Master of Science in Computer Science
of the Universities of Bern, Neuchâtel and Fribourg

Information Event in Bern
Prof. Christian Cachin
September 17th, 2021

mcs.unibnf.ch
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3 Universities – 1 Campus

- The **Swiss Joint Master of Science in Computer Science** is a study program offered by the universities of Bern, Neuchâtel, and Fribourg.

- However, this multi-site infrastructure can be considered as one campus:
  - travel between the sites by public transportation is quick, convenient and comfortable, and the travel costs are reimbursed.
  - common legal documents
  - common systems
1. JOINT MASTER PROGRAM
Structure of the Master Studies

Courses (60 ECTS)

- T₁: General
- T₂: Distributed Systems
- T₃: Advanced Software Engineering
- T₄: Advanced Information Processing
- T₅: Logic
- T₆: Information Systems and Decision Support
- T₇: Data Science

Master Thesis (30 ECTS)

An individual research project with a thesis report

Additional Minor (30 ECTS)

An optional module may be chosen from approved minor programs in other disciplines at Swiss Universities
A Broad and Structured Offer

- A student chooses 12 courses/seminars
  - a minimum of 8 courses out of around 40 courses
  - a minimum of 2 seminars out of seminars offered by 18 research groups
  - the full course/seminar list can be found on our website

- All courses/seminars are grouped into 7 tracks according to fields of studies, allowing high quality focus

- All courses are credited with 5 ECTS
Available Tracks

- T0 - General (complementary offer)
- T1 - Distributed Systems
- T2 - Advanced Software Engineering
- T3 - Advanced Information Processing
- T4 - Logic
- T5 - Information Systems and Decision Support
- T6 - Data Science
Diversification and Focus

- There are no mandatory courses

- Diversification
  - at least 3 tracks have to be touched (earning at least 5 ECTS per track)

- Optional specialization
  - at least 25 ECTS in one track (T1 - T6) + master thesis
Study Duration

- The program normally takes 3 semesters of full-time studies to complete (30 ECTS each semester)

- The maximal study duration is limited to 6 semesters

- Exceptionally, in case of part-time studies, the duration of the program may be, upon request, extended accordingly
Evaluation / Exam

- Exam principles
  - the exams take place at the end of the semester
  - only failed exams can be repeated at a fixed repetition date

- A course is only credited if a mark $\geq 4.0$ has been obtained

- Insufficient marks ($< 4.0$) cannot be compensated with higher marks of other courses
Study Tracking

- To guarantee a certain quality standard in the master program, a so-called study tracking is performed two times during the academic year.

- The goal of such a study tracking is to observe the progress that students made during the last semester.

- Students who have problems in their studies are advised how to better plan their further studies.
2. LEGAL DOCUMENTS
Conventions

- Convention cadre / Rahmenvereinbarung
  - agreement about the collaboration between the three BeNeFri universities

- Convention de branche / Fachkonvention
  - agreement about the collaboration between the three BeNeFri Computer Science institutes

| BENEFRI – Universités de Berne, Neuchâtel, Fribourg | BENEFRI – Universität Bern, Neuenburg und Freiburg |
| Convention de branche BENEFRI en Informatique | Fachkonvention BENEFRI in Informatik |
| du 23 février 2010 | vom 23. Februar 2010 |
Regulation and Study Plan

► Règlement / Reglement

► regulation that specifies the principles of the master studies in Computer Science and the corresponding evaluations

| BENEFRI – Universités de Berne, Neuchâtel, Fribourg | BENEFRI – Universitäten Bern, Neuenburg und Freiburg |
| Règlement pour l’obtention du Master en Informatique | Reglement für die Erlangung des Masters in Informatik |

► Plan d’études / Studienplan

► contains the structure and the rules of the master studies

| BENEFRI – Universités de Berne, Neuchâtel et Fribourg | BENEFRI – Universitäten Bern, Neuenburg und Freiburg |
| Plan d’études pour l’obtention du Master en Informatique | Studienplan für die Erlangung des Masters in Informatik |
Supplement to the Study Plan

- Annexe du plan d’études / Anhang zum Studienplan
  - contains the list of teaching units with the corresponding ECTS credits
  - this list is adapted every year

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3. ORGANIZATION AND STUDENT’S TODO LIST
Administration Systems

- **Website**
  - information about the program ([http://mcs.unibnf.ch](http://mcs.unibnf.ch))

- **Learning management system (ILIAS)**
  - for all courses and seminars, there is a course page in ILIAS ([https://mcs.unibnf.ch/e-learning](https://mcs.unibnf.ch/e-learning), click on “Login”)

- **Student management system (Academia)**
  - students are administrated with Academia ([https://mcs.unibnf.ch/admin](https://mcs.unibnf.ch/admin))
Student’s ToDo List for every Semester (1/3)

- Registration for teaching units (courses and seminars)
  - at the beginning of each semester, students must register for the teaching units that they want to take during that semester
  - students who have registered for a teaching unit but later change their mind about attending it, are requested to cancel their registration
  - (de-)registration in Academia through SWITCHaai with your account and password of your SWITCH edu-ID
    https://mcs.unibnf.ch/admin
Student’s ToDo List for every Semester (2/3)

- Registration for exams
  - students have to register for the exam before the registration deadline
  - students who do not register to take the exam at the end of the teaching unit are not allowed for the repetition exam
  - registration for an exam can be cancelled or withdrawn (this procedure depends on when it takes place)
  - (de-)registration in Academia through SWITCHaai with your account and password of your SWITCH edu-ID
    https://mcs.unibnf.ch/admin
Student’s ToDo List for every Semester (3/3)

- **Reimbursement of travel expenses**
  - at the beginning of each semester: register for the BeNeFri network if you follow a teaching unit at a partner university until
    - autumn semester: September 30th
    - spring semester: February 28th
  - during the semester: complete the travel regulation (BeNeFri forms) available at [https://www.unifr.ch/studies/en/assets/public/files/sai/benefriremboursementen.pdf](https://www.unifr.ch/studies/en/assets/public/files/sai/benefriremboursementen.pdf) (the lecturer has to sign for all of his/her courses)
  - at the end of the semester: sign the form and send it, together with the necessary attachments (train tickets, …), to the responsible service of the home university
    - autumn semester: January 31st
    - spring semester: June 30th
Master Thesis

Before starting your master thesis, you should in principle have achieved all your teaching units (if applicable, all additional academic requirements must be successfully completed).

Details can be found at
https://mcs.unibnf.ch/organization/master-thesis/
Important Dates and Deadlines

- Registration for teaching units ([https://mcs.unibnf.ch/admin](https://mcs.unibnf.ch/admin))
  - autumn semester 2021: October 15\(^{th}\) 2021
  - spring semester 2022: March 18\(^{th}\) 2022

- Registration for exams ([https://mcs.unibnf.ch/admin](https://mcs.unibnf.ch/admin))
  - autumn semester 2021: January 3\(^{rd}\) 2022
  - spring semester 2022: May 13\(^{th}\) 2022
  - repetition 2022: August 5\(^{th}\) 2022

- Reimbursement of travel expenses ([http://www.unifr.ch/benefri](http://www.unifr.ch/benefri))
  - autumn semester: January 31\(^{st}\)
  - spring semester: June 30\(^{th}\)
Complement to the Master Program

- Teaching units of the complement are submitted to the bachelor rules and regulations of the Faculty of Science of the home university (dates, condition to pass, …)
  - Be: [https://www.unibe.ch/e152701/e154048/e191232/e205337/e707890/phil_nat_rsl_final_ger.pdf](https://www.unibe.ch/e152701/e154048/e191232/e205337/e707890/phil_nat_rsl_final_ger.pdf)
  - Ne: [https://rsn.ne.ch/DATA/program/books/rsne/htm/416320.htm](https://rsn.ne.ch/DATA/program/books/rsne/htm/416320.htm)
  - Fr: [https://www3.unifr.ch/apps/legal/de/document/1424425](https://www3.unifr.ch/apps/legal/de/document/1424425)

- Student management systems used in the complement
  - Be: KSL ([http://www.ksl.unibe.ch](http://www.ksl.unibe.ch))
  - Ne: Academia ([http://www.unine.ch/is-academia](http://www.unine.ch/is-academia))
  - Fr: GeFri/MyUniFR ([http://my.unifr.ch](http://my.unifr.ch))
4. INFORMATION FOR HOSTED JMCS STUDENTS
Hosted JMCS Students

- Hosted JMCS students are all students other than JMCS students (students who are matriculated in the Joint Master program in Computer Science) who follow a teaching unit of the Joint Master in Computer Science, e.g.:
  - bachelor students in Computer Science (major, minor, optional studies)
  - master students in Mathematics, Information Management, …

- They have exactly to do the same tasks as JMCS students (slides 18, 19, 20). Additionally, they have to:
  - complete a request form for Academia access (https://mcs.unibnf.ch/organization/request-for-academia-access/) at the beginning of every semester until
    - autumn semester: September 30
    - spring semester: February 28
5. FURTHER INFORMATION AND CONTACT
Further Information

Further information can be found on the website (https://mcs.unibnf.ch)

- program
- admission
- organization
- lectures
- research groups
- student life
- downloads
Frequently Asked Questions

- There is a section for frequently asked questions (FAQ) on the website: [https://mcs.unibnf.ch/faq/](https://mcs.unibnf.ch/faq/)

- There are questions like
  - Is there a possibility to study part-time?
  - Can I interrupt my studies for a given time period (e.g., one semester or one year)?
  - ...

17.09.2021
Contact (Secretariat)

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Branch Committee

Members

- Prof. David Bommes, University of Bern (president)
- Prof. Paolo Favaro, University of Bern
- Prof. Pascal Felber, University of Neuchâtel
- Prof. Bernard Ries, University of Fribourg
- Prof. Jacques Savoy, University of Neuchâtel
- Prof. Ulrich Ultes-Nitsche, University of Fribourg
Networking

- During your studies: Fachschaft
  - Fr: Fachschaft of Informatics (http://student.unifr.ch/informatics)
    They always search new members!

- Getting insider help: Mentors
  - Mentors (https://www.inf.unibe.ch/studium/mentors/index_ger.html)

- After your studies: Alumni
  - Joint Alumni Association in Computer Science (JAACS) (https://www.jointalumni.ch)
Questions?

We hope your studies will be interesting and successful!