



Chemical Education

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Shortcut to a First Degree

Cornelia Frei

*Correspondence: C. Frei, E-mail: info@aprentas.com
aprentas, Mauerstrasse, CH-4002 Basel

Abstract: The FHNW School of Life Sciences and aprentas have launched a shortened part-time study programme at the university of applied sciences which allows high-performing apprenticeship graduates to advance quickly.

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“It is an ideal combination that works very well for me,” says Lukas Spangenberg, one of the students on the 3+4 pilot programme, which comprises a VET (vocational education and training) diploma and a bachelor’s degree in life sciences, in the field of chemistry. 3+4 stands for three apprenticeship years followed by four part-time study years.

Lukas completed his apprenticeship as a laboratory technician, specialty chemistry, at Novartis in summer 2024. In September of the same year, he started studying at the School of Life Sciences at the University of Applied Sciences Northwestern Switzerland (FHNW) and, in parallel, took up a laboratory technician position at his former training company, at 50% each. *“I wanted to continue my education after my apprenticeship. The great thing is that I can now gain professional experience at the same time, because I really enjoy working in the laboratory. And this programme enables me to finance my life and my studies.”*

Advantages for Companies and Students

The 3+4 model was initiated by Novartis. The FHNW School of Life Sciences and aprentas, the vocational training association where Lukas had attended both vocational training school and practical training units in the laboratory, cooperated to establish a programme for high-performing apprenticeship graduates. The aim was to give them the opportunity to remain at their company while continuing their education at a quick pace, a combination that makes the programme both attractive for the students and worthwhile for their employers.

It goes without saying that an employment contract for the entire duration of the programme requires a high degree of commitment and trust on both sides, as well as above-average performance on the part of the apprenticeship graduates. After applying for a position linked to the programme in his last apprenticeship year, Lukas therefore underwent a very demanding selection process at Novartis.

The Shortened Model

The FHNW School of Life Sciences offers various part-time models. A regular degree programme with a 50% workload takes

up to six years, the new shortened model only four. This is made possible by examinations and achievements at the start of the programme and also at the end, as part of the bachelor thesis within the company. The achievements that lead to the required ECTS points must of course be completed either way and documented at the FHNW. Although during his apprenticeship Lukas was very well prepared for these studies, that was not the end of it (Fig. 1). In order to have some of the modules and the corresponding ECTS points recognized and thus to qualify for the shortened new model, additional examinations were required in advance, for the FHNW can only give credit for what they have examined.



Fig. 1. Lukas Spangenberg is one of the first students in the shortened part-time study programme. Photo credit, Daniele Ciociola, aprentas.

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Please contact: Prof. Catherine Housecroft, University of Basel, E-mail: Catherine.Housecroft@unibas.ch

The Call of Practice

The usual path to Swiss universities of applied sciences is a Federal Vocational Baccalaureate (Berufsmaturität), which can be completed either in parallel to an apprenticeship or after obtaining a VET diploma. With a general education baccalaureate (high-school diploma), a one-year internship is required for admission so the candidates can keep up with the practical skills of students with an apprenticeship background.

Lukas has taken a different path again. After school, having graduated with a general education baccalaureate, he started studying chemistry at the ETH in Zürich. There he soon found out that he much preferred the practical courses in the laboratory to the purely theoretical studies. One of his fellow students, who was a trained laboratory technician, told him about his apprenticeship. After careful consideration Lukas discontinued his studies at the ETH and started an apprenticeship in the same profession himself. He has never regretted taking this step.

But now, a few years later, having successfully finished his apprenticeship and obtained his VET diploma – if it had not been for the opportunity with the new 3+4 programme: Would he have considered returning to the ETH or to university? *“I do not think so. I would not have wanted to start a 100% study programme again. I would probably rather have applied for a lab technician position and tackled further training sometime later”*, says Lukas. So, for the time being, the call of practice still prevails.

A New Era

Lukas' start at the FHNW School of Life Sciences last autumn went very well, and he keeps up with his studies successfully. What he found to be a big change at the beginning was the new situation at work: the transition from an apprentice to a trained employee, who is expected to fulfil higher standards. *“Getting used to this is a process that should not be underestimated. It has taken me some time. Settling into a new job in a new department, starting a new study programme at the same time and balancing my time between the two 50% workloads at work and at the university of applied sciences was very challenging. But things have now levelled out well.”* His provisional conclusion after the first study year is clearly positive: *“I'm really enjoying the programme, despite the effort and the long, busy and intense days. I can highly recommend it!”*

Watch the video interview with Lukas Spangenberg (in German) to learn more about the programme:



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