The Doctoral Programme in Industrial Chemistry and Chemical Engineering (CII) is designed for students aiming in getting deep expertise in research activities as well as in the development and design of chemical processes. Courses are held at Milano Leonardo Campus.

The goal of the Doctoral Programme in Industrial Chemistry and Chemical Engineering is that of forming high professional characterized by a particular versatility and flexibility. This target can be achieved through a solid scientific preparation on a few key topics, such as transport phenomena, physical chemistry and chemistry.

The development of an original research work on a specific thematic topic, which is a relevant part of the Doctoral Programme, completes the specialized formation of the Research Doctor. As examples, the specific research activity will be focused on the following topics:

- methods and criteria through which chemical processes and industrial plants are designed and run, including also the selection of feedstocks, the economy of the process, aspects related to safety and environment;
- design and control of each unit operation and of the global plant, analyzed by computer-based mathematical modeling and simulation methods;
- the study of processes on a microscopic scale, by analyzing the thermodynamic and kinetic aspects of the process and by using, among others, specific tools for electrochemical and material science problems;
- synthesis, characterization, transformation technology and application of substances;
- design of chemical and/or biological material (synthesis, transformation, use);
- characterization of products and materials.

The PhD is typically structured in three year activity, but a fourth year is also possible.
PhD courses for thirty credits must be achieved, but the PhD Board can decide to assign some extra credits to a student in case of lack of specific knowledge. The courses are offered by the PhD school or can be followed in other universities or in summer schools, by previous authorization of PhD Board. Reference people for the different research areas can be found among the PhD Board members.

The research themes that characterize the Doctoral Programme in Industrial Chemistry and Chemical Engineering are directly related to numerous industrial sectors. Accordingly, the Research Doctors will be able to find a natural location in research institutes and universities, and companies, operating in the fields of research, design, production, formation, control and consulting services.

Students holding “Laurea Magistrale” degrees in Chemical Engineering, Materials Engineering, Industrial Chemistry and Chemistry, Safety and Prevention Engineering. The programme is also open to graduates in other scientific faculties.

Scholarships comes from public and private funds. Those coming from industries and some of those from Ministries have specific areas of interest.

For further information, please visit the following web site: www.dottorato.polimi.it or contact the School of Doctoral Programmes - Politecnico di Milano at phdschool@polimi.it.

For further information on specific aspects of the course and curricula, visit the following web site: http://phd.chem.polimi.it or send an e-mail to daniela.rignanese@polimi.it