

SPECIALIZED COURSE
FROM LAB TO DEMO:
SAFE AND
SUSTAINABLE
SCALING

31 March - 03 APRIL 2026

GHENT | ZEBRASTRAAT



essenscia
PROCESS
ACADEMY

DEAR MEMBER,

essenscia herewith presents the details of the Specialized Course “From Lab to Demo: Safe and Sustainable Scaling” organized by its Process Academy, in collaboration with Ghent University.

For additional information, please contact Mr. Geert Boogaerts (+32 476 906 663 | gboogaerts@essenscia.be).

The academic coordination will be supervised by Prof. Dr. Ir. Paul Van Steenberghe (Laboratory of Chemical Technology, EA11, UGent).

To register, [please click here](#).

Aim

This 4-day Doctoral School offers PhD students, postdocs and professionals from the industry an integrated approach, from process safety at lab-scale via a pilot plant and a demonstration plant towards industrial-scale production. Participants are provided with safety concepts that are essential for their career development and the safety of their operations. The course focuses on chemical safety in laboratories and the scale-up of chemical experiments towards pilot plants and industrial-scale pilot installations for real-life production.

Target Audience

The target audience includes PhD students, postdocs, process safety professionals, R&D specialists and those responsible for the safety of scale-up activities, pilot installations and demonstration plants. The lectures are taught by specialists in their discipline.

WITH THE SUPPORT OF



Program

- ✓ The first day starts with a theoretical explanation of intrinsic chemical hazards and risks at lab-scale, including the relevant aspects of the REACH regulation relevant for research to ensure life cycle safety.
- ✓ On the second day, we visit Eastman to see a real example of industrial-scale operations. The site visit focuses on approaches and methodologies for safe and sustainable scaling, with a particular emphasis on safety of pilot plants and their influence on final upscaling.
- ✓ The third day features a session on scale-up management from a technical, cost, schedule and quality perspective followed by the safety and risk analysis in transferring from lab to pilot and from pilot to demo scale. Moreover, an extended explosion demonstration emphasizes the utmost importance of explosion safety.
- ✓ On the fourth day, we visit BlueChem, an incubator supporting real-life realizations of start-ups with a chemical focus. This day also covers the topic of Safe & Sustainable by Design and the impact of this framework on the innovation process

HOST CITY
Ghent

LOCATION
Zebrstraat 33, 9000 Ghent

LOGISTICS

A bus will bring participants to outside venues for site visits and workshops on day 2 and 4

REFRESHMENTS

8am welcome coffee
2-course business lunch

REGISTRATION FEE

€2200 members / €2700 non-members

REGISTRATION LINK

To register, [please click here](#)



DAY TO DAY OVERVIEW OF THE PROGRAM:
08:30 – 17:00

DAY 01



TUESDAY 31 MARCH 2026

Safety in the R&D laboratory



Introduction

Geert Boogaerts, Director Safety & Sustainability, essenscia

Overview of the program and the importance of an integrated safety approach



Chemical product safety

Tine Cattoor, Director Product Policy, essenscia

Product safety & REACH applied in an R&D environment



Safety of chemical molecules

Wim Deraut, R&D Manager Chemical Process Development, Agfa Materials

Integrated safety in a laboratory environment

DAY 02



WEDNESDAY 01 APRIL 2026

Safety in pilot installations



Safe and sustainable scaling at Eastman

Eastman

**a bus will take the class from Ghent to the site and back*

Presentations and visit of the plant



DAY TO DAY OVERVIEW OF THE PROGRAM:
08:30 – 17:00

DAY 03



THURSDAY 02 APRIL 2026

Safety in pilot installations



Management from a technical, cost, schedule, and quality perspective

PhD. Geert Reyniers, Manager Process and Technology, and

MSc. Isabelle De Ketelaere, Project Director, Worley

When not balanced: No success.



Safety and risk analysis in transferring from lab to pilot and from pilot to demo scale

PhD. Geert Reyniers, Manager Process and Technology, and

MSc. Isabelle De Ketelaere, Project Director, Worley

The art to not forget: did we catch all the risks?

Real-life Explosion Experiments

Introduction



Geert Boogaerts, Director Process Safety and Sustainability, essenscia

Safety as a starting point of our operations



Explosion demonstrations

Prof. Filip Verplaetsen, Managing Director, and

Frederik Norman, Explosion Safety Consultant, ADINEX

Vapour pressure, UEL, flash point,

Heavy gases, gases lighter than air,

Physical Explosion, Implosion, Chemical Explosion, BLEVE, Internal Explosion,

Flame Propagation in a Tube,

Pressure Relief, Pressure build-up, etc.



Networking reception



DAY TO DAY OVERVIEW OF THE PROGRAM:
08:30 – 17:00

DAY 04



FRIDAY 03 APRIL 2026

From idea to industry: BlueChem incubator for sustainable chemistry



Ecosystems for scaling

BlueChem, Olieweg 95, 2020 Antwerpen**a bus will take the class from Ghent to the site and back*

Introduction to BlueChem

Liesbet Boogaerts, Managing Director, BlueChem

What is it about?



Innovation strategy of the chemical & life sciences industry

Tine Schaerlaekens, Managing Director, Catalisti

On which innovations to focus?



Safe & Sustainable by Design

Prof. Dr. Mariya Edeleva, Professor, Center for Polymer and Material Technologies (CPMT),
Department of Materials, Textiles and Chemical Engineering (MaTCh), University of Ghent

From concept to implementation



Scaling Innovations

Steven Peleman, Founder, Triple-Helix**Pieter Billen**, Professor, University of Antwerp

Solving the technical and market puzzle



Translating ambitions into scalable solutions

Kurt Du Mong, CEO, Zeopore

Introducing the next generation of accessible (mesoporous) zeolite catalysts



Networking reception

