

October 2019

Strategy EPFL Doctoral School

1. Introduction

EPFL's doctoral education and training is organized by its Doctoral School (<https://www.epfl.ch/education/phd/>), which has 21 doctoral programs that cover all EPFL research fields. The Doctoral School is highly interdisciplinary while at the same time comprising all EPFL's disciplines. It runs across EPFL's other organisational structures.

The around 2'200 doctoral students are all registered and followed in one of the 21 doctoral programs. Each doctoral student has an EPFL thesis Director and often a co-Director (someone from the academic or non-academic sector who hold a PhD). The thesis Director(s) guides the doctoral student academically and helps to develop and support the student's career plan. The doctoral program offers scientific and technical doctoral courses and facilitates the academic and social integration of the doctoral students. It provides mentoring by an academic staff member and verifies annually the progress of the doctoral student. The Doctoral School management supervises the functioning of the 21 doctoral programs, and coordinates the offer of transferable skills courses and scientific-social events (such as for example international summer schools).

2. Key trends and opportunities

All EPFL doctoral students belong (since 2003) to a doctoral program, and the doctoral education and supervision is well developed. The EPFL is therefore in a relatively good position. A comprehensive PhD survey - with more than 1'000 respondents - has been performed in 2018/19. Satisfaction among doctoral students is high, and EPFL's results are favourable compared with other universities (comparisons have been made with several well-known foreign universities).

However, the survey results also demonstrated that improvement is needed concerning career preparation, student-advisor relationships, and stress & depression levels of the doctoral students. The balance between employee-subordinate on one side, and student-researcher on the other, has been shifting too much towards employee-subordinate.

3. Doctoral School 2.0

In order to remain at the forefront of doctoral education and supervision, several aspects need to be further developed, namely:

- Doctoral student - Advisor (and mentor) relationships

The onboarding of Professors and doctoral students need to be improved. Tenure track Professors need to be supported and receive an EPFL specific management training (this has recently started). The PhD Welcome event needs to be reviewed and where needed strengthened. It should become obligatory for all new doctoral students.

A PhD guide for doctoral students and Advisors - with main rules on the academic and HR aspects, and supervision guidelines (expectation management at the start of the PhD) - should be created, i.e. a short, easily readable, online booklet that is updated regularly. We should aim at better PhD communities and more doctoral program events with visibility of program Directors, thesis Directors, and mentors (PhD supervision culture).

- Depression and stress levels among doctoral students

The measures mentioned above for the doctoral student-Advisor relationships will improve the situation. However, exit interviews by doctoral program Directors - for all doctoral students that stop before the end - will be important. Procedures and contact points for avoiding and handling difficult doctoral student-Advisor situations should be further developed and communicated. EPFL's Respect Unit should be positioned as main entry point for reporting the more serious/problematic situations.

Doctoral students should have more freedom and possibilities to choose courses (scientific, technical and transferable) to align them with their research and career plans. Initiative, exploration, critical thinking, and independent decision-making should be part of each PhD's education.

A bi-monthly newsletter for all doctoral students and Advisors, with regular highlights (PolyDoc events, Alumni, career events, repetition of some rules/regulations, etc.) should be launched.

- Career preparation of doctoral students

Doctoral students need to make better-informed decisions about their career goals (and, in fact, our society needs that more high-level scientists become leaders). The ability to communicate to broad audiences and to manage teams and projects should be enhanced. An EPFL PhD should take 4 years (extensions should be exceptional). There should be a yearly PhD career event, and a section in the 3rd-year annual report on the career plans. A fund for international non-academic or academic exchanges of several months duration, that doctoral students can apply for, would be very valuable.