

**Course offered for the PhD program
in Civil, Chemical and Environmental Engineering
Curriculum in Chemical, Material and Process Engineering – a.a. 2022/2023**

(possibility of participation for students in other PhD cycles or other PhD courses)

1. Title

Contaminants of emerging concern (CEC) in the environment: origin, occurrence, and removal through advanced treatment technologies.

2. Course Description

The course is aimed to introduce the Contaminants of emerging concern (CEC) and their occurrence in the environment. CEC encompasses a broad group of compounds that consists of several classes such as pharmaceutical and personal care products, pesticides, and microplastics. Recent advances in treatment technologies for removing CEC will be presented and discussed.

A particular focus will be posed on the group of per- and polyfluoroalkyl substances (PFAS) recently labelled as “forever chemicals” due to their persistence and mobility in the environment as well as their toxicity for human and ecosystems. Moreover, the contamination of PFAS in the Veneto region will be introduced as a case study.

3. Course Organization

The course is based on frontal lessons.

4. Teachers

Prof. Gallo Michela and Dr. Gagliano Erica

5. Duration and credits

The course (15 hours) will consist of frontal lessons (3 credits).

6. Activation mode and teaching period

The course be held during in May 2023 and the detailed calendar of the lessons will be given to the registered students.

7. Deadline for registration

The students are advised to inform the teachers about the registration by sending an e-mail to: erica.gagliano@unige.it.

8. Final exam

The final exam consists of a written test (multiple-choice test and open-answer questions).