

# EPFL – Internships Microengineering and Robotics

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STI internship  
coordinator

- General context
- Administrative procedures

November 2024

# The internship: Excellent Opportunity !!!

- Students :



- ✓ **A Great incentive to ask oneself the right questions !**
- ✓ Familiarize with working life
- ✓ Immerse into Industry practice
- ✓ Future Hiring opportunity

- Companies :



- ✓ Benefit from highly qualified students
- ✓ A new insight on current issues, innovate !
- ✓ Evaluate futur employees

- EPFL :



- ✓ A direct link to industry
- ✓ A platform to start collaboration on the research level
- ✓ Feedback from industry to improve the education of our students

- ✓ The Internship in industry is a mandatory step of the Master degree
- ✓ Possible formats to validate this obligation

Models:      **STAP:** Detached internship but credited with the master's project  
                 **PDME:** Master project in the industry

	Models	Duration	Periods
MT & Robotics	STAP	Min. 8 weeks	After bachelor, after MA2 or MA3
	PDME	25 weeks	During the Master project

## ■ Internship

- ✓ Minimum duration of 2 months, up to 6 months
- ✓ Immersion into industry
- ✓ Familiarize with company processes
- ✓ Acquire specific competences
- ✓ Apply transversal skills
- ✓ Evaluation report by student and industry supervisor



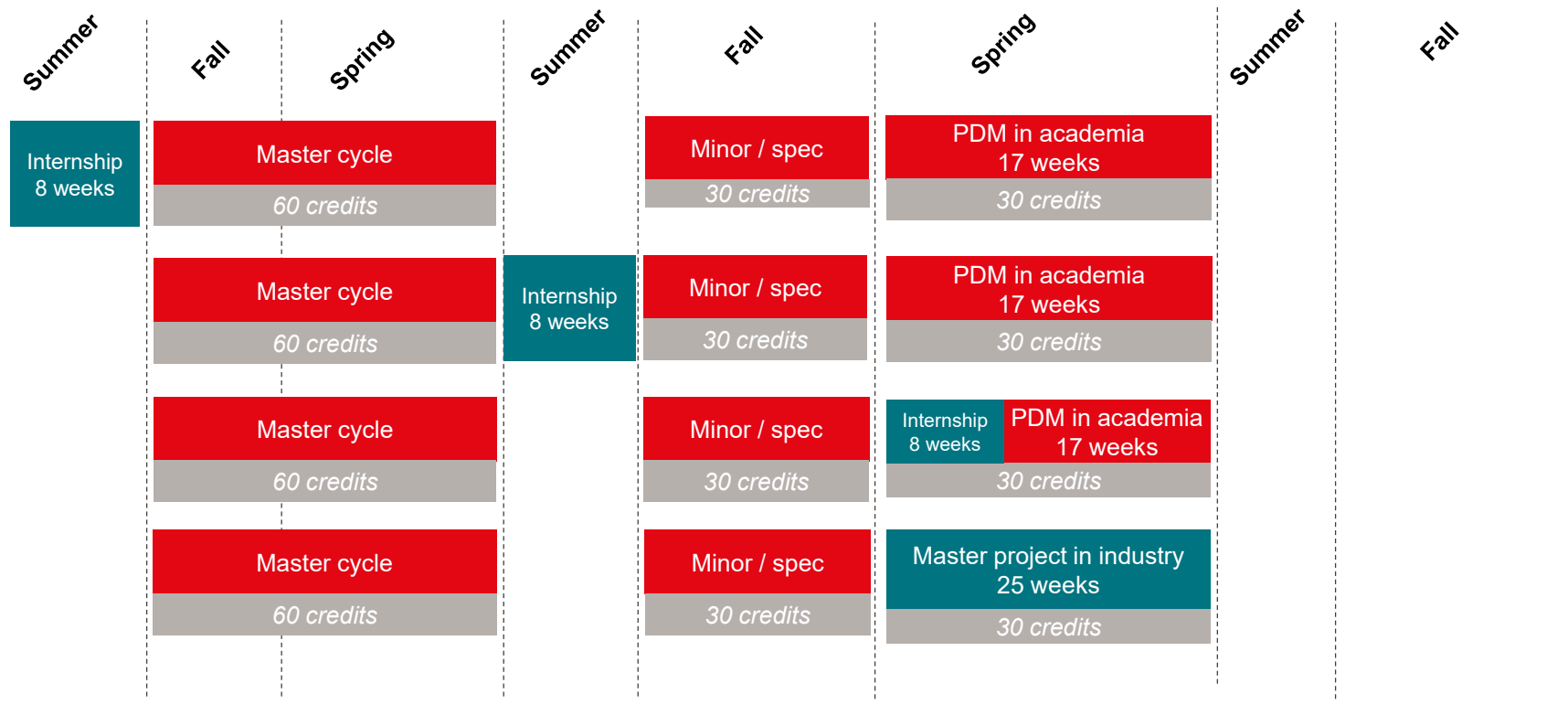
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## ■ Master project in industry

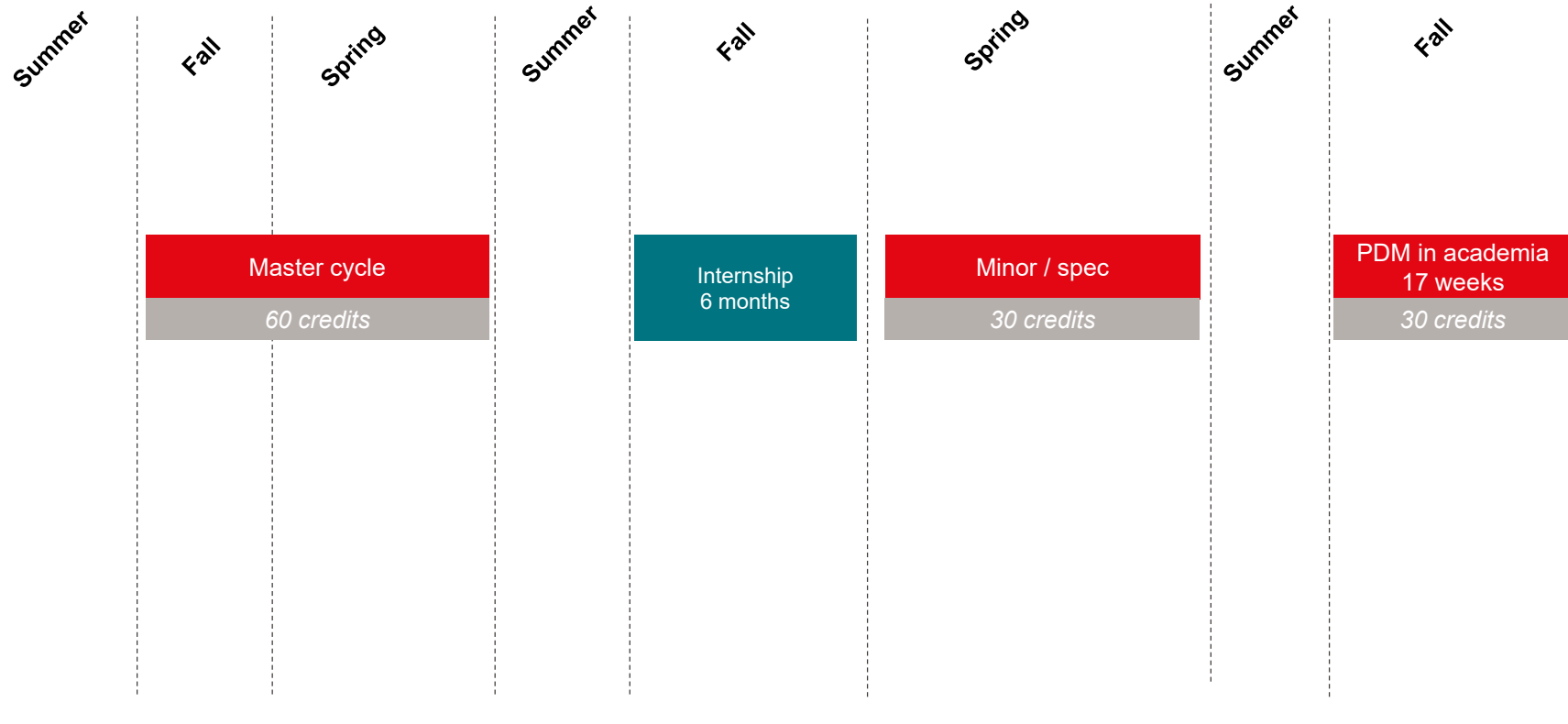
- ✓ A research project in the company
- ✓ Student applies the competences acquired during his master
- ✓ Supervised by a Professor **from his section**
- ✓ Written report and oral defense
- ✓ **Regular feedback to Professor**
- ✓ 25 week duration (+1 week vacation)



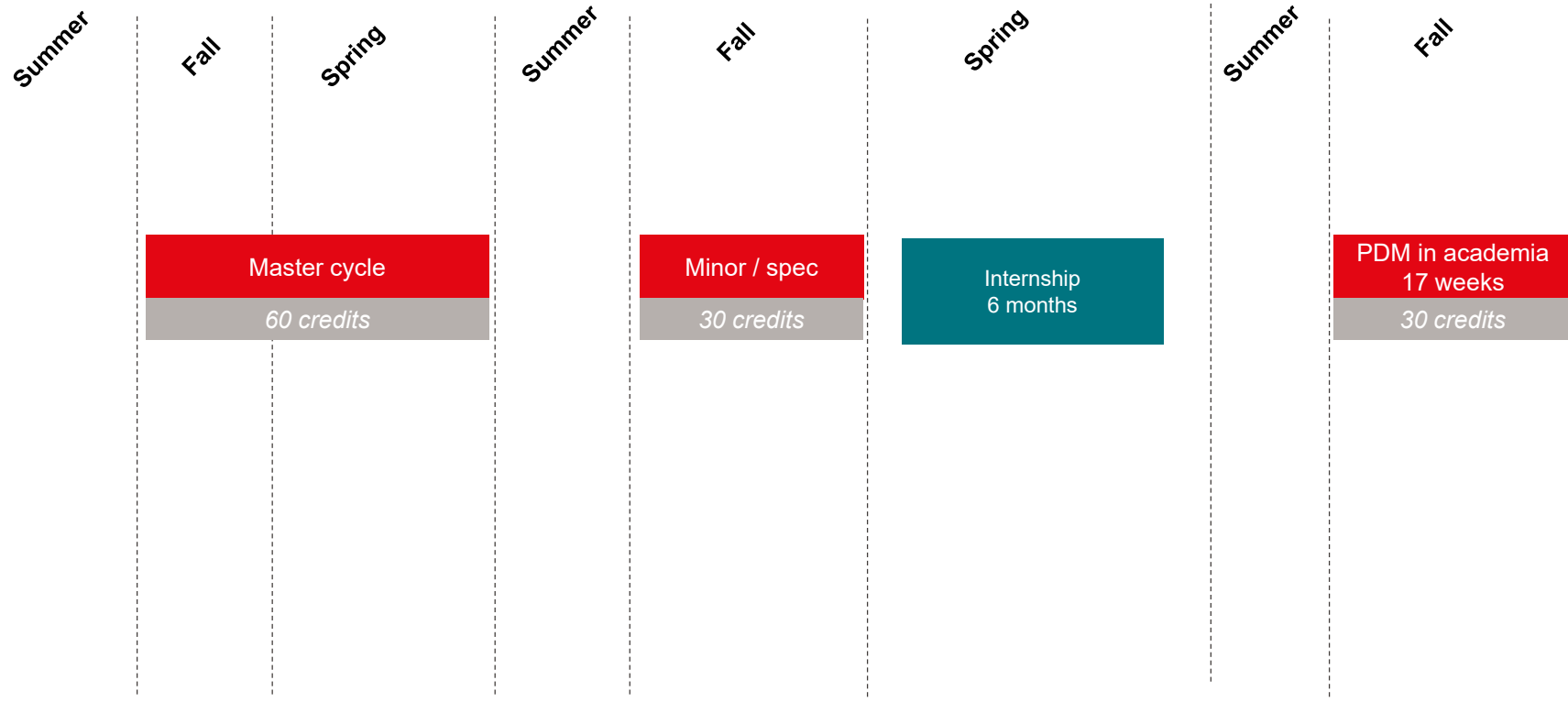
# When to place your internship / Master thesis ?



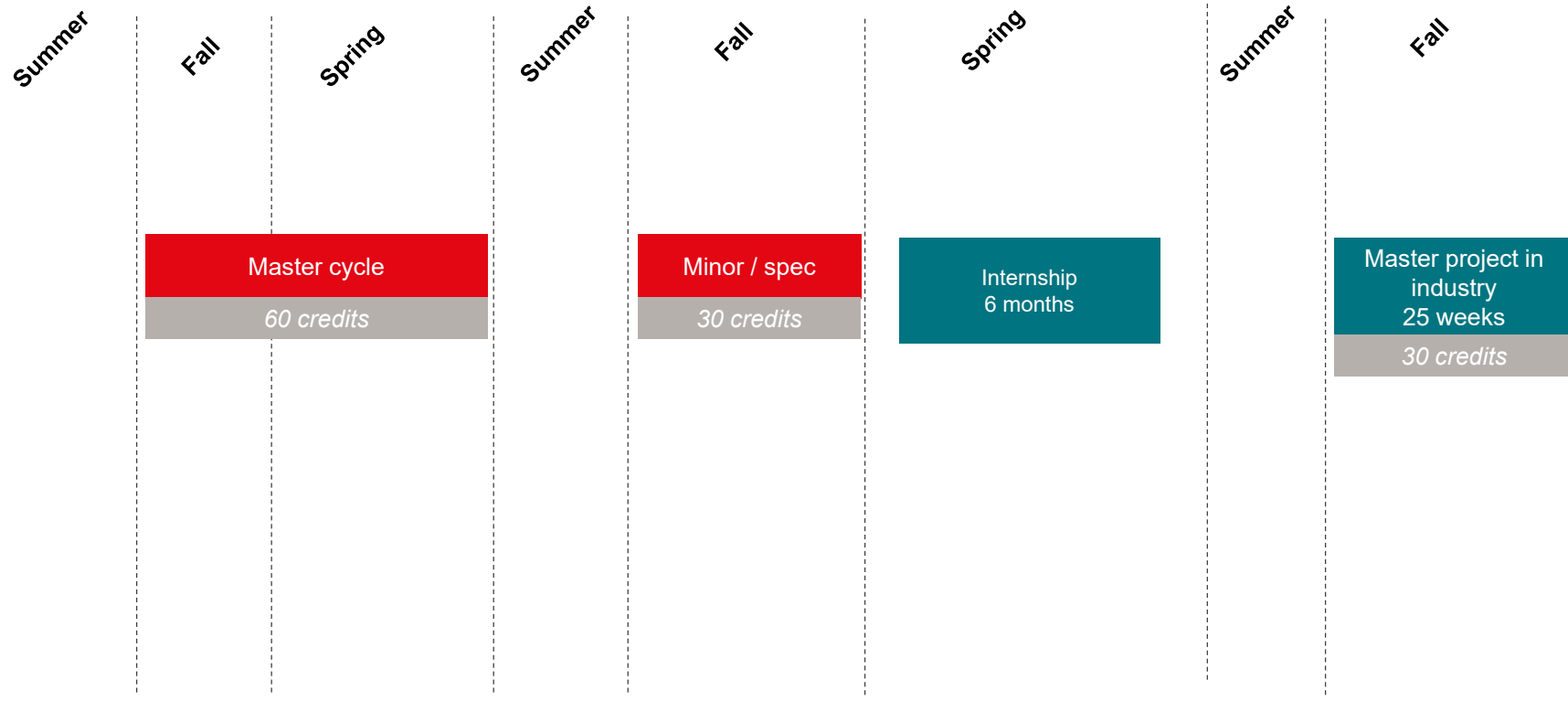
PDM in academia in foreign Universities: 25 weeks



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- If you have finished your bachelor and would like to take an interim year to do your mandatory industry internship for your master, the following academic rules and FRAC status' apply:

	Summer	Fall semester	Spring semester	Summer	Fall Semester
Option 1		Internship up <i>To 6 months:</i> FRAC "INTERNSHIP" Registered in Ba5	Start master FRAC "present" Registered in Ma2		
Option 2		Internship up <i>To 6 months:</i> FRAC "INTERNSHIP" Registered in Ba5	No master start FRAC «on leave» Semester does not count		Start master FRAC "present"
Option 3		Start master FRAC "present" Registered in Ma1	Internship up <i>To 6 months:</i> FRAC "INTERNSHIP" Registered in Ba6		
Option 4		No master start For motivated reasons FRAC «on leave»	Internship up <i>To 6 months:</i> FRAC "INTERNSHIP" Registered in Ba6		Start 2 <sup>nd</sup> master semester FRAC "present"



In option 4 the fall semester will be accounted to your master studies, except if you are doing your army or civil service

## ■ Maximum duration of studies

The maximum duration of course semesters

- ❑ Maximum amount of study semesters allowed: 6
- ❑ Extended by one semester if the internship is done during a semester

The Master's project must be successfully completed within two semesters of the successful completion of the Master's cycle (including the industry internship). Should the Master's project (of a duration of 25 weeks and in industry) serve to validate the engineer's internship, the deadline is extended to three semesters.

## ■ Internship in parallel to taking courses

Performing the industry internship in parallel to taking master courses is generally not encouraged. Exceptions can be granted by the section under the following conditions:

- ❑ The student can physically follow the registered courses and attend the exam session
- ❑ The maximum amount of credits does not exceed 5 ECTS
- ❑ The company accepts that the student takes courses

## ■ Failed Master thesis in industry

Students who fail their master thesis in industry during the first attempt are asked to perform their 2<sup>nd</sup> attempt in a lab at EPFL

# What is considered «Industry»?

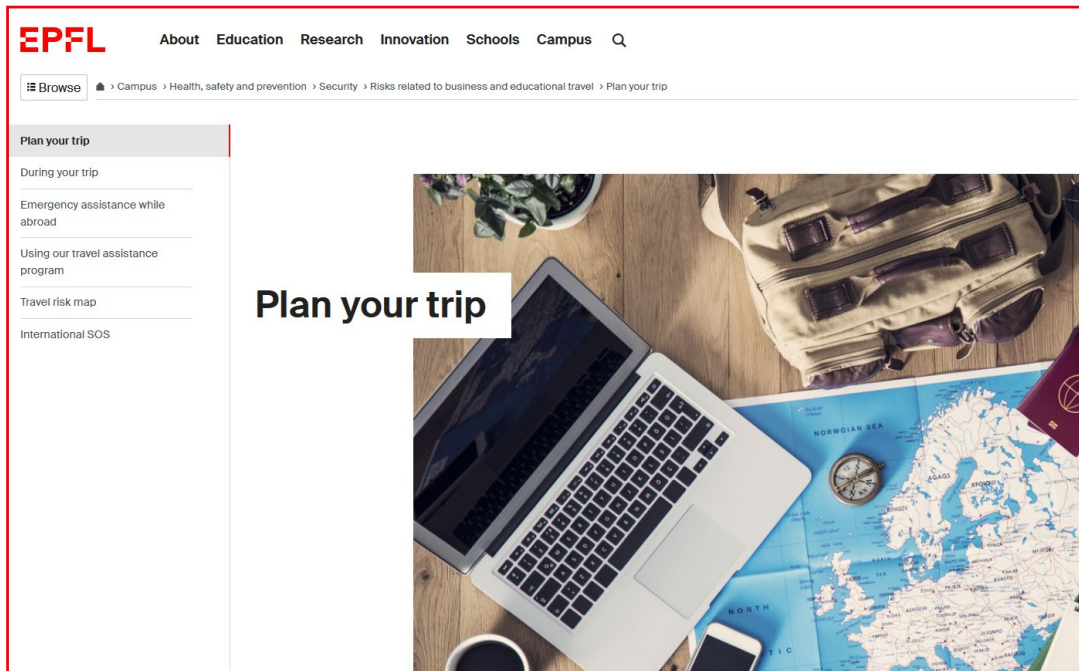
- Every company or start-up offering a workplace outside of an EPFL laboratory and outside of a university
- Every Research Organisation not delivering academic credits



- There is no official regulation in Switzerland to pay a monthly salary for an internship.
  - Salaries are mostly ruled by offer and demand
  - Often the salary is dependent of the company's size and status
  - EPFL recommends a typical monthly salary around **2'000** SFr. However, there is no obligation of the company to comply with this.
- In Case of a Master Project in Industry, remuneration can be handled more freely (no monthly salary, compensations, bonus at the end, ...)

Some recommendations for an internship abroad :

<https://www.epfl.ch/campus/security-safety/en/security/travels-abroad/plan/>



**EPFL** About Education Research Innovation Schools Campus Q

Browse > Campus > Health, safety and prevention > Security > Risks related to business and educational travel > Plan your trip

### Plan your trip

- During your trip
- Emergency assistance while abroad
- Using our travel assistance program
- Travel risk map
- International SOS

**Plan your trip**

## (not required for Master Projects without a monthly remuneration)

- The federal council allows foreign students of Swiss academic institution to perform a mandatory internship during their studies: <https://www.admin.ch/opc/fr/classifiedcompilation/20070993/index.html#a39>
- Students with Non-EU/EFTA passports require a valid **work authorization** to do their internship or Master project with monthly salary in Switzerland or EU countries.
- EU students performing a 3-6 month internship have to be simply **announced** at the cantonal office
- It is the company's responsibility to request this authorization at the proper working office of their canton/country ([Link](#) to obtain a mandatory internship certificate).
- It requires up to 8 weeks to obtain this authorization from the cantonal offices.
- We recommend that students from non-EU/EFTA countries inform the companies in their motivation letter of these regulations.

*Example: "As I'm a non-EU/EFTA resident, your company would be required to ask for a temporary work authorization. Please be advised that the federal council allows foreign students of Swiss academic institution to perform a mandatory internship during their studies: <https://www.admin.ch/opc/fr/classified-compilation/20070993/index.html#a39>. As I will stay registered at EPFL during this internship, and since this internship is a mandatory part of my Master education, the delivery of this document does not fall into the quota limitation of each canton and is therefore straightforward".*

# EPFL – Internships Microengineering and Robotics

Hind Klinke  
STI internship  
coordinator

- Administrative procedures

November 2024

- It is the student's responsibility to find an appropriate internship to validate his Master degree.
- No responsibility can be taken from EPFL side if no internship has been found by the student
- The student can find an internship position by himself, but the subject needs to be approved by the section deputy
- EPFL offers an internship portal on which students can find an alternative to their personal quest for finding an internship.
- Access to the EPFL portal is given through the student's IS-Academia account





## ■ How to identify them ?

Company submissions are listed on the internship portal once validated by each section. Internships with a sustainability label will be identifiable with the following logo:



## ■ Evaluation report

The evaluation process of the internship is similar to a regular internship but the student is asked to write a **half-page report** to comment if the sustainability goals have been reached. This report does not influence the validation of the internship for the master curriculum.

	Optimisation du potentiel énergétique d'une installation de traitement des granulats	03.10.2022	Holcim (Suisse) SA	Aigle	
	Multi-Frequency, Multi-Modal transduction of Piezoelectric Micromachined Ultrasonic Transducers (PMUTs).	03.10.2022	IMEC	Leuven, Belgium	
	Aerospace smart sensors - R&D embedded software developer	03.10.2022	Meggitt SA	Fribourg	
	Comparing NTA/IDS(Suricata+QosmosDPI, nProbe Cento+nDPI, Mellanox/Nvidia @BF2 ARM AR QosmosDPI) Solutions @100Gbps	02.10.2022	Universitaet Bern	Bern 3012, HochschulStrasse 6	
	Simulation Based Aerodynamic Performance Evaluation	30.09.2022	Sauber Motorsport AG	Hinwil, Switzerland	
	L'exploitation optimale des installations techniques dans l'environnement bâti	30.09.2022	energo	Lausanne	
	L'exploitation optimale des installations techniques dans l'environnement bâti	30.09.2022	energo	Lausanne	

<https://forum-epfl.ch/2024/en/>



07 - 11 Oct 2024  
SwissTech Convention Center

# The largest recruitment fair by students in Europe

42nd Edition

SwissTech Convention Center

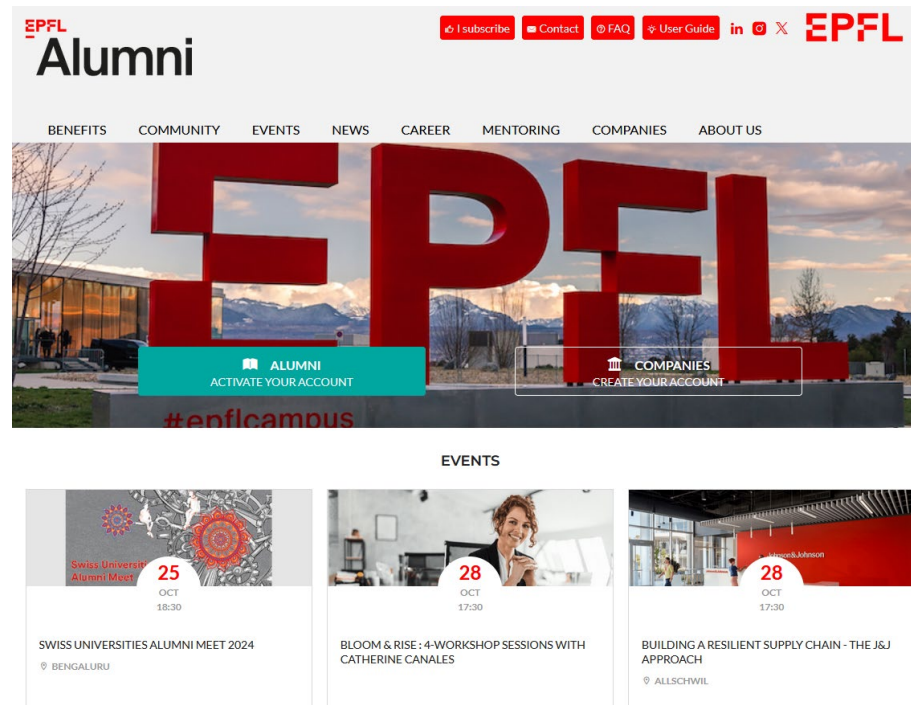
07 - 11 Oct 2024

Discover the program

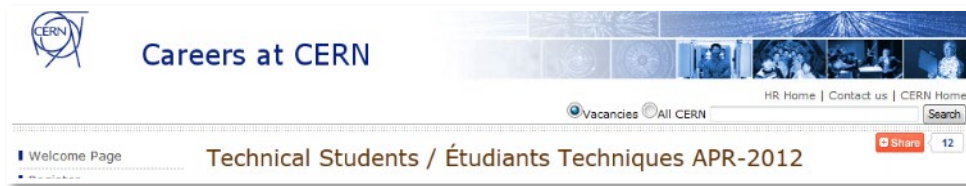
EPFL students have access to the Alumni network

Website: <https://www.epflalumni.ch/students/>

Pocketcampus app



- Personal contacts, family, friends
- Topic related agencies and organizations
- Company websites



- EPFL Professors, especially for master projects in Industry



Every Internship found outside the IS-A portal has to be approved by your section. Please send a short but detailed description to Mr. Abdeljalil Sayah as soon as you have found an opportunity

- Browse through the internship offers of your Master program
- Apply for a position by uploading 2 mandatory documents:
  - ✓ CV
  - ✓ motivation letter
- Applications are sent on a weekly basis to the companies (every Monday 14h00)
- Wait for the company to make its selection process (up to several weeks)
- If no response after 2 months, contact:
  - ✓ The company if the contact is visible
  - ✓ Your internship coordinator if not
- You will be contacted by the company if your application was successful  
(Most selection processes involve an interview and several e-mail exchanges)
- You MUST accept only one offer and reject all the others within the next 3 working days.
  - ✓ No withdrawal from the accepted position!
  - ✓ Kindly notify all other companies you had privileged contact with



✗ Do not use the portal for personal internship search

✗ Apply always through the portal for mandatory internship

- **2 important documents**

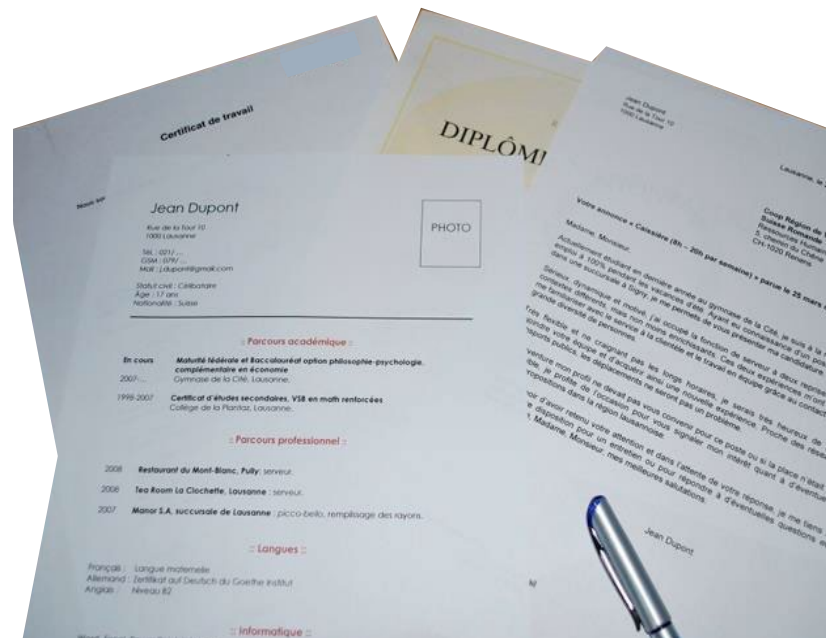
- ✓ Motivation letter
- ✓ Curriculum vitae (CV)

The criteria for interview selection by the company is mostly based in these documents. Reference letters can be added as well. Your motivation letter should specifically address the company and the proposed subject

- **Language** : you should use the language of the offer

- **To be avoided:**

- ✓ No motivation letter
- ✓ copy-paste errors
- ✓ Wrong addressing



**Most companies would like to meet the students for an interview prior to making their final choice**

- Be prepared for the interview and demonstrate a professional attitude
- Non EU/EFTA students: Inform the company about the required work authorization
- If the living allowance is mentioned in the description, do not bargain. If not mentioned, inquire for it.
- Follow up: After the interview, write a short e-mail as feedback of your interview to the company.
- For Master projects: Do not accept a position without having confirmed the eligibility of the project and settled the details with the academic supervisor.



## EPFL proposes several modules of 1h45:

- Comprendre le recruteur / Understanding recruiters
- Les rubriques d'un CV efficace / Crafting an effective CV
- How to leverage the Alumni network to find an internship or a job ? (eng only)
- La lettre de motivation qui permet de faire la différence / crafting a standout letter of motivation
- Les clés de l'entretien d'embauche / Mastering the job interview
- Influencing and convincing (eng only)
- 10+ techniques pour une communication et une organisation efficace  
10+ successful techniques for communication and organization at work

Information and mandatory registration here: <https://epflcareer.ch/en/>



- The internship agreement specifies the commitments and responsibilities of EPFL, the company and the internship student.

**This agreement must be signed for all engineering internships.**

- No other tripartite agreement involving EPFL will be signed by the section.

Engineering Internship Agreement

## Engineering Internship Agreement

The present agreement is entered into by:

The Host Company  
(*company and address*)

represented by

(*name and title of representative*)

(hereinafter referred to as « Host Company »)

AND

L'École Polytechnique Fédérale de Lausanne, 1015 Lausanne (EPFL)

represented by EPFL's representative:

(*name, surname*)

(hereinafter referred to as "EPFL Representative")

AND

The student

(*name, surname*)

(*address*)

enrolled for the Master . Year .

(hereinafter referred to as « Student »)

- Submit a short but detailed description of your internship to Mr. Abdeljalil Sayah.
- Once you have signed the tripartite internship agreement, enter your project details on the internship portal by creating a new internship proposal, and upload a pdf copy of the fully signed agreement.

Internships - Showroom (stu)

+ You found a work placement, which was not proposed in IS-Academia. Please, do register it clicking [HERE](#).

Nombre de places disponibles : 239 84 displayed item(s) / 84 available item(s)

Context : -- ☐ All criteria/words should be contained

Action	Internship	Company (t	Assignment location	Févr- Sept (P1)	Juil- Févr (P2)	Juil- Sept (P3)	Internship number	Format	Registered	Places	Prof	Creation date of the internship
			<div> <div> <div></div> <div>=</div> <div></div> </div> <div>[all]</div> </div>						25	240		
	Industrial Analytics, IoT, and Mobiles	Schindler Aufzüge AG	Ebikon	✓			19094	Internship	0	1		20.09.2017
	Temperature mapping and monitoring of a complex device	CERN - European Organization for Nuclear Research	CERN, Geneva, Switzerland	✓			19088	Internship	0	1		20.09.2017

In case your internship is done during an academic semester, make sure to update your FRAC according to your status:

- Semester: (choose the right one: MA1; MA2; MA3)
- Status : Internship (authorized by the section)
- Mention in the comments « Detached internship but credited with master Project (STAP) »



If you take courses in parallel to your internship,  
your FRAC status should be «present»

- A change of residence or relocation might be necessary
- Setting up a Master thesis in industry takes several weeks/months
- Time consuming formalities might be required:
  - ✓ Confirm an internship
  - ✓ Visa, Work authorization and Residence permit (typically 4-8 weeks)
  - ✓ Collection of the signatures of the internship agreement
  - ✓ New validation of your passport
  - ✓ ...
- It is your responsibility to settle these formalities prior to the Internship beginning

- In case of problems (accident or illness, personal problems, conflict with supervisors, ...), contact urgently the STI Internships coordinator or your section.
- No written report of the student is requested by EPFL (except for credited internships in EE), but can be requested by the company.
- To validate your internship, an evaluation form has to be filled out by the student and the supervisor in the company (sent out automatically 2 weeks prior to ending).



✓ Application of scientific and technical knowledge

✓ Planning and management of work tasks

✓ Integration in the professional world

✓ Communication

✓ Independence

	E	G	S	I	N	Comments
<b>Application of scientific and technical knowledge</b>						
Technical skills and knowledge						
Ability to resolve complex problems						
Mastery of domain-specific methodologies						
<b>Planning and management of work tasks</b>						
Definition of work objectives and management of priorities						
Evaluation of resources required						
Work planning, monitoring of activities, and management of emergent issues						
<b>Integration in the professional world</b>						
Respect for the organizations procedures/ rules and for their profession's ethical codes						
Capacity to work in teams						
Quality of the work delivered						
<b>Communication</b>						
Written communication (structure, clarity, coherence of reasoning)						
Oral communication (clarity, reasoning, self-confidence)						
Interpersonal skills and engagement, including in a multicultural context						
<b>Independence</b>						
Ability to present and defend her/his own ideas						
Capacity to access sources of information and to evaluate them						
Capacity to self-evaluate and to respond constructively to feedback						
<b>Overall Evaluation</b>						

- Find an internship position and in case you have found it by yourself, without using the IS-A portal, have the subject validated by **Mr. Abdeljalil Sayah**.
- Inform the **STI coordinator** that you have found your internship.
- Cancel all ongoing applications by gently notifying the companies. This step is extremely important to keep a good relationship with future employers.
- Transmit the **EPFL internship agreement** to the employer and have it filled out and signed by the employer and the section deputy.
- Transmit a copy of the agreement to the section secretariat.
- If you are a non-Swiss/EU citizen, ask the company to request a work authorization for the duration of the internship. ([Link](#) to obtain a mandatory internship certificate.)
- Once all the details of your internship have been settled, **enter or edit the details of your internship on the IS-A internship portal**. Upload a copy of the signed internship agreement.
- If your internship takes place during an academic semester, make sure to **update your FRAC**.
- At the end of the internship, **fill out the evaluation report** that will be sent to you by e-mail. The evaluation procedure starts 2 weeks prior to the official ending of the internship. Both the student and the supervisor will fill out an evaluation report.



- ✓ Companies get in touch with research labs to propose master thesis topics

- ✗ Companies can hire students for internship proposals and accept the format change to master thesis projects without involving a Professor



- ✓ Students contact professors of their section to ask for existing industrial projects
- ✗ Students apply for internships on the IS-A portal and have it validated as master thesis projects by the company without involving the supervising professor

Compatibility with academic calendar

IP owner(s)



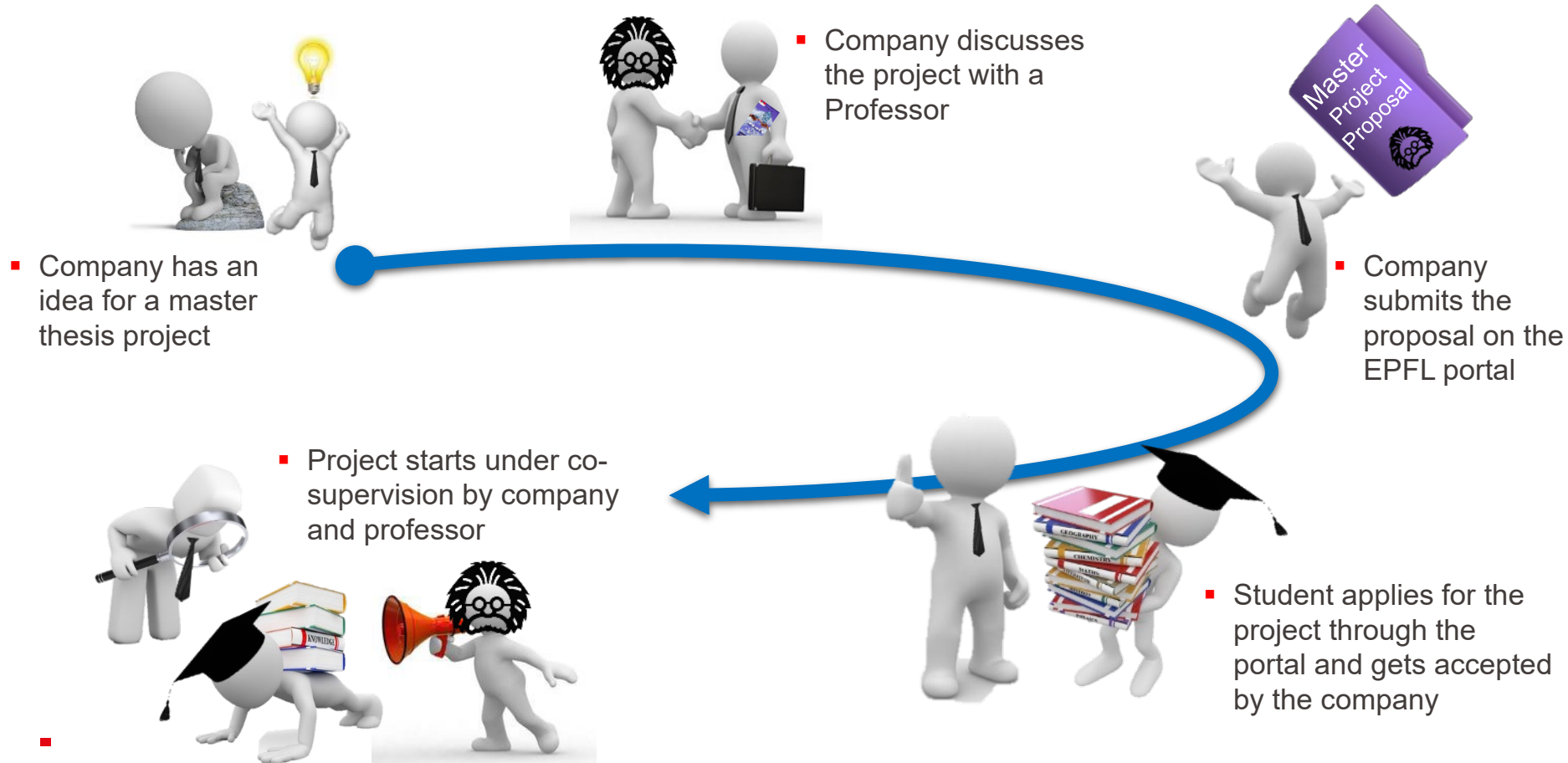
Confidentiality

Eligibility of candidate for master thesis



- ✓ Professors and teachers propose master thesis projects with known partner companies.
- ✓ Professors and teachers evaluate the academic content of proposals from companies before accepting it as master thesis projects.
- ✗ Professors and teachers evaluate the academic content of the student proposals without interacting with the host company





# EPFL Master thesis in industry – offers on the internship portal

36

Action	Stage	Date de soumission du stage	Entreprise	Localisation du stage	Label durable	N° du stage	Format	Inscrits	Places	Partagé (entr.)	Acceptés	Statut	Partagé (publ.)
								1570	1296		834		
	Three-dimensional fabrication with grayscale electron beam lithography	15.08.2019	CEPF			26604		1			1	★	
	Designing a fishnet harvesting buoy to find and tag ghost nets at the ocean surface in a nature-driven way for ocean cleanup and marine plastic mining	02.09.2024	CEPF / EMPA St-Gallen	St Gallen		49950	Stage	2	1	!	0	★	!
	Designing a fishnet harvesting buoy to find and tag ghost nets at the ocean surface in a nature-driven way for ocean cleanup and marine plastic mining	08.09.2024	CEPF / EMPA St-Gallen	St Gallen		50076	Stage	2	1	!	0	✓	!
	Digital, CFD-based twins to optimize fresh fruit cold chains from tree to table	04.10.2024	CEPF / EMPA St-Gallen	St Gallen		50074	Stage	2	1	!	0	✓	!
	Measurement of bunch length in a particle accelerator	27.08.2024	CEPF / Paul Scherrer Institut	PSI		49736	PDM coordonné	0	1		0	?	
	Stage d'Ingénieur Microtechnique	03.07.2018	CeQur Corporation	Marlborough MA USA		22140		1			1	★	
	Stage	06.07.2023	CERN	Genève, Suisse		44676		1			1	★	
	Internship	20.02.2018	CERN - European Lab. for Particle Physics	Geneva		20977		1			1	★	
	Approaches for the fabrication of silicon buried channels for the thermal management of monolithic pixel detectors	02.02.2017	CERN - European Organization for Nuclear Research			16799		1			1	★	
	Automation and Optimization of a Robotic System for Radio Frequency Cavities Inspection	23.06.2020	CERN - European Organization for Nuclear Research			30617		1			1	★	
	Contrôle et automatisation d'une station de compression d'hélium destiné à la cryogénie.	04.12.2017	CERN - European Organization for Nuclear Research	Cern (Centre Européen de Recherche Nucléaire)		20038		1			1	★	
	Development and integration of plastic connectors	23.09.2016	CERN - European Organization for Nuclear Research	1211 Genève 23		15594		1			1	★	
	Enhancement of Inspection and Maintenance Capabilities in Radioactive Environments through Legged Robots	26.07.2023	CERN - European Organization for Nuclear Research			44845		1			1	★	

-> Give priority to Master thesis proposals from laboratories of your section and proposals posted on the IS-A portal with confirmed academic supervisor

If you can't find a suitable topic this way, **consider doing an internship to validate your industry immersion.** If this is not an option, then proceed like this:

- Contact potential academic supervisors to inform them on your intentions
- Apply for positions and inform companies on your objective to do a master thesis (in motivation letter, during e-mails exchanges and interviews, ...)
- The academic supervisor should discuss with the company about the academic content and administrative formalities. Suggest the signature of the EPFL master thesis agreement (to settle IP and confidentiality).
- Insure a coordinated supervision and regular meetings between the company and the teacher during the project

- The master thesis agreement specifies the commitments and responsibilities of the supervising teacher, the company and the student.

This agreement **can be signed upon request of the teacher or the company**

- It defines IP and confidentiality aspects for any master thesis in industry without existing collaborations.
- It allows the academic supervisor to have access to the results of your work without having to sign a NDA.
- **As it is not mandatory**, amendments and changes requested by companies won't be accepted by the internship coordination or the legal department of EPFL.
- This document is only accessible to Professors and MER.

Agreement for master project

## Agreement for master project

### Important notice for the heads of EPFL laboratories:

This agreement shall not be signed:

- 1) **when the master project is part of a research project financed by the company.** In such a case, a research agreement shall be negotiated and executed in collaboration with the company and the Technology Transfer Office of EPFL (TTO) and the student will sign with EPFL an agreement on intellectual property and confidentiality.
- 2) **when the laboratory discloses to the Student source code or EPFL confidential information.** In such a case, the ownership on and the right to use EPFL intangible assets and the results of the Student shall be well analysed and discussed. Do not hesitate to contact TTO.

**In addition, this agreement may only be signed if it is fully compatible with the other projects within the laboratory.**

The present agreement is entered into by the three following Parties:

The host company

(company and address)

Represented by

(name and title of representative)

(hereinafter referred to as "Company")

AND

Ecole Polytechnique Fédérale de Lausanne, 1015 Lausanne (EPFL)

Represented by professor EPFL

- Find a master project in industry by contacting the professors of your section.
- A master subject can also be found through the IS-A Internship portal. In this case, it is mandatory to find a professor willing to supervise you before you accept the offer from the company.
- Official starting dates for master projects are determined at a school level. Other starting dates can be obtained on special request to your section.
- All administrative details of your master project in industry have to be settled between the employer and the professor supervising your work. A special Master project agreement can be signed on request by the supervising professor or the partner company.
- Once all the details of your Master project have been settled, **register your project in your study plan.**
- Update your FRAC

■ [General information](#) about Master's Projects

For further information, please visit the internship page of your section: <https://sti.epfl.ch/smt/internships/> or the EPFL webpage <https://go.epfl.ch/infos-stages>

Depending on your inquiry, you can contact the following persons:



Sebastian Gautsch

SMT  
Adjunct to the  
section Director



Abdeljalil Sayah

SMT  
Validation of internship subjects  
& signature of internship agreement



Isabelle Schafer

SMT  
Administration



Valérie Berger

STI  
Internship  
Coordinator



Mélanie Thuillard

STI  
Administration



Thank you for your attention  
And best of success for your internship campaign!

