Course offered for the PhD program
in Civil, Chemical and Environmental Engineering
Curriculum in Chemical, Material and Process Engineering –
a.a. 2022/2023 (cycles XXXVIII, XXXVII and XXXVI)

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

1. Title

Thermo-chemical valorisation of waste materials

2. Course Description

The course aims at providing notions to the future PhD students on the characterization and valorisation of waste materials and their sub-products.
The course will include the following topics:

- thermal and physico-chemical characterization of waste;
- thermo-chemical conversions of waste: pyrolysis, gasification and incineration;
- valorisation of sub-products: char and ashes;
- laboratory activities: simulation of thermo-chemical processes using Aspen Plus

3. Course Organization

The course, organized in a single module, will consist of classroom lessons and practical computer laboratory training.

4. Teacher

The course teacher will be Dr. Cristina Moliner

5. Duration and credits

The course (15 hours) will consist of 4 lessons, 3 hours each, and a 3 hours tutorial in the computer laboratory, for a total of 3 credits.

6. Activation mode and teaching period

The course will be held yearly if at least one student will be registered by simple contact with the teacher by email. The course will be held in January/February 2023. The exact dates of the lessons will be confirmed about one month before the beginning of the course.

7. Deadline for registration

Registration to the course must be made before December 31st, 2022. Students are asked to inform teachers by e-mail (converti@unige.it; alessandro.casazza@unige.it) about their registration.

8. Final exam

The final exam will consist in an interview on the topics covered by the course. The students are requested to contact the teacher by email to establish the date of the exam.