



International
PtX Hub



**Sustainable Chemistry (SC)
&
Power-to-Chemicals (PtC)**

**INTERNATIONAL SUSTAINABLE
CHEMISTRY COLLABORATIVE
CENTRE (ISC3)**

**INTERNATIONAL POWER-TO-X
(PTX)-HUB**

Training: SC and PtC

Time: 8h: 2 day a 4 hours.

Scope and participants:

25 professionals (RE and PtX)

- Teachers for engineering, chemistry, energy and renewables
- decision makers
- industry / associations

Objectives:

- Awareness Raising and deep dive into Sustainable Chemistry, focus on PtC.
- Guidance for countries and stakeholders to achieve Sustainable PtC.

Results:

At the end of the training, participants will have:

- key terminology related to SC,
- an overview over the most important PtC products: ammonia, methanol, cosmetics and plastics;
- critical thinking about the processes related to energy and chemistry and
- their possible side effects



Content:

Day 1: Sustainable Chemistry

- Global Megatrends and SDGs
- Production, use and trade of chemicals
- Conventions and regulations
- Social Dimension
- Green Chemistry
- Circular economy
- 10 Key Characteristics of SC
- New Business Models
- (Sustainable Chemistry and Power-to-X)
- (Side effects, unattended issues)

Day 2: Power-to-Chemicals (PtC)

- Introduction to Power-to-X
- Input sources: energy, water, CO2, metals
- Power-to-Ammonia
- Power-to-Methanol
- Power-to-Fuels
- Power-to-Solids (Plastics)
- Other: personal care products