TOOLS AND METHODS FOR BIOREFINERY DESIGN AND EVALUATION

School of Engineering, Universidade de Santiago de Compostela (Spain), 3-4th July 2025

CONTENT AND GOALS

This training school on **Tools and methods for biorefinery design and evaluation** is organized by University of Santiago de Compostela (USC) and the Agricultural Cooperatives Federation of Catalonia (FCAC) in the framework of Horizon Europe project AGRILOOP. It provides a practical introduction to technical design and environmental assessment in biorefinery development. Participants will work activity through hands-on session with the user-friendly software tool for early stage biorefinery design with **OUTDOOR**, and work in teams to solve and present case studies. OUTDOOR is based on Python and counts with a graphical interface to facilitate its use by non-experts. The program includes expert talks and discussions on key challenges in agrifood waste and biomass valorization. Designed for researchers and professionals, this course offers a structured approach to decision-making in biorefinery design.

TENTATIVE PROGRAM

Thursday 3rd July

09:00 Welcome to the participants

Session 1: Challenges and modelling tools in Biorefinery design – 9:30-11:30

Session 2: Hands-on session (bring your own laptop) on OUTDOOR software for biorefinery design – 12:00-15:30 (including lunch break)

Session 3: Team work on case-studies for biorefinery design – 15:30 – 18:00 (including coffee break)

20:30 Group networking dinner

Friday 4th July

Session 4: Ensuring the benefits for the environment and the agricultural sector – 9:00 – 11:00

Session 5: Team work on case-studies for biorefinery design – 11:30 – 13:00

Session 6: Team preparation and oral presentations of case-study solutions– 14:00 – 16:00

16:00 Last remarks and farewell

External lecturers: Mariano Martín (University of Salamanca), Krist V. Gernaey (Technical University of Denmark), Gemma Eibes (University of Santiago de Compostela)
Project AGRILOOP lecturers: Miguel Mauricio Iglesias (chair), Almudena Hospido (co-chair), Màrius Simon, Diana Molina, Isaac Leis

If you are interested in attending, send an e-mail with a one-page motivation letter to miguel.mauricio@usc.es (Subject: AGRILOOP Training School) before 16th May 2025. No prior experience on Python is required, although some programming experience is an advantage. A certificate of attendance will be delivered to all participants