

42 Luxembourg - A programming school like no other

42 Luxembourg is a school for adults whose main objective is to adequately prepare individuals **for a career in IT** by offering a practical, well-rounded training in programming. Its strength lies in its students successfully graduating as highly competent programmers ready to start their career, thanks to its flexible and comprehensive study program that bolsters both personal and professional development to match the expectations of the labour market.

It is no secret that the ongoing digital transformation brings with it a multitude of challenges. One of these challenges is the “**digital skills gap**”, which has had a considerable impact on the job market in the last few years. Indeed, as per the National Employment Agency (ADEM), the number of declared vacancies in the ICT for 2023 goes up to 3.977¹. Given this tremendous need for IT professionals, the Ministry of Education, Children and Youth launched the **Digital Learning Hub** and **42 Luxembourg** in May 2022 as part of the government’s solution to combat the digital skills gap and further expedite digitization.

The Digital Learning Hub is an adult education institute located in the heart of Esch/Beval. It provides three types of vocational training programs in various fields of computer sciences and technologies. Going from beginner level to advanced, the Digital Learning Hub offers certified **short courses** focusing on a specific skill or topic as well as certified training programs composed of multiple modules imparting a specific set of competences called **learning tracks**. **42 Luxembourg** completes this assemblage as the long-term program of study. All these different types of programs are open to anyone of adult age who wishes to upskill and/or reskill, without any prerequisites².

The first 42 school originated in Paris in 2013 and has now grown into an international network consisting of 54 campuses in 31 countries³. Its study program enjoys an **excellent global reputation** “with a remarkable track record of 100% hiring rate”⁴, as their graduates turn out to become invaluable assets.

What sets it apart from other schools? 42 operates on the basis of a progressive pedagogy that is becoming increasingly widespread. Moving away from traditional teaching methods, 42 Luxembourg has no teachers, no courses, and no classes. **Project-based** and **self-directed learning**, as well as **peer-to-peer exchange**, are the main pillars that make up 42’s pedagogy. In other words, students gain programming proficiency through practice from day one by accomplishing sets of exercises, which increase in difficulty, containing instructions and problems to solve. In the absence of teachers, students are pushed to use all the resources at their disposal and to learn how to properly use them (**learning to learn**), in order to find the solutions on their own. These resources include any kind of study material of their own choosing and asking their peers for help, among many others. Some of these projects are group efforts while others are individual projects subject to peer-evaluations. This is the opportunity to showcase their work and prove their understanding of the material. Both parties benefit from this exchange; the evaluator learns how to give constructive feedback and the evaluatee learns how to use or implement it for the purpose of self-improvement. The advantage of this project-based learning method is that it involves **learning by doing**. Without wasting time with theoretical courses and by starting with practical exercises right away, this accelerates the acquisition and the internalization of the competences all the while ensuring better retention thereof.

¹Source: Statistics by the National Employment Agency (ADEM), provided on demand

²Note: no conventional prerequisites are required in order to register for a course, for instance a diploma or a portfolio. However, some intermediate and advanced courses may demand preliminary knowledge in order to follow and fully understand the content thereof

³Source: [42 Schools | 42 - A Global Network of IT Campuses \(42network.org\)](https://www.42network.org/)

⁴Source: [FAQs - 42 Wolfsburg](#)

Overall, 42's learning method tackles a variety of competences at once, intending to adequately prepare the students for the expectations of the competitive job market and to make sure they succeed in the professional world. In addition to the technical know-how, the project-based learning aims to mirror real-life situations to compel students into using their creativity and resourcefulness to complement their logical thinking and problem-solving skills (**higher-order thinking**). At the same time, the hardship of the program inevitably pushes the students' resilience as well their self-reliance. And thanks to the peer-to-peer learning aspect, it also puts their **communication and collaboration techniques** to the test to ultimately facilitate their improvement. Because both hard and soft competencies are equally important in the workplace, 42's program is designed to promote the simultaneous development of both, so that, in the end, the students come out with the necessary tools to enter the workforce as competent and well-rounded programmers able to face the challenges of the working life.

Gamification builds the structure of the study program at 42, meaning students do not progress in years of study, but in levels going from 1 to 21. Each level increases in difficulty and builds upon the acquired competences of the previous one. Moreover, 42's program is divided into two parts: the **common core** (level 1 to 9) and the **second part** (level 9 to 21). The common core focuses on **programming fundamentals**: in addition to learning coding with the language C, students develop simple softwares using classic algorithms, learn management of the UNIX process, and discover a simple first approach to network architecture as well as system administration, among many others. Everyone, no matter their background, starts from scratch and upon its completion, students emerge with a well-balanced and fully developed practical knowledge in programming. At this point, students have one of two choices. They may take their portfolio to venture out into the job market or they can choose to continue and move on to the second part if they wish to enter a more **specific field**, such as web development, cybersecurity, artificial intelligence, etc. For the latter, students have the option to transfer and pursue it on another 42 campus of their choosing. What's more, this part includes an optional internship with an aggregated company lasting from 4 to 6 months to complement their studies.

Every student works and progresses in their own way and at their own pace. That's why the campus is **open 24/7**, giving everyone the chance to manage their time at their convenience. Consequently, the duration of the training depends on the individual's engagement for the program. In general, the common core is completed within 8 and 18 months. The advantage of this flexibility is that students get to work on and further improve on their **time-management skills**. Each project demands to be submitted within a specific timeframe and the students have the liberty to work on them at their own pace as long as they respect the **given deadline**.

Inclusiveness and open-mindedness being non-negotiable values, 42 is open to anyone who wants to start a career in IT. Provided one is at least 18 years old, 42 requires **no prerequisites** to join the study program. With or without a degree, with or without mathematical talents, with or without a basic knowledge in coding or computer sciences, everyone is welcome. All one needs is logical thinking, motivation, and resolve. What's more, the program is entirely **free of charge**.

The infrastructure at 42 Luxembourg has been optimized to allow for the best learning environment. Equipped with cutting edge computer technology, students have everything they need to succeed at 42. With 150 state-of-the-art computers as well as a fully furnished break room, access to student canteen and a caring staff always at their disposal, everything has been put into place to guarantee **the best learning experience** and to ensure for the students' well-being.

To join the program, one has to go through a selection process. The first step is to create an account on 42luxembourg.lu and play two **online games** designed to test one's logical thinking prowess. Afterwards, one is invited to an **information session** called a "check-in meeting" where the staff explains the philosophy and program in more detail. This is also an opportunity to get to know the team and to ask questions. Finally comes the most important stage of the process: the **Piscine**. This is an intense four-week trial period during which one deep-dives into various programming projects. The Piscine, like the program itself, requires considerable personal investment. As such, as well as giving an idea of what to expect, it aims to test one's level of **motivation and resolve**. At the same time, it is a way for the individual to determine whether this way of learning suits them.

In conclusion, for those considering a career in IT, 42 Luxembourg is a **great alternative** to traditional academic studies that brings nothing but gains. On top of the newly acquired technical competencies and personal growth, 42 Luxembourg provides its students with an international education and a huge professional network that broadens their horizons and trains them for the IT career of tomorrow.

If you wish to receive more information, or if you'd like to schedule a meeting and/or a visit of the premises, please contact info@42luxembourg.lu or (+352) 247 55 242.

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