

January DAY, 2023

**Name Surname** (from **School, City, Country**) participated in the course DatZ7097 “Programming quantum computers” from our doctoral study program in Autumn 2022, which run 16 weeks between September 2022 and December 2022. It is a 4 credits course (64 academic hours and 96 individual study hours), equivalent to 6 credits of European Credit Transfer and Accumulation System Credits. The course was taught by our faculty member Assoc. Prof. Abuzer Yakaryilmaz. The current syllabus of the course can be accessed at the following link: [https://luis.lu.lv/pls/pub/kursi.kurss\\_dati?p\\_kods=2DAT7097&l=2&p\\_par=](https://luis.lu.lv/pls/pub/kursi.kurss_dati?p_kods=2DAT7097&l=2&p_par=)

During the course, the hands-on tutorials called Bronze and Silver on “quantum computing and programming” developed by QWorld (<https://qworld.net>) was used as the main materials, and the following topics were covered: basics of probabilistic and quantum systems; elements of basic quantum circuits and quantum programming libraries such as Qiskit and Cirq; superposition and measurement; composite quantum system; Grover’s search algorithm and its implementation; complex numbers and Bloch Sphere; Quantum Fourier Transform; and, Shor’s factorization algorithm. Besides, each student was asked to complete a self-study module.

The course grade was calculated based on **N** homework (70 points in total) and one self-study module (30 points). **Name Surname worked on the self-study module “XYZ”** and completed the course with **XY** points out of 100 points.

Title Name Surname

Director of the doctoral study programme