

## Economic and Social Sciences

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### Degree conferred

Rerum Politicarum Doctor /

- Doctor of Philosophy in Economics (PhD)
- Doctor of Philosophy in Management (PhD)
- Doctor of Philosophy in Business Informatics (PhD)

### Commencement of studies

An application for admission may be submitted at any time.

### Regulation

<http://studies.unifr.ch/go/IX6QZ> (French and German only)

### Application procedure

#### Candidates with Swiss qualifications

<https://studies.unifr.ch/go/Ui3b4>

#### Candidates with foreign qualifications

<https://studies.unifr.ch/go/2KPB6>

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### Fribourg profile

At the Faculty of Management, Economics and Social Sciences, candidates can participate in a doctoral programme in the different subfields of the economic sciences – management, economics or information systems.

The **Department of Management** offers doctoral studies in all management disciplines (e.g. financial management, accounting, HRM, marketing, corporate strategy, technology management, international management). These are organised according to the research fields of the professors of the Department. You can find a list of the research fields here: <http://www.unifr.ch/bwl/en/research>. During their doctoral studies, candidates usually write research articles, give presentations at academic conferences in Switzerland and abroad, publish articles and participate in various courses (e.g. doctoral seminars, method courses).

The **Department of Economics** offers doctoral studies in all fields of economics (e.g. microeconomics, macroeconomics, econometrics). Ph.D. students regularly participate in doctoral programmes offered by the *Study Center Gerzensee*:  
– *Swiss Program for beginning doctoral students in economics, Gerzensee* (see DOCTORAL SCHOOL)  
– *Advanced Courses in Economics for Doctoral Students, Gerzensee* (see DOCTORAL SCHOOL)  
Moreover, Ph.D. students regularly participate and present in the departmental seminar series:  
– Departmental Research Seminar  
– Departmental Ph.D. Seminar

The **Department of Informatics** of the University of Fribourg offers doctorates in the fields of *information management* and *computer*

*science*. *Information management* should be understood in the broadest sense of the term as comprising both information systems and decision-support systems.

During their studies, Ph.D. students can participate in doctoral schools (such as the CUSO doctoral programmes in computer science or statistics and applied probability), or in specialist seminars in operational research.

Consequently, doctoral theses may cover themes such as the Internet of Things/Web of Things, or decision support systems for managers through the application of operational research, fuzzy logic or applied statistics models.

### Professors eligible to supervise a doctoral thesis

#### Department of Economics

##### • Prof. Berno Büchel

Research fields:

- Industrial Organisation
- Network Science
- Law & Economics
- Applied Microeconomic Theory
- Applied Game Theory
- Digital Economy

Supervision of theses in English and German.

##### • Prof. Christelle Dumas

Research fields:

- Development microeconomics
- Applied econometrics
- Empirical health, labour, education economics and demographics

Additional courses:

Other courses (health economics, econometrics) provided as workshop or block lectures, at University of Fribourg or in Switzerland.

Supervision of theses in French and English.

##### • Prof. Reiner Eichenberger

Research fields:

- Public Economics
- Political Economics
- Public Choice
- Economic Policy
- Behavioural Economics

Supervision of theses in German and English.

##### • Prof. Volker Grossmann

Research fields:

- Growth Economics
- Distribution of Income and Wealth
- Human Capital Formation
- International Migration





- Coordination of foreign subsidiaries
- Market selection
- Market entry strategies
- Internationalisation of services and services companies
- Internationalisation of retail companies
- Management in Emerging Markets

Supervision of theses in German and English.

• **Prof. Martin Wallmeier**

Research fields:

- Asset Management
- Derivatives and Structured Financial Products
- Asset Pricing
- Firm Valuation
- Information Implied in Option Prices
- Behavioral Finance

Additional courses:

Ph.D. courses offered by the VHB (*Verband der Hochschullehrer für Betriebswirtschaft*), *Swiss Finance Institute*, *Swiss Doctoral Program Network in Accounting Research*.

Supervision of theses in German and English.

**Department of Informatics** (interfaculty)

• **Prof. Laurent Donzé**

Areas of specialisation:

- Survey statistics
- Fuzzy statistics
- Statistical modeling
- Imputation of missing data in complex enquiries
- Evaluating economic policy programmes
- Problems related to evaluation of wage gaps

Subjects of specific interest:

- Hedonic methods, notably for constructing price indices
- Fuzzy statistics methods

Supervision of theses in French, German and English.

• **Prof. Bernard Ries**

Areas of specialisation:

- Combinatorial optimisation
- Structural and Algorithmic Graph Theory
- Decision Support
- Complexity Theory
- Mathematical Modeling

Subjects of specific interest:

- Modeling and solving real world problems using graph theory and combinatorial optimisation
- Analysing the computational complexity of graph theoretical problems
- Analysing the structure of graphs in order to provide efficient algorithms

Supervision of theses in French, German and English.

• **Prof. Hans-Georg Fill**

Areas of specialisation:

- Meta modeling
- Conceptual modeling
- Visualisation
- Process management
- Development of enterprise information systems

Subjects of specific interest:

- Semantic information systems
- Blockchains and smart contracts
- Application of virtual and augmented reality in enterprise modeling
- Deviceless interaction for enterprise information systems

Supervision of theses in German and English.

• **Prof. Jacques Pasquier Rocha**

Areas of specialisation:

- Applying and improving software engineering techniques to build modular and extensible software architectures for challenging application domains
- Frameworks for integrating and coordinating heterogeneous software components (legacy applications, micro-services, objects populating the Internet of Things, RESTful web services, etc.) and humans in complex distributed systems

Supervision of theses in French and English.

• **Prof. Marino Widmer**

Areas of specialisation:

- Quantitative models and methods of operational research with their applications in manufacturing and logistics
- Combinatorial optimisation, in particular scheduling theory
- Heuristic and metaheuristic methods
- Simulation methods
- Decision support systems

Subjects of specific interest:

- Operational Research: General Applications for Small and Medium Enterprises
- Supply chain and distribution management
- Production planning and control in industry and services
- Design and control of systems in manufacturing and logistics

Supervision of theses in French and English.

## Studies organisation

### Structure of studies

30 ECTS credits can be earned.

### Doctoral school

- <https://szgerzensee.ch/courses>
- <http://www.gserm.ch>
- <http://www.dar.uzh.ch/en.html>
- <https://behavioural-research.cuso.ch>
- <https://statistique.cuso.ch>

