

# UE Green chemistry

 ECTS  
3 credits

 Component  
UFR Chimie-  
Biologie

 Semester  
Tous les ans

- > **Teaching language(s):** English
- > **Open to exchange students:** No

## Presentation

### Description

Green chemistry is a major evolution in organic chemistry for more efficient, sustainable transformations while minimizing by-products, solvents and waste. In this course, the 12 principles of green chemistry will be presented and illustrated through dedicated chapters to: solvents, catalysis, biotransformation, flow chemistry, organocatalysis and multicomponent and cascade reactions.

Details:

- I – Introduction: History, E-factor, 12 principles
- II- Solvents: greener solvent, no solvent, water, supercritical CO<sub>2</sub>, Ionic liquids,
- III- Biocatalysis – Biomass
- IV- Solids supported reaction/reagents, flow chemistry
- V- Microwaves
- VI- Multicomponent and cascade reactions
- VII- Organocatalysis

### Course parts

CM	Lectures (CM)	36h
TD	Tutorials (TD)	4,5h

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## Recommended prerequisites

Prerequisites: Organic chemistry

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## Skills

Skills: Knowledge of the principles and challenges of green chemistry, with solutions and evolution of the methods and technics for better sustainability of chemical processes.

## Useful info

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### Contacts

Program director

Jean Francois Poisson

✉ [Jean-Francois.Poisson@univ-grenoble-alpes.fr](mailto:Jean-Francois.Poisson@univ-grenoble-alpes.fr)

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### Campus

› [Grenoble - University campus](#)