EPFL

Welcome Day IC Master programs

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Program Director

September 16, 2022
Room CM 1

École polytechnique fédérale de Lausanne

Agenda

- Curriculum
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  - Registration for courses and exams
- Projects
- Mandatory internship
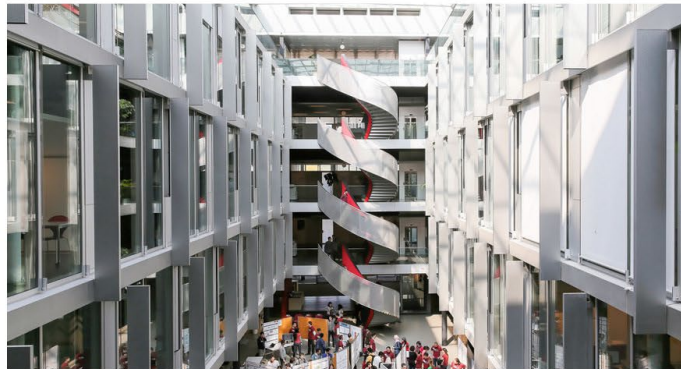- PDM / Master project
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School of Computer and Communication Sciences - IC

Master students

777

51+6 joint

Professors

Bachelor students

1220

295

PhD students

EPFL

School of Computer and Communication Sciences - IC

- Internationally highly ranked
- 51 (+ 6 joint) professors
- From peer schools
- Internationally recognized
- Strong industrial liaison
- Core + interdisciplinary science: Collaboration with Life Sciences, Mathematics, Microengineering, Electrical Engineering, etc.

IC Research at a glance

ATCS Algorithms & CS Theory

ICT Information & Comm. Theory

theory, foundations, fundamental limits…

AIML Artificial Intelligence & Machine Learning

DMIR Databases & Info. Retrieval

SIP Signal & Image Processing

DE Digital Education

learning from data, extracting knowledge, transforming data …

CAIS Architecture & Circuits

OSN OS Systems & Networking

PLFM Languages & Formal Methods

SC Security & Privacy

building real systems, all layers…

VC Visual Computing

HCI Human Computer Interaction

interfacing with humans …

You are about to …

- **Join a fantastic peer group of students:** take full advantage, make friends, form study groups, network, enjoy the diversity!

- **Interact with renowned and the next generation of scientists:** take full advantage, ask questions, challenge their thinking!

- **Get a great chance to learn and prepare for life:** explore new fields, learn new concepts, think outside the box!

- **Explore your abilities and push your limits:** in your classes, in your projects, in your extracurricular activities!

- **Make a unique contribution:** through your projects and personal interactions!

Curriculum

Courses, projects and internship for IN, SC, DS

Semester project 12 credits	**+** **Project in SHS** 6 credits	**=** **18 credits**
Group 1: Core courses 30 credits	**+** **Group 2: Optional courses** 42 credits	**=** **72 credits**
Internship in Industry*	**+** **Master project (PDM)** 30 credits	**=** **30 credits**

Total   120 credits

*   The internship can also be combined with the PDM.

▪ **IN-SC:** Specialization or minor possible (30 credits included in the 72 credits of courses).

▪ **DS:** Minor possible – no specialization (30 credits included in the 72 credits of courses).

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Courses, projects and internship for Cyber

Semester project 12 credits	+	**Project in SHS** 6 credits	=	**18 credits**
Group 1: Breadth Courses 30 credits	+	**Group 2: Depth and Optional Courses** 42 credits	=	**72** credits
Internship in Industry*	+	**Master project (PDM)** 30 credits	=	**30 credits**

Total   120 credits

*   The internship can also be combined with the PDM.
** 30 credits of courses must be taken in the "depth requirement" (from Group 1 and 2)

- Semester and master project must be in the field of cyber security.
- No specialization possible.

Courses, projects and internship for Cyber

EPFL	1st semester mandatory in Lausanne
ETHZ	• one semester in Zürich • 20 credits minimum • 35 credits maximum

- Students cannot take equivalent courses at EPFL and ETH Zurich.
- Students will receive a stipend of CHF 2'500.- for their semester in Zurich (subject to approval by the IC Dean's office).

Both study plans (EPFL-ETH Zürich) are accessible on:
go.epfl.ch/master-cyber

Choice and length of the Master program

- **Change to another IC Master program (CS, SC, DS, Cyber)**

  - You have been admitted to a specific Master program, in which you have enrolled. Switching to another program (e.g., IN => DS; SC => Cyber) **only possible after the 1st semester** for the following September, **subject to online application** (deadlines: 15 December or 15 April) and acceptance by the Admissions Committee. Students should contact the Section for approval **before the start of 2nd semester.** After that, students cannot change their field of study.

- **Maximum length of the Master program**

  - For the Master cycle (before the Master project): **6 semesters (90 credits)**
  - For the Master program (including the Master project): **8 semesters (120 credits)**

- **A six-month internship during a semester is not counted in the maximum studies duration of 6 semesters.**

- **A semester "off" is not allowed**, unless special cases (e.g., medical reasons). If exceptionally approved for other personal reasons, the semester will be counted in the studies duration.

Specializations

- A specialization is a combination of courses that allow a student to pursue a particular aspect of interest in their field of study.

- Equivalent to 30 ECTS acquired from courses listed in Group 1 (Core) and/or Group 2 (Options) in the selected specialization.

- IN and CS can choose **either** a specialization or a minor. DS and Cyber and students **cannot enroll** in a specialization.

- Students can only enroll in **one specialization**.

- Deadline to register is **beginning of 3rd semester** of Master cycle.

List of specializations:

- Computer Engineering
- Data Analytics
- Foundations of Software
- Cyber Security
- Networking and Mobility
- Signals, Images and Interfaces
- Software Systems
- Wireless Communications
- Computer Science Theory
- Internet Information Systems

More information:
go.epfl.ch/IC-master-specializations

Minors

- Minor group of obligatory or optional courses offered by another section.

- Equivalent to 30 ECTS which replace 30 ECTS in Group 2 (options).

- IC Master students cannot enroll in the IC minors (IN, CS, DS, Cyber, CS).

- Only exception DS students who can enroll for the Cyber security minor.

- Cyber security students cannot enroll in a minor.

- Deadline to register is end of **1st semester** of Master cycle.

- **Think carefully about your choice of a minor** as there may be implications with recuperating credits if you decide to drop it later.

Some examples:

- Biocomputing

- Computational Science & Eng.

- Cyber security (DS only)

- Financial Engineering

- Management, technology & entrepreneurship

- Mathematics

- Quantum Science & Eng.

- Neuro-X

- *and many more …*

More information:
go.epfl.ch/IC-master-minors

Courses outside the study plan

- 15 credits maximum are allowed for the whole master program. Out of these 15 credits, 12 credits maximum of "non-technical courses" (HEC, MTE) are allowed.

- The CS- and COM- codified courses appearing in the study plan of the other IC Masters are not considered as outside the study plan and can be taken without prior authorization request.

- Students **enrolled in a minor cannot take courses** outside the study plan, except for CS- and COM- codified courses given in IC.

- Authorization must be requested to take courses outside the study plan **before** registering in IS-Academia. Requests should be sent to:
  - ➤ **Antonella Veltro** (IN students)
  - ➤ **Elise van Eijs** (Cyber students)
  - ➤ **Carole Dauphin** (SC and DS students)

- Please note that you cannot register for course with limited attendance, as they are not available for students who don't have these courses in their study plan (e.g., many MTE courses).

Bachelor courses as admission conditions

- If you have bachelor courses to catch up as an admission condition, please take into account that these are **prerequisites** for the successful completion of the master courses.

- Therefore, **priority must be given for these bachelor courses**: they need to be **completed during the 1st year**, as admission to the master program is conditional on the acquisition of these bachelor courses.

- These credits will not count for your master degree.

Tips to build your study plan

- This is to help you organize your studies, no one will check.

- Look at the course offerings (takes time but you have to do it). Go see the courses during Week 1 and then decide (don't wait until Week 10 to make your choice). Choose courses that interest you!

- Make sure you have enough credits in the different groups / where you need to take them.

- Do you want to do a minor or a specialization (not mandatory)?

- Master cycle over 3 or 4 semesters (or more)? Cyber security students when do you want to do your exchange semester at ETH Zurich?

- Create a spreadsheet balancing your courses, projects, etc. over the semesters. Think about when you want to do your mandatory internship.

- Your study plan will evolve, don't stay fixed on what you decided at the beginning of the Master.

Registration for courses and exams

- Deadlines for registration for course and exams in IS-Academia: **Friday, September 30, 2022**

- Registration for courses and projects is **mandatory** to be able to take the exams.

- No withdrawal authorized after the registration deadline for courses with limited-seat attendance.

- Last withdrawal from exams (for all forms of examinations – oral, written and continuous control): **Friday, November 25, 2022**

Exams and academic calendar

- Exam sessions
  - ➢ January/February
  - ➢ June/July

- There are **no deferred or make-up exam** sessions at EPFL.

- Should you fail an exam, you can take the course again the **following year only** or replace it with another course: go.epfl.ch/master-pass-conditions

- Important deadlines and information are available on: go.epfl.ch/academic-calendar

Projects

Semester project

- The semester project (12 credits) can be done during the autumn or the spring semester, whenever you want during the master, but before the master project (PDM).

- If the Professor proposing the project is not found on the list of authorized labs, the project has to be submitted for validation to the Section.

- Cyber Security students need to submit a form, as the project must be done in the field of Cyber security.

- Details can be found on the following webpage: go.epfl.ch/IC-master-semester-projects

Optional project

- You have the opportunity to do an optional project (8 credits).

- The optional project and the semester project **cannot be done during the same semester**.

- If you decide to carry out the optional project, we recommend to do it once you have completed the semester project (mandatory project).

- If the Professor proposing the project is not found on the list of authorized labs, the project has to be submitted for validation to the Section.

SHS project

- The SHS project (humanities) must be done:
  - ➢ Over two consecutive semesters, starting **only in the autumn**
  - ➢ Individually or in groups

- **You are strongly to enroll now!**

- If some students have difficulty in finding a project, especially ones in English, they can contact the SHS administrative team for assistance: scienceshumaines@epfl.ch

Mandatory internship

Mandatory internship

You can do your mandatory internship in one of the following forms:

	Short	**Long**	**Integrated PDM**
Duration	8 weeks	6 months (100%) *	6 months (26 weeks including 1 week vacation)
When	summer July 15-Sept. 15	spring: starting Feb. 15 autumn: starting July 15	spring: Feb 15- March 1 autumn: Aug 1-Oct 1 **
Where	industry	industry	industry
Supervision	validation by the Section	validation by the Section	supervised by an IC professor

* Be careful **no courses can be attended in parallel during a long internship**. Students are on a sabbatical leave.

** Cyber students: September 1 to October 1.

Mandatory internship

- International students are required to complete one full year before being able to undertake an internship. Earliest starting date: **summer/autumn 2023**.

- You will need to apply 4-5 months before start. An Information Session is held at the beginning of each semester. Next date: September 22 at 9 am in BC 420.

- Should you do two internships (short + long), only the first internship will be mentioned on the Diploma supplement.

- It is not possible to do two internships of six months.

- If you intend to pursue a PhD after your master, we recommend that you first do the internship in industry followed by the Master project in a lab at EPFL.

PDM / Master Project

PDM – Master project

IN, Cyber*, SC, and DS	
EPFL	4 months
Industry / Other University	6 months

Four possibilities:

➤ At EPFL, proposals from labs

➤ At EPFL, your own proposal to a Professor

➤ In industry

➤ In other universities

* For Cyber, the Master project must be in the field of cyber security.

EPFL

PDM – Master project (Conditionally)

- According to the rules, you may be authorized to do your Master project and acquire up to 8 missing credits of courses in parallel. However, this is only possible if you fulfill the following conditions:

  - ➢ You should not be at the end of the maximal duration of your studies (max. 6 semester of courses).

  - ➢ The Master project is done at EPFL or in the Lausanne vicinity.

  - ➢ Not possible if you have not completed the semester project.

Papers and attendance at conferences

- A semester or optional project done in a lab may give you the opportunity to write a paper related to it. Likewise for a Master project done in a lab, in industry, or at another university.

- If you have the opportunity to attend a scientific conference to present your work, the costs (registration, travel and accommodation) can be covered by the section <u>and</u> the lab (50%-50%).

- Your paper will be mentioned on the student achievement page: go.epfl.ch/IC-student-publications

Contacts

Your Peer Mentors!

Hafsa Aoutir
(IN)

Günes Ozgun
(IN)

Sepideh Mamooler
(IN)

Sébastien Ollquist
(IN)

Raphaël Attias
(DS)

Ghali Chraibi
(DS-SC)

Iris Kremer
(DS)

Kamila Babayeya
(Cyber)

Your Peer Mentors …

- To ensure your transition between your Bachelor and Master studies and discuss your choice of courses, help is available …

- You should have received an email to inform you about your Mentor

- Discussion by Zoom, or by email (individual or small groups of 2-3 students)

- For the meetings, please prepare:
  - ➢ Your preliminary plans for the 1st semester
  - ➢ Your list of questions

- Do not hesitate to reach out to your assigned Mentor or to ask questions!

Administrative Contacts

Section Computer Science and Communication Sciences

Prof. A.-M. Kermarrec
Associate Dean
For Education

Prof. Karl Aberer
Program Director
IN-Cyber

Prof. Serge Vaudenay
Program Director
SC-DS

Eileen Hazboun
Deputy Head
All programs

Antonella Veltro
Master IN

Carole Dauphin
Master SC-DS

Elise van Eijs
Master Cyber

Patricia Genet
Internships & PDM

Do not forget …

Our websites with a lot of useful information

Computer Science:
go.epfl.ch/master-IN

Communication Systems:
go.epfl.ch/master-SC

Data Science:
go.epfl.ch/master-DS

Cyber Security:
go.epfl.ch/master-cyber

Frequently Asked Questions:
go.epfl.ch/IC-master-FAQ

Be careful …

➢ It is your responsibility to read and understand the **rules and regulations** pertaining to your studies at EPFL

➢ It is also your responsibility to **read your emails**. This is only way we can contact you!

Registrar's Office (SAC)

➢ Please read carefully the emails sent by the Registrar's office (SAC) and Student Services.

➢ They will send you relevant information about your studies at EPFL including the important deadlines.

Let's set the example of a culture of respect

- Harassment, violence and discrimination are not tolerated here

- Provide and seek support

- Talk about it, bring up the problems

> **go.epfl.ch/tsn (Trust and Support Network)**

> Take the online training on Moodle: « Promoting Respect »

Let's all strive for a secure IT environnement

- Protect your passwords
- Be mindful of fishing campaign
- Only use a privileged account when required
- Protect your devices and credentials
- Keep your software updated at all time
- Minimise your risks when browsing internet

→ https://go.epfl.ch/ITSecure

GO.EPFL.CH/ITSECURE

Any Questions?

And last but not least ...

CLIC

IC Student Association

HELLO WORLD

Next edition:

September 29

Le Souper de Faculté

Next edition:

October 13

ICBD — IC BOOST DAY
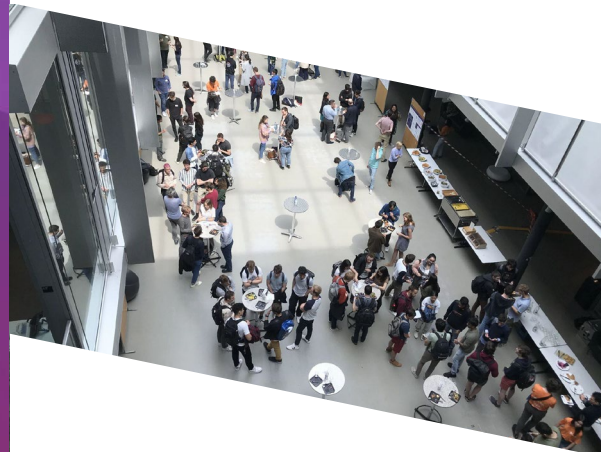
Next edition:

Spring semester

OUR COMMISSIONS

Follow us on our social media!!
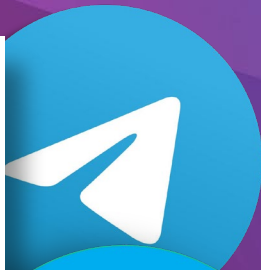
Have fun at the Welcome Drink

@15:30, BC Terrace