

## **Regulation**

made on the 21st September 2015

### **for the award of the doctoral degree at the Faculty of Science of the University of Fribourg**

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#### **The Faculty of Science of the University of Fribourg**

In accordance with article 43, subparagraph 3§2 of the legislation concerning the University, approved on the 19<sup>th</sup> November 1997;

In accordance with article 12 of the Regulations concerning admission to the University, approved on the 3<sup>rd</sup> April 2006;

In accordance with articles 78, 79 and 88, of the Statutes of the University of Fribourg, approved on the 31<sup>st</sup> March 2000;

In accordance with articles 9, 40 and 45, of the Statutes of the Faculty of Science, approved on the 25<sup>th</sup> June 2001

*Decides:*

#### **I: PRINCIPLE**

##### **Article 1. Academic grades**

<sup>1</sup> Based on this current regulation, the Faculty confers the academic grades of *Doctor of Philosophy* (PhD) in its the domains of competence. The detailed list of the titles accorded by the Faculty constitutes an integral part of the current regulation. These grades attest the capacity of the awardee to carry out scientific research of high quality based on the presentation of original and personal work (thesis), an oral examination (defence), and a public presentation.

<sup>2</sup> The Faculty can also confer the academic grade of Doctor *honoris causa* (Dr h.c.) in recognition of outstanding contributions to science.

#### **II. DOCTORAL STUDIES**

##### **Article 2. Study structure**

Doctoral studies consist of:

- a) doctoral research;
- b) continuous training
- c) a doctoral thesis;
- d) a doctoral examination (defence);
- e) a public presentation

## ***a. Admission requirements and registration***

### **Article 3. Admission**

Before being admitted to studies for a doctoral degree a candidate shall:

- a. possess a Diploma or a Master of Science awarded by the Faculty or a similar qualification recognised to be equivalent by the Faculty, and
- b. attest, using the appropriate form obtainable from the Dean's office (Annex I), the agreement of the person willing to supervise the research work.

### **Article 4. Derogation**

If the requirement in art. 3§a is not satisfied; the Faculty may accord a derogation. The candidate, however, may be required to pass an admission examination or to successfully follow a pre-doctoral programme.

### **Article 5. Registration at the University**

<sup>1</sup> Doctoral students shall be registered, as such, at the University throughout all of the studies, i.e. until the end of the semester during which the doctoral examination takes place.

<sup>2</sup> He/she shall be registered for a minimum of four semesters before being permitted to sit the doctoral examination.

<sup>3</sup> He/she cannot be registered simultaneously in a doctoral programme at another University, unless a convention of joint supervision has been established.

## ***b. Doctoral work***

### **Article 6. Normal period of study**

In general, the normal period of study for the doctorate should not exceed four years.

### **Article 7. Aim**

The aim of the doctoral work is research in one of the scientific disciplines of the Faculty. The Dean's office keeps an up-to-date list of these disciplines proposed by the various Departments.

### **Article 8. Study outcomes**

<sup>1</sup> The candidate will be initiated in a scientific domain and shall carry out personal research permitting him/her to develop scientific curiosity. He or she shall learn to plan and carry out practical and theoretical work, be able to critically assess the results obtained, and reinforce his/her ability to communicate those results both orally and in the form of a scientific publication. The candidate shall also deepen his/her general scientific knowledge in the chosen discipline. In general, his/her capacities of innovation and decision-making, efficiency, flexibility and scientific responsibility shall be developed.

<sup>2</sup> The doctoral candidate shall agree to respect the principles of scientific integrity all along the course of his/her doctoral studies. He/she shall accept this condition by signing a *declaration of honour*

## **Article 9. Supervision**

<sup>1</sup> The doctoral research work shall be supervised by:

- a. a professor of the Faculty or
- b. after the consent of the Faculty, a privat-docent, lecturer or senior lecturer. Should this be the case, a professor of the Faculty must sponsor the former person
- c. external professors (adjunct or *emeritus*) must also be sponsored by a professor of the Faculty.

<sup>2</sup> A co-supervisor can be designated if the responsibility for supervision is to be shared (a domain spanning two disciplines, cotutelle, work to be carried out at two sites, etc.).

## **Article 10. Location of the research student**

<sup>1</sup> In principle, the research work shall be conducted in the department or institute of the Faculty where the supervisor is engaged.

<sup>2</sup> The Faculty may permit the candidate to carry out the research work in other Swiss universities, national or international research centres, university hospitals, industrial concerns or any other appropriate institution. In such a case, the thesis supervisor must present written arguments showing a competent person is available on site in order to oversee the candidate and that access to scientific conferences, and regular participation at internal colloquia, etc. is possible.

## **Article 11. Confirmation**

<sup>1</sup> At the end of the first year of study, at the very latest, the supervisor shall decide, on the basis of the candidate's capacity, the results obtained, and an interview, whether the doctoral research work shall be continued. The supervisor shall then submit a short written report to the Dean's office. Under certain circumstances the probationary period may be extended for a maximum of six months.

<sup>2</sup> If the student's candidature is terminated, the student can be re-admitted, under the conditions given in Art. 3, for as long as another qualified person agrees to supervise the research work.

## **Article 12. Monitoring progress**

<sup>1</sup> At the very latest, during the second year of the doctoral studies, the supervisor shall propose the nomination of a *supervisory team* composed of

- a. the supervisor and
- b. one or two members internal or external to the Faculty

<sup>2</sup> The candidate will present a written report to the members of the supervisory team concerning the progress made and any problems encountered. The supervisory team will help the supervisor concerning any scientific question. The supervisory team will also help both the thesis supervisor and the doctoral candidate concerning any scientific questions.

<sup>3</sup> The doctoral studies can be terminated by decision of the supervisory team. The thesis supervisor shall furnish a written communication to the Dean's office concerning this procedure.

## **Article 13. Further training**

The doctoral candidate shall further his/her scientific knowledge and training by attending appropriate courses. The thesis supervisor shall decide, according to the guidelines set by the

department where he is engaged, the necessity of attending a particular course and the way in which the student shall demonstrate his active participation.

### ***c. Doctoral thesis***

#### **Article 14. Publication**

<sup>1</sup> The results of the research work shall be presented in a doctoral thesis. This thesis shall show the capacity of the doctoral candidate to clearly demonstrate the results obtained and their relationships not only scientifically but also correctly concerning redaction and graphic presentation.

<sup>2</sup> The doctoral candidate and the thesis supervisor shall publish the results of the research work in recognized scientific journals.

#### **Article 15. Fraudulent scientific behaviour**

<sup>1</sup> A thesis which contains elements that are contrary to scientific integrity, e.g. the presentation of invented or falsified results, or where a part of the text is plagiarized, shall be definitively refused.

<sup>2</sup> The procedure concerning any disciplinary sanctions remains reserved

#### **Article 16. Languages and summaries**

<sup>1</sup> In agreement with the thesis supervisor, the thesis shall be written in German, French, or English. There shall be a summary of one to two pages in English and in at least one of the other two languages (Annex II).

<sup>2</sup> The publications and manuscripts of publications that have been accepted for publication can be included in the thesis, itself, for as long as they are accompanied by text related to the subject matter. The individual contribution of the candidate, however, shall be clearly indicated.

### ***d. Doctoral examination***

#### **Article 17. Jury**

<sup>1</sup> At the end of the research work the Faculty shall choose, upon the recommendation of the thesis supervisor, an *examination jury*. The Faculty shall ensure that the fields of the scientific domains treated by the doctoral studies, particularly if the studies are interdisciplinary, are covered by the jury that shall comprise:

1. a president designated by the Dean's Office and who is, in principle, the president or his/her deputy of the department concerned.
2. the thesis supervisor acting as examiner and
3. at least two co-examiners, of which at least one must be external to the University of Fribourg, chosen with agreement of the candidate. The independence – judged by the absence of work in collaboration with the candidate – for at least one of the co-examiners must be guaranteed

<sup>2</sup> In the case of co-supervision, the co-supervisor shall act as co-examiner

<sup>3</sup> In the case of sponsorship of the supervisor, the sponsor shall also be a member of the jury

## **Article 18. Registration for the examination**

<sup>1</sup> A doctoral candidate who has been registered for the minimum number of semesters may, at any time, register for the doctoral examination. He/she shall announce him/herself at the Dean's office and submit (at least 30 days before the envisaged date of the examination) the following documents:

- a) the thesis accompanied by the title page ready for printing (see Annex II)
- b) a *curriculum vitae*,
- c) a written declaration of honour certifying that the candidate composed the thesis him/herself and that the thesis contains personal research carried out without illicit help,
- d) proof of payment of the examination fees

<sup>2</sup> The Dean shall control that the conditions given in art. 5 have been satisfied.

## **Article 19. Examination reports**

<sup>1</sup> The examiner and the co-examiners shall each submit a written report on the thesis for the attention of the Dean. The report shall be accompanied by a recommendation to accept or refuse the thesis. Using an *Examiner's report form*, the thesis supervisor shall be responsible for handing over, at least 30 days before the envisaged date of the examination, the examiners' reports to the Dean's office.

<sup>2</sup> If one of the members of the examination jury concludes that the thesis should be refused, the examination procedure shall be interrupted.

## **Article 20. Circulation of the thesis**

For a period of two weeks, the Dean shall circulate amongst the professors of the department concerned, the thesis, the examiners' reports and the documents mentioned in art. 18. If doubts are expressed, particularly concerning the quality of the science, by either the examiners or professors of the department concerned, the Dean shall announce that the thesis and the reports can be consulted by all of the professors of the Faculty Board at the Dean's office (see Annex III).

## **Article 21. Acceptation or repetition**

<sup>1</sup> The jury shall accept or refuse the thesis taking into account any remarks made by the professors of the Faculty Board.

<sup>2</sup> If a thesis is refused, the doctoral candidate can rewrite the thesis and re-submit it for final examination

## **Article 22. Convocation**

If the thesis is accepted, the Dean shall convoke the candidate to a thesis defence (oral examination). In general, the oral examination shall take place a minimum of 30 days after receipt at the Dean's office of the thesis and related reports.

## **Article 23. Thesis defence**

<sup>1</sup> The defence shall take place *in camera* in the presence of the president and at least two members of the examination jury and normally lasts at least one hour. It begins with a short presentation by the candidate of his/her scientific results. The oral examination is conceived as a discussion pertaining to the relevant scientific domain and its context.

#### **Article 24. Decision**

<sup>1</sup> Immediately after the oral examination, the jury shall decide whether the defence was satisfactory. Should the defence be judged unsatisfactory, it may be repeated once more, but at least three months later.

<sup>2</sup> The jury shall immediately inform the candidate of its decision and communicate it to the Dean's office.

#### **Article 25. Public presentation stopped here**

<sup>1</sup> The public presentation consists of a conference where the doctoral candidate presents the scientific results obtained during the research work and places them in their correct context. The conference shall be followed by a discussion. The candidate shall take into account the fact that the audience is public.

<sup>2</sup> The public presentation shall only take place after a successful thesis defence and, in principle, at least one week after the oral exam but within one month. The thesis supervisor, in agreement with the candidate, can request a derogation (a shorter or longer interval). The Dean is competent to make the decision,

#### **Article 26. Communication**

Once the public presentation has taken place, the Dean shall give to the candidate, on the basis of the approval of the thesis, the thesis defence and the public presentation, written confirmation of the his/her success. The Dean shall also inform the Faculty Board.

#### **Article 27. Printing of the thesis**

<sup>1</sup> After the thesis defence the candidate shall give the Dean the original version of the thesis, if necessary modified according to the recommendations of the jury, in a form ready for printing. If the thesis conforms to the directives given in annexe II (Directives concerning the preparation and lodging of the obligatory copies of the thesis), the Dean shall accord the status « Ready for printing ». Within the following six months, the candidate shall hand over to the Dean's office the original version of the thesis and the required number of obligatory copies. It is only then that the candidate shall have the right to use the title « Doctor » by way of an attestation furnished by the Dean.

<sup>2</sup> If the delay of 6 months can not be respected, the candidate must present a justified request for prolongation to the Dean. If no such request is made, or if the request is refused, then candidate shall lose the right to the title of Doctor

### **III. DOCTORATE HONORIS CAUSA**

#### **Article 28. Procedure**

<sup>1</sup> One or several members of the Faculty Board can propose that the Faculty confers the title of Doctor *honoris causa* to persons of outstanding scientific merit.

<sup>2</sup> The agreement of  $\frac{3}{4}$  of the professors by secret ballot is necessary to ratify the proposal.

#### **Article 29. Communication**

The Dean shall announce the award of the title Doctor *honoris causa* at the *Dies academicus* of the University.

## **IV. TRANSITORY AND FINAL DISPOSITIONS**

### **Article 30. Authority**

The Faculty committee shall be responsible for any decision concerning circumstances not governed by this regulation.

### **Article 31. Abrogation**

The entry into force of the present regulation shall abrogate and replace the regulation of the 12 May 2003 governing the award of a doctorate at the Faculty of Science of the University of Fribourg.

### **Article 32. Transitory measures**

<sup>1</sup> Doctoral studies may be carried out and completed under the former regulation until the 31<sup>st</sup> July 2018.

<sup>2</sup> Students having already started their research work before the entry into force of the present regulation can choose, by way of a transition contract, to continue their studies governed by the present regulation.

### **Article 33. Entry into force**

The present regulation shall enter into force after its ratification by the State Department for Education, Culture and Sport.

Approved on the 23<sup>rd</sup> November 2015 by the Rectorate of the University.

Ratified on the 11<sup>th</sup> December 2015 by the State Department for Education, Culture and Sport.

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*The present translation into English is for information only. Only the French version «Règlement pour l'obtention du doctorat à la Faculté des sciences de l'Université de Fribourg» or the German version «Reglement über die Erlangung der Doktorwürde an der Mathematisch-Naturwissenschaftlichen Fakultät der Universität Freiburg» are valid.*

**Supplementary clause to the Regulation of the 21<sup>st</sup> September 2015 for the award of a doctorate at the Faculty of Science at the University of Fribourg**

**The Faculty Board of the Faculty of Science**

In accordance with article 1 of the Regulation made on the 21<sup>st</sup> September 2015 for the award of a doctorate at the Faculty of Science at the University of Fribourg

*Decides:*

Art. 1 The Faculty of Science awards the following titles:

|   |  |  |  |
|---|--|--|--|
| Docteur ès sciences en mathématiques                | Doktor der Wissenschaft in Mathematik                                      | Doctor of Philosophy in Mathematics        | Scientiarum doctor in mathematicae                               |
| Docteur ès sciences en informatique                 | Doktor der Wissenschaft in Informatik                                      | Doctor of Philosophy in Computer Science   | Scientiarum doctor in computatoria                               |
| Docteur ès sciences en physique                     | Doktor der Wissenschaft in Physik  | Doctor of Philosophy in Physics            | Scientiarum doctor in physica                                    |
| Docteur ès sciences en chimie                       | Doktor der Wissenschaft in Chemie  | Doctor of Philosophy in Chemistry          | Scientiarum doctor in chemica                                    |
| Docteur ès sciences en science des matériaux        | Doktor der Wissenschaft in Materialwissenschaften                          | Doctor of Philosophy in Materials Science  | Scientiarum doctor in scientia materiarum                        |
| Docteur ès sciences en sciences de la Terre         | Doktor der Wissenschaft in Erdwissenschaften                               | Doctor of Philosophy in Earth Sciences     | Scientiarum doctor in scientiis terrarum                         |
| Docteur ès sciences en géographie                   | Doktor der Wissenschaft in Geographie                                      | Doctor of Philosophy in Geography          | Scientiarum doctor in geographia                                 |
| Docteur ès sciences en biologie                     | Doktor der Wissenschaft in Biologie  | Doctor of Philosophy in Biology            | Scientiarum doctor in biologia                                   |
| Docteur ès sciences en biochimie                    | Doktor der Wissenschaft in Biochemie                                       | Doctor of Philosophy in Biochemistry       | Scientiarum doctor in biochemia                                  |
| Docteur ès sciences en bioinformatique              | Doktor der Wissenschaft in Bioinformatik                                   | Doctor of Philosophy in Bioinformatics     | Scientiarum doctor in bioinformatica                             |
| Docteur ès sciences en sciences médicales           | Doktor der Wissenschaft in medizinischen Wissenschaften                    | Doctor of Philosophy in Medical Sciences   | Scientiarum doctor in scientiis medicinae                        |
|   |  |  |  |
| Docteur ès lettres humaines et sociales en médecine | Doktor der Philosophie in Sozial- und Geisteswissenschaften in der Medizin | Doctor of Philosophy in Medical Humanities | Philosophiae doctor in scientiis humanis et socialibus medicinae |