as the number of items cleaned, the square meters coated, or the volume of purified water—rather than the quantity of chemicals consumed. This alignment of interests incentivizes all parties to reduce consumption, minimize waste, and improve safety across the supply chain.

This training is grounded in the vision of Sustainable Chemistry, as promoted by the International Sustainable Chemistry Collaborative Centre (ISC3). According to ISC3, sustainable chemistry is not only about the chemistry itself, but also about transforming entire value chains to foster innovation, reduce environmental burdens, and support societal well-being.

Chemical Leasing fits perfectly within this broader sustainability framework. It fosters responsible chemical management, supports circular economy strategies, and aligns with international agendas like the UN Sustainable Development Goals (SDGs), particularly those addressing responsible consumption (SDG 12), clean water and sanitation (SDG 6), and industry innovation (SDG 9).

Through this training, participants will explore the principles, implementation process, and benefits of Chemical Leasing, while also gaining a deeper understanding of how it supports the systemic transformation towards sustainable chemistry on a global scale.

2. Content Overview

This Chemical Leasing training provides a structured and practical introduction to one of the most innovative service-based business models in sustainable chemical management. The course is designed to build a deep understanding of the concept, its practical implementation, and its alignment with international sustainability goals.

The training is organized into six interconnected modules that combine theoretical foundations, policy context, implementation strategies, and real-world case studies. Each module builds upon the previous one to offer a coherent learning journey for consultants, suppliers, industry professionals, and other stakeholders interested in promoting responsible and efficient chemical use.

The training is structured into six main modules:
Module 1: Introduction to Chemical Leasing
Module 2: The Chemical Leasing Concept and Business Models
Module 3: Policy and Sustainability Context
Module 4: Implementing Chemical Leasing (Phases and Tools)
Module 5: Quantifying Benefits and Sustainability Indicators
Module 6: Case Study: SAFECHEM Implementation anp Lessons Learned

3. Learning Objectives

General Objectives:

- Understand the principles and benefits of Chemical Leasing.
- Be able to identify suitable applications and partners
- Develop skills for project planning, implementation, and monitoring.
- Learn to apply sustainability indicators and measure project success.
- Recognize policy support mechanisms and international frameworks.

4. Target Audience

- Environmental and sustainability consultants
- Chemical suppliers and distributors
- Industrial production managers

-Chemical users (with a focus on purchase and strategy departments)
- Government and NGO representatives working in cleaner production
- Academia and researchers in circular economy and green and sustainable chemistry

5. Course content

The **Chemical Leasing Training** is structured around six key modules, designed to offer participants both a conceptual and practical foundation for implementing this service-oriented business model. Each module integrates theoretical input, real-world examples, interactive exercises, and tools for application. The course promotes critical thinking, collaborative problem-solving, and the adoption of sustainability-oriented solutions in the chemical value chain.

Module title	Summary
Module 1: . Introduction to Chemical Leasing	This module introduces participants to the concept of Chemical Leasing, the structure of the

	training, and its relevance in modern sustainable chemical management. - Overview of the training agenda and methodology - Background and rationale of Chemical Leasing - Training goals and expected outcomes
Module 2: Policy context	This module connects Chemical Leasing to global policy instruments such as GFC, REACH, Circular Economy strategies, and the UN Sustainable Development Goals. - Alignment with international frameworks (REACH, GFC, Responsible Care) - Integration with Circular Economy and Green Economy strategies - Contribution to the UN Sustainable Development Goals (SDGs) - Sustainability criteria for Chemical Leasing
Module 3: How to set up Chemical Leasing	A step-by-step breakdown of the implementation phases of a Chemical Leasing project, from initial engagement to monitoring and evaluation, including tools and team building. - Three-phase implementation process: 1. Preparatory phase 2. Implementation phase 3. Monitoring phase - Stakeholder mapping and engagement - Designing contracts and defining payment units - Internal capacity building and staff training
Module 4: Quantification of Benefits	Participants will learn how to use sustainability indicators and the SMART 5 tool to quantify economic, environmental, and social benefits of Chemical Leasing projects.

	- SMART 5 Tool for monitoring and evaluation - Key performance indicators: economic, environmental, social - Data collection and impact assessment - Application for the Global Chemical Leasing Award
Module 5: Case Study	A real-life application of Chemical Leasing is reviewed, including the business context, project steps, and the actual savings and benefits achieved by the participating companies. - Real-life example of implementation in the metal parts cleaning sector - Setup, monitoring, and achieved results - Discussion of economic, environmental, and social benefits - Lessons learned and replicability