

ED n° 474 Interdisciplinaire Européenne "Frontières du Vivant" - Liliane Bettencourt

PhD program guidelines¹

The aim of the interdisciplinary doctoral school "Frontières du Vivant" (FdV) is to promote ambitious research projects involving interactions between a broad range of academic disciplines, in the pursuit of understanding living systems.

The doctoral school is supported by the Liliane Bettencourt Doctoral Program of the Bettencourt-Schueller Foundation.

1) FdV Spirit

The pedagogical project of FdV is focussed on the active participation of the PhD students in their own education at the frontiers of knowledge. Key actors of their research projects, they will benefit from academic and financial resources made available by FdV in an environment of cooperation and excellence to educate themselves and further develop their potential as "young researchers".

2) Admission to the PhD program

Candidates must present themselves and the PhD project for evaluation by the International Scientific Council. Fellowships for the doctoral school are awarded according to the candidate's rank after the recruitment selection and the annual available financial resources. Since the graduate school will not be able to support all the eligible candidates, students and their supervisors are encouraged to apply with the help of the program for funding available from other institutions.

3) Thesis Advisory Committee

A Thesis Advisory Committee (TAC) follows the student throughout. Its role is to ensure the progress of the research, with respect to the original aims and in the light of new advances in the field, as well as the general well being of the student. The TAC consists of the PhD supervisor(s) and of two senior scientists of complementary expertise, covering the different interdisciplinary facets of the student's project and from outside of the supervisors' labs. The TAC members are appointed by the FdV director following recommendation from the PhD supervisors and student.

The PhD student meets with the TAC at least once per year. The first meeting must take place six months after the start of the PhD. Before each meeting the student submits a written progress report to the members of the TAC. During the meeting the progress of the PhD-work is discussed and the TAC provides advice and criticism on the proposed research plan for the next year(s). The TAC will also advise the student on scientific and career issues and on the choice of conferences and training courses.

A meeting report whose format is laid out by the school is written by the TAC committee members and submitted to the head of the doctoral school with copies to the thesis advisor and to the student. In addition the candidate returns to the school a filled self-assessment questionnaire on his activity

4) Training program

The FdV Liliane Bettencourt PhD Program offers an extensive doctoral training program that combines research with a curriculum of advanced courses and workshops on interdisciplinary

¹ Based on the quadriennial project of the doctoral school approved by the AERES.

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research and science-related topics. The interdisciplinary nature of FdV program students' interests and projects requires a broad set of skills and knowledge. Students are required to validate 300 hours of academic training including advanced, interactive training sessions, student-led science clubs, workshops, and conferences before thesis defense is granted.

At least half of this training should be followed within the offer of the FdV courses and workshops, organized by the Center for Research and Interdisciplinarity (CRI). The rest may be validated through courses taken at other institutions in France and abroad, international meetings and summer schools, or from teaching activities, upon prior agreement with the program's director of studies.

All students must take a workshop on interdisciplinary project proposal writing (one full week September of the first year), a course on the critical analysis and presentation of scientific articles (during the first year), and participate in the student seminars of the doctoral school. The students must participate in at least two international workshops/conferences during their thesis to maximize the visibility of their work and develop contacts for their scientific projects. To this aim the program provides up to 1000 euros per year per student to help cover the expenses for attending international workshops and conferences.

5) PhD program Student Interdisciplinary Seminars

Student seminars are given in the second year and provide valuable training on giving scientific presentations. The presentations must address an audience drawn from a wide range of scientific backgrounds (i.e. fellow PhD students and the teachers of the PhD program). The presentations should include an introduction to the basic scientific concepts that define the project, an overview of the latest scientific knowledge in this area, and a clear description of the scientific questions that the project is going to address and how these fit into the wider picture of understanding biological systems. These seminars are intended to promote discussions and scientific exchange among the students and senior scientists and develop an interdisciplinary scientific community. After each session the student is given feedback to improve his scientific communication skills.

6) Criteria for the Doctoral degree

Approval to defend the thesis is given by the doctoral school director, based on completion of the FdV pedagogic requirements and research achievements as evaluated by the Thesis Advisory Committee. It is expected that the student will have published at least one peer-review article, submitted/prepared one 1st-author manuscript to a peer-reviewed international journal as well as a review article prior to defense approval. The doctorate degree is awarded by the universities following the public defense and examination of the thesis manuscript by the doctoral jury.

7) Duration of the thesis

PhD students at the FdV PhD program are expected to finish their PhD in 3 years. Extensions are only granted under exceptional circumstances and need the approval of the Thesis Advisory Committee and the director of the doctoral school. Extensions will only be considered if funding is available.