

Chemical Engineering

General picture of the programme structure

The Aalto Doctoral Programme in Chemical Engineering was established on 1 January 2011 by a decision of the Aalto University's President. All doctoral candidates of the School of Chemical Engineering belong to the Doctoral Programme.

The Aalto Doctoral Programme in Chemical Engineering comprises 7 fields of research. The Programme is a joint effort of the Departments of Bioproducts and Biosystems, Chemical and Metallurgical Engineering, and Chemistry and Materials Science. The Doctoral Programme is managed by the director of doctoral programme who also develops and coordinates doctoral education in the School of Chemical Engineering. The School also has a Doctoral Programme Committee that is chaired by the director of doctoral programme.

The aim of doctoral studies

The purpose of doctoral studies is for the student to acquire more profound scientific knowledge and skills in scientific research and their practical application than is provided by master's degree studies. The key element in doctoral studies is to acquire the skills required in research and the application of research results. High-level research is a prerequisite for doctoral studies and researcher training.

The aim of doctoral studies is that the student:

1. acquires profound knowledge of his or her research field and its social significance and achieves the necessary skills to independently and critically apply the scientific methods of the respective field and produce new scientific knowledge;
2. acquires thorough knowledge of the development, basic problems and research methods of his or her research field; and
3. achieves a sufficient level of knowledge in the theory of science and other fields related to his or her research field to enable him or her to follow their development.

See the [Youtube video of doctoral candidate from the School of Chemical Technology](#).

Story of research project: [loncell](#) and another video of actual [research work with cellulose from birch wood and ionic liquid](#).

Degrees

A doctoral candidate is a student pursuing further studies after having attained a Master's degree. The postgraduate degrees offered by the Aalto University schools of technology are:

- Licentiate of Science (Technology)
- Doctor of Science (Technology). The doctoral degree may be taken directly after the master's degree; it is not compulsory to take the licentiate degree first.

The Licentiate of Technology degree takes an estimated 2 years to complete, while the Doctor of Science (Technology) degree takes approximately 4 years. A postgraduate degree comprises theoretical studies and research work. The emphasis is on scientific research.