**Study program “Biotechnology”**

**1st level professional higher education**

**Study direction:** Chemistry, chemistry technologies and biotechnology

**Acquired qualification:** Biotechnologist

**Program volume:** 100 KP or 150 ECTS

**Program implementation form:** full-time studies

**Duration of studies:** 2,5 years (5 semester)

**Study language:** latvian

**Previous education required:** secondary or vocational

After studies in Olaine Technology College it is possible to continue studies in University of Latvia, Riga Technical University, Rezekne Academy of Technologies, as well as in foreign higher education institutions.

**Program annotation**

Program is being implemented from 2003/2004 study year. Olaine Technology College is the only educational institution in Latvia, which implements the 1st level professional higher education study program “Biotechnology” and prepares qualified specialists – biotechnologists.

Program designed, taking into account demand for biotechnology – specialists of perspective branch of science in the future.

The 1st level professional higher education study program “Biotechnology” graduates are able qualitatively perform biotechnologist duties, which are specified in the professional standard “Biotechnologist”.

Study process is organized, so that students in two years learn theoretical knowledge in general and professional study courses, work in college laboratories and undergo the first practice (6 KP) in production companies and in the 5th semester undergo qualification practice (10 KP) in production companies, as well as develop and defend a qualification paper.

Practices provided in Latvian and foreign production companies.

**Aim of the program**

Aim of the study program is to provide an opportunity to obtain the first level professional higher education and to prepare knowledgable specialists – professionals in the field of biotechnology.

**Tasks of the program**

Theoretically and practically to teach biotechnology specialists, able to show comprehensive and specialized knowledge and skills in facts, theory, regularities and technologies of professional field.

To promote student personality development according to the demand of employer in the field, to develop necessary in professional activities character traits, such as sense of responsibility, accuracy, susceptibility, creative and critical thinking.

To develop skills in work planning and organizing, good communication skills and team work.

To carry out applied research.

To ensure the quality of education at the level, in order to allow continue studies in top level programs.

**Professional study courses to be acquired in the program**

Industrial biotechnology, food biotechnology, environmental biotechnology, cell biology, enzymatic preparations extraction technology, microbiology, medication extraction technology, analytical chemistry, genetics and DNA technology, instrumental analysis.

**Study results**

Program graduates:

* develop and apply technological schemes;
* select and apply technological equipment;
* working with biological materials;
* manages and develops biotechnological processes in the company;
* familiar with food, agriculture, pharmacy, environmental biotechnologies, bioenergetics;
* knows the rules of work safety and environmental protection in the company;
* knows quality assurance systems in the company;
* carry out applied research and, according to the results, suggests improvements in biotechnological processes.

**Job opportunities**

The first level professional higher education study program “Biotechnology” graduates are being prepared to work in companies in different sectors, where in production are used biotechnological processes.