Course offered for the PhD program
in Civil, Chemical and Environmental Engineering
Curriculum in Chemical, Material and Process Engineering –
a.a. 2019/2020 (cycles XXXV, XXXIV and XXXIII)

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

1. Title
Processes for liquid and gaseous biofuels production

2. Course Description
The course aims at providing notions to the future PhD students on the production of biofuels.
The course will include the following topics:
- biofuels: description of the main biofuels and food vs. fuels debate;
- processes for the production of bioethanol: alcoholic fermentation for the production of bioethanol;
- processes for the production of biodiesel: transesterification of vegetable oils and pyrolysis of non-homogeneous matrices for the production of biodiesel and liquid and gaseous biofuels;
- biogas from anaerobic digestion: production of bio-methane and carbon dioxide removal by phytodepuration.
- laboratory activities: realization in the Biotechnology laboratory of one of the processes analyzed during the course.

3. Course Organization
The course, organized into a single module, will consist of classroom lessons and practical laboratory training.

4. Teacher
The course teachers will be Prof. Attilio Converti and Dr. Alessandro A. Casazza. Dr. Casazza will be involved in practical laboratory training.

5. Duration and credits
The course (16 hours) will consist of 4 lessons, 3 hours each, and a 4 hours tutorial in the 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 both teachers by email. The course will be held on June 2020. 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 March 20th, 2020. Students are requested 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 both teachers by email to establish the date of the exam.