

**MASTER** IN  
COMPUTER  
SCIENCE

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

Information Event in Bern  
Prof. David Bommès  
September 16<sup>th</sup>, 2022

[mcs.unibnf.ch](https://mcs.unibnf.ch)

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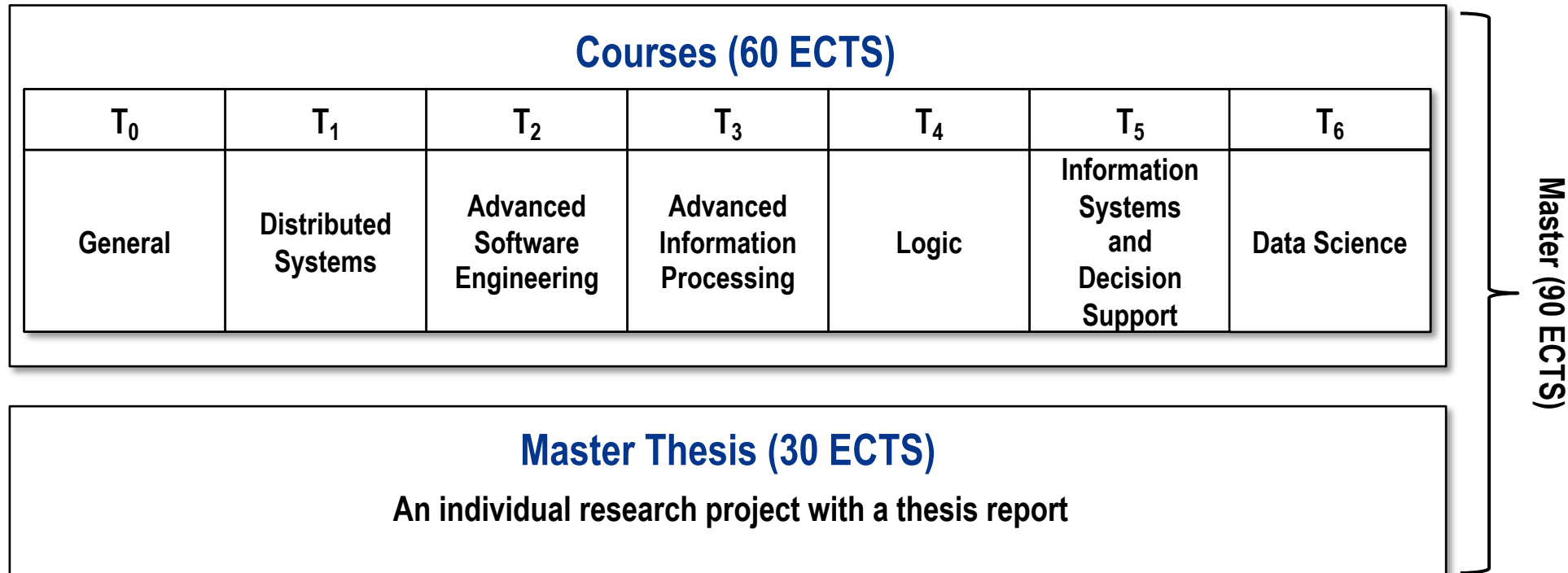
# 3 Universities – 1 Campus

- ▶ 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

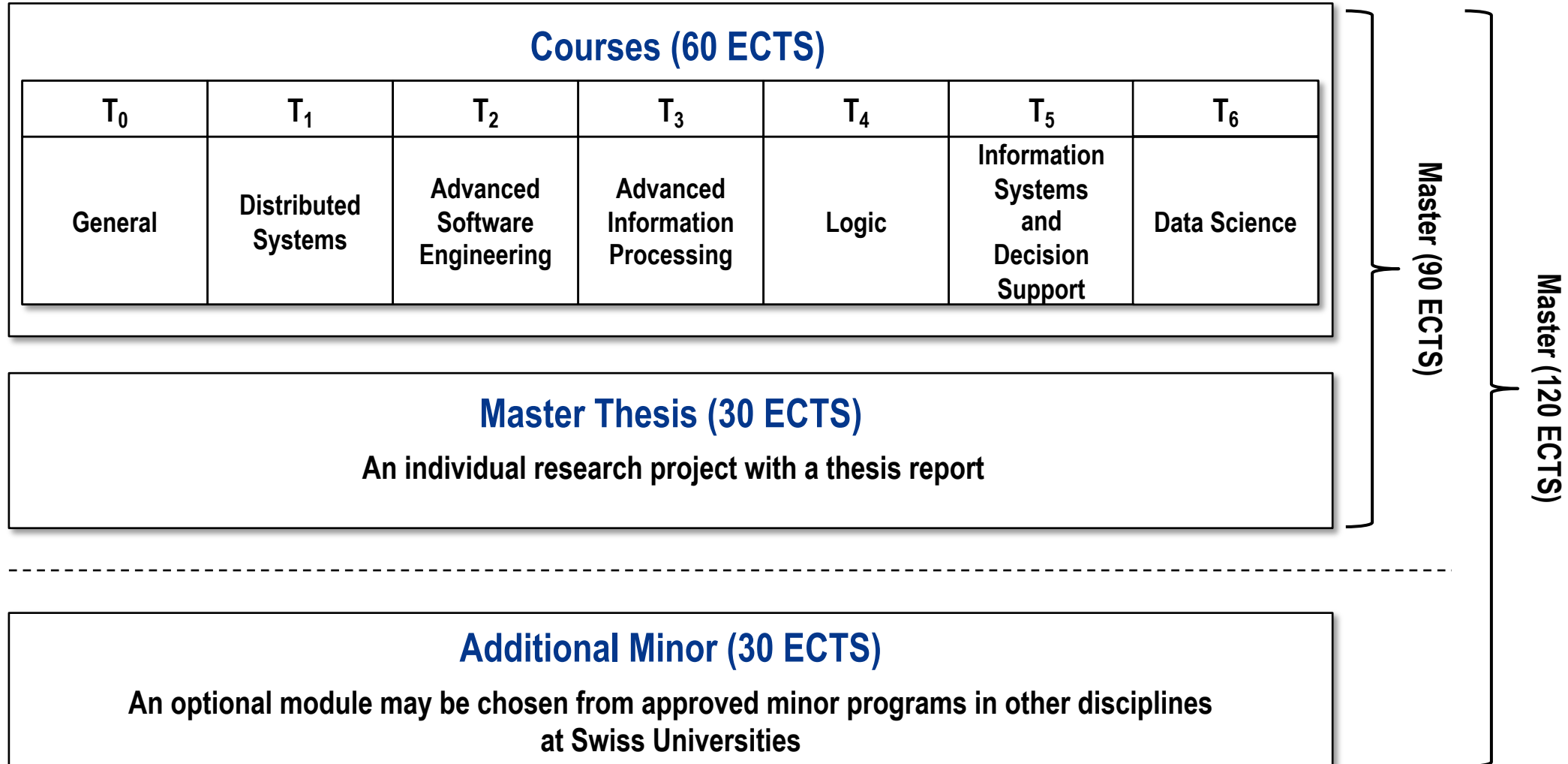


# 1. JOINT MASTER PROGRAM

# Structure of the Master Studies



# Structure of the Master Studies



# 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**

**Convention de branche BENEFRI en  
Informatique**

*du 23 février 2010*

**BENEFRI – Universitäten Bern,  
Neuenburg und Freiburg**

**Fachkonvention BENEFRI in  
Informatik**

*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

**BENEFRI – Universités de Berne,  
Neuchâtel et Fribourg**

**Annexe du plan d'études pour  
l'obtention du Master en Informatique**

*du 18 juillet 2016*

**BENEFRI – Universitäten Bern,  
Neuenburg und Freiburg**

**Anhang zum Studienplan für die  
Erlangung des Masters in Informatik**

*vom 18. Juli 2016*



# 3. ORGANIZATION AND STUDENT'S TODO LIST

# Administration Systems

- ▶ Website
  - ▶ information about the program (<https://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>, click on “Login”)
- ▶ Student management system (Academia)
  - ▶ students are administrated with Academia (<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 30<sup>th</sup>
  - ▶ spring semester: February 28<sup>th</sup>
- ▶ during the semester: complete the travel regulation (BeNeFri forms) available at <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 31<sup>st</sup>
  - ▶ spring semester: June 30<sup>th</sup>

# 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>)
  - ▶ autumn semester 2022: **October 14<sup>th</sup> 2022**
  - ▶ spring semester 2023: **March 17<sup>th</sup> 2023**
  
- ▶ Registration for exams (<https://mcs.unibnf.ch/admin>)
  - ▶ autumn semester 2022: **January 2<sup>nd</sup> 2023**
  - ▶ spring semester 2023: **May 12<sup>th</sup> 2023**
  - ▶ repetition 2023: **August 4<sup>th</sup> 2023**
  
- ▶ Reimbursement of travel expenses (<http://www.unifr.ch/benefri>)
  - ▶ autumn semester: **January 31<sup>st</sup>**
  - ▶ spring semester: **June 30<sup>th</sup>**

# 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>
  - ▶ Fr: <https://www3.unifr.ch/apps/legal/de/document/1424425>
- ▶ Student management systems used in the complement
  - ▶ Be: KSL (<http://www.ksl.unibe.ch>)
  - ▶ Ne: Academia (<http://www.unine.ch/is-academia>)
  - ▶ Fr: MyUnifr (<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 to do exactly 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<sup>th</sup>
    - ▶  spring semester: February 28<sup>th</sup>

# 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/>
- ▶ 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)?
  - ▶ ...

# Contact (Secretariat)

## Program Coordinator

**Dr Andreas Humm**

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# Branch Committee

## ▶ Members

- ▶ Prof. David Bommès, University of Bern (president)
- ▶ Prof. Christos Dimitrakakis, University of Neuchâtel
- ▶ Prof. Paolo Favaro, University of Bern
- ▶ Prof. Pascal Felber, University of Neuchâtel
- ▶ Prof. Bernard Ries, University of Fribourg
- ▶ Prof. Ulrich Ultes-Nitsche, University of Fribourg



# Networking

## ▶ During your studies: Fachschaft

- ▶ Be: Fachschaft Mathematik-Informatik Bern (<https://www.fsmib.ch/>)
- ▶ Fr: Fachschaft of Informatics (<http://student.unifr.ch/informatics>)  
**They always search new members!**

## ▶ 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!