

Hind Klinke Coordinatrice des stages STI

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





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





STI Internship Coordination

School of Engineering

Dean: Ali Sayed Adjunct: Audrey Barras

EPFL internship program

VP Education Educational Affairs Academic Service Career center

Legal and IP aspects

VP Research Tech Transfer Office

Internship portal

IS-A Developpement staff

Internship Coordination

Hind Klinke Emilie Thévoz

Neuro-X (STI/SV/IC)

Section Director: Dimitri Van De Ville Adjunct: Hind Klinke Secretary: Emilie Thévoz

Quantum Science & Engineering (STI/SB/IC)

Section Director: Nicolas Macris Adjunct: Hind Klinke Secretary: Emilie Thévoz

STI Internship Coordination

Hind Klinke Isabelle Turpin

919

Master students

STI

Industry

HR, CEOs, CTO's Engineers

Mechanical Engineering

Section Director: François Gallaire Adjunct: Alain Prenleloup Secretary : Anne Mireille Legrand Faculty members

Electrical Engineering

Section Director: Andreas Burg Adjunct: Philippe Gay-Balmaz Secretary : Suzanne Manné Faculty members

Materials Science and Engineering

Section Director: Fabien Sorin Adjunct: Béatrice Marselli Secretary : Danièle Utz Faculty members

Microengineering

Section Director: Christophe Moser Adjunct: Sebastian Gautsch Secretary: Isabelle Schafer Faculty members





Internship obligation

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

SCS: Credited internship during the Master course

PDME: Master project in the industry

	Models	Duration	Periods	Contact info		
Electrical &	STAP	Min. 8 weeks	After bachelor, after MA2 or MA3			
electronics engineering	SCS	4-6 months	After MA2	EL website		
	PDME	25 weeks	During the Master project			





Mandatory Internship or Master Project in Industry

- Short Internship (STAP)
 - Immersion into industry
 - Familiarize with company processes
 - Apply transversal skills
 - Minimum duration of 8 weeks, up to 12 weeks
 - Evaluation report by student and industrial supervisor
- Long Internship (SCS)
 - Immersion into industry
 - Familiarize with company processes
 - Apply and analyze transversal skills
 - Aquire specific competences
 - Minimum duration of 17 weeks, up to 6 months
 - Written report to section
- Master project in industry
 - A research project in the company
 - Student applies the competences aquired during his master
 - Supervised by a Professor from his section
 - Written report and oral defense
 - Monthly feedback to Professor
 - 25 week duration (+1 week vacation)











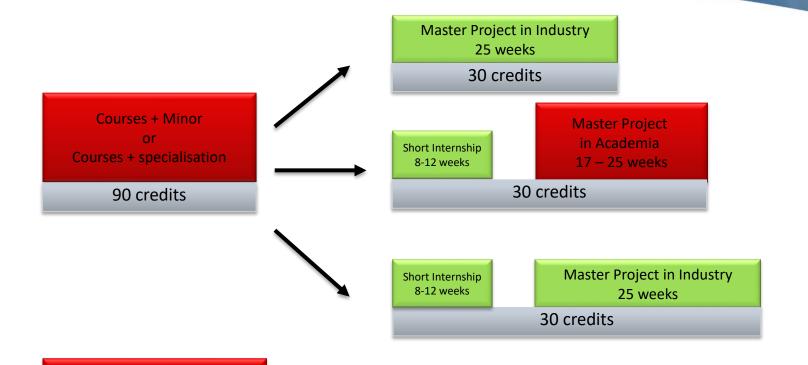


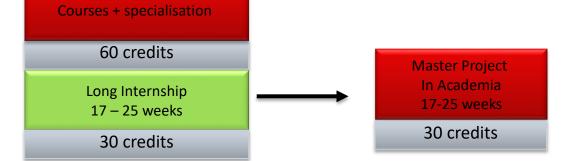






SEL Master Curriculum





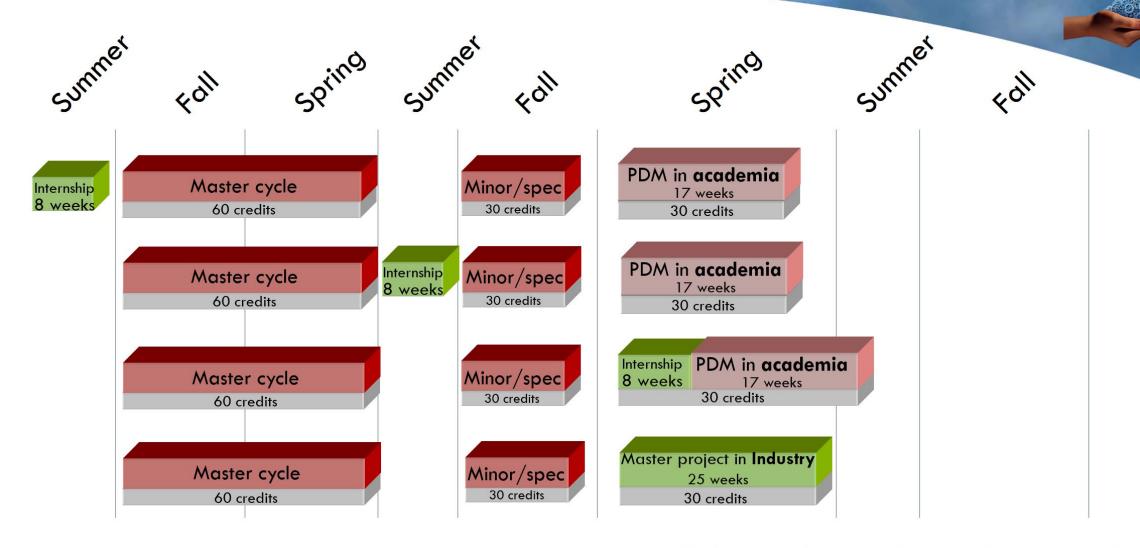


If you take a minor, you cannot do a SCS





When to place your internship / Master thesis?



PDM in academia in foreign Universities: 25 weeks







Master cycle
60 credits





PDM in academia in foreign Universities: 25 weeks





Master cycle 60 credits







PDM in academia in foreign Universities: 25 weeks





Important rules

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

<u>The Master's project</u> 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 2nd attempt in a lab at EPFL





Validation of 30 credits for long internship (SCS)

Mandatory Internship Activity and Transversal Skills Analysis Report

This activity report is mandatory for all students performing a master in Electrical Engineering and wishing to acquire 30 credits for their industrial internship lasting more than 17 weeks. It can be written either in French or in English. It has to be sent to the STI internship coordinator the latest 2 weeks after the official ending of the internship.

This report has to be completed in addition to the regular evaluation report sent to students 2 weeks before internship ending.

The activity report should be 3 to 5 pages long with the following structure:

- 1. Student's internship search campain
- 2. Internship activity and technical skills report
- 3. Transversal skills report and analysis

Download the report template from the EL internships website





What is considered «Industry»?

- Every company or start-up offering a workplace outside of an EPFL laboratory (EPFL's Innovation Parc included)
- Every Research Organisation not delivering academic credits
- Affiliation of independent research labs with academic institutions can lead to a specific decision by the section







How much salary?

- 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
 - Typical salary in large companies: ~3'000 SFr
 - Typical salary in start-ups and SMEs: 1'500 SFr
 - Typical salary in the European Union: 600 900 Euros
- 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, ...)



Validation of previous internships and industrial experiences

Internships done during the bachelor degree will not exempt you from the mandatory internship. Exemptions can be granted by the section in the following cases:

- Internships done <u>after</u> your bachelor degree
 - The internship duration must be at least 8 weeks
 - The ending should not be further than 1 year apart from your master beginning date.
 - A work certificate or an evaluation report or a has to be presented to the section deputy
- Industry employment at 100% occupation of at least 1 year related to the field of the future master studies but not in the context of your studies
 - A valid work certificate has to be presented to the section deputy.





Your start-up as substitute to a master thesis in industry?

- ☐ A few students will be able to undertake their master projects in industry, at the EPFL Innovation Park to work for their own startup.
- Projects will be co-supervised by a mentor from the Vice Presidency for Innovation and a professor from the section
- ☐ This opportunity will be offered to 3-4 projects per year. Students will have to go through a selection process, start by contacting pdm-eip@epfl.ch.
- More information about the program could be found here:
 - https://www.epfl.ch/innovation/startup/students/master-project-in-your-startup/

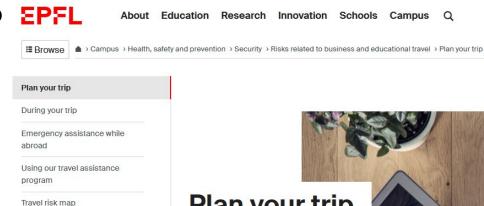




Internships outside Switzerland

Some recommendations for an internship abroad:

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



International SOS







Work authorization

(not required for Master Projects without a monthly remuneration)

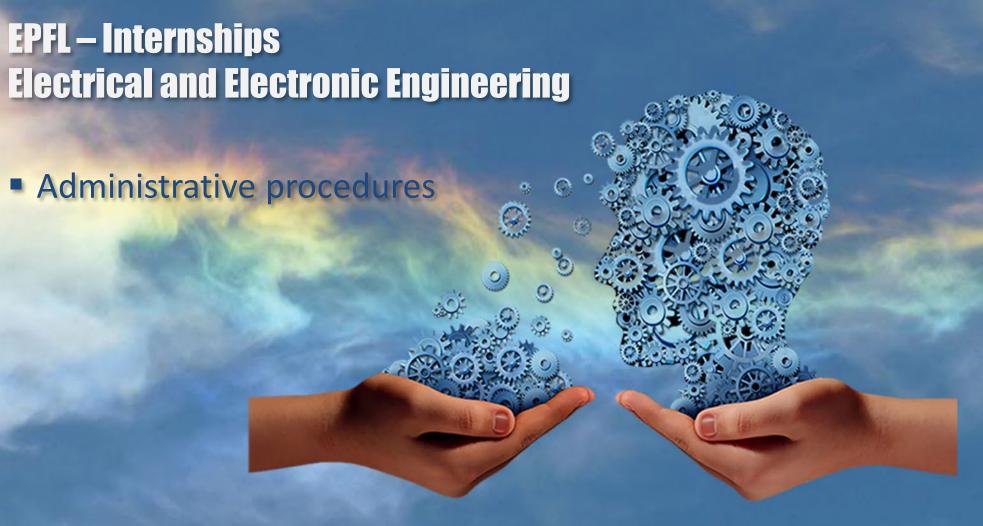
- The federal council allows foreign students of
 Swiss academic institution to perform a mandatory internship
 during their studies: https://www.admin.ch/opc/fr/classified-compilation/20070993/index.html#a39
- Students with Non-EU/EFTA passports require a valid **work authorization** to do their internship 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 (<u>Link</u> 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".



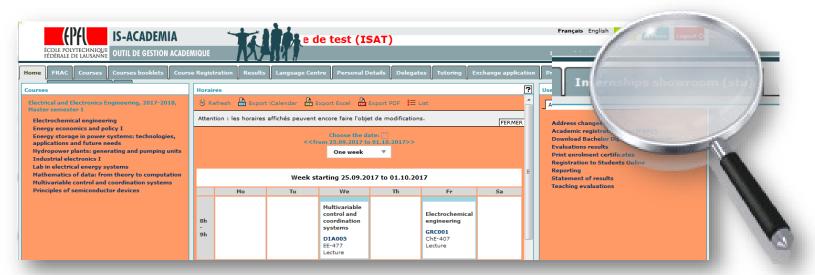






How can you find an internship?

- It is the student's responsibility to find an appropriate internship to validate his Master degree.
- □ No responsibilty 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





Sustainable Internships

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.



	· ·		I.		
9 / I	Optimisation du potentiel énergétique d'une installation de traitement des granulats	03.10.2022	Holcim (Suisse) SA	Aigle	0
9 / L	Multi-Frequency, Multi-Modal transduction of Piezoelectric Micromachined Ultrasonic Transducers (PMUTs).	03.10.2022	IMEC	Leuven, Belgium	
P / 1	Aerospace smart sensors - R&D embedded software developer	03.10.2022	Meggitt SA	Fribourg	
9 Z	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	
9 / I	Simulation Based Aerodynamic Performance Evaluation	30.09.2022	Sauber Motorsport AG	Hinwil, Switzerland	
9 / I	L'exploitation optimale des installations techniques dans l'environnement bâti	30.09.2022	energo	Lausanne	0









Engineers of tomorrow, we interest ourselves in the cooperation for a sustainable development around the world

Contact us

Write to us at

stages.idm@listes.epfl.ch

We offer you scholarships...

- That covers travel and visa costs
- For an internship
 - In the field of development
 - For a sustainable project
 - Of 8 weeks minimum

Go check our available offers on our webpage!

http://idm.epfl.ch/stages/



Every internship found through « Ingénieur.e.s du Monde » needs to be approuved by your section. Please contact the section deputy as soon as you have found an opportunity





Forum EPFL





Édition 2022 Étudiants Entreprises Start-ups Forum EPFL FAQ



Le Forum EPFL fête ses 40 ans!

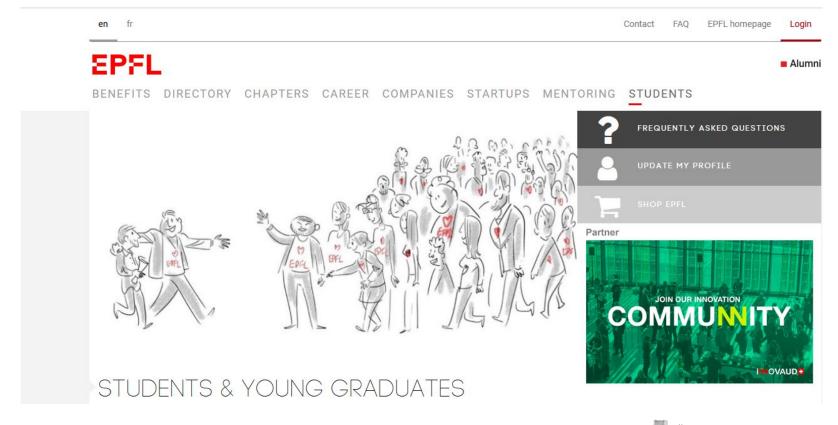
3 – 7 Octobre 2022 au SwissTech Convention Center





EPFL Alumni network

- EPFL students have access to the Alumni network
 - Website: https://www.epflalumni.ch/students/
 Pocketcampus app







EPFL Career Center workshops/presentations

Dear student, Dear doctoral student,

Garrett is a global leader in turbo technology solutions pioneering the breakthrough of new electric boosting products and automotive software to support passenger cars, commercial vehicles, and off-road equipment.

They partner with all major automotive companies helping to implement key differentiated technology offerings.

Garrett would like to invite you to catch a glimpse of their exciting high-speed activities during a dynamic presentation, featuring:

- Their demanding evolution from mechanical engineering to the electrical and software fields;
- Challenging internship offers in their engineering center in Thaon Les Vosges, located next to Nancy, in France as well as in Brno, in Czech Republic

The presentation will be held in English on Wednesday, 26 October 2022 at 12:15 in room BC 420.

Attendees are invited to stay for a networking reception afterward, with complimentary food and drinks.

Don't miss this exciting power transfer train heading towards the future of sustainable mobility!

>> Register here <<

If you encounter problems during the registration process, please send a message to cc@epfl.ch mentioning Garrett's Presentation.

Best regards,

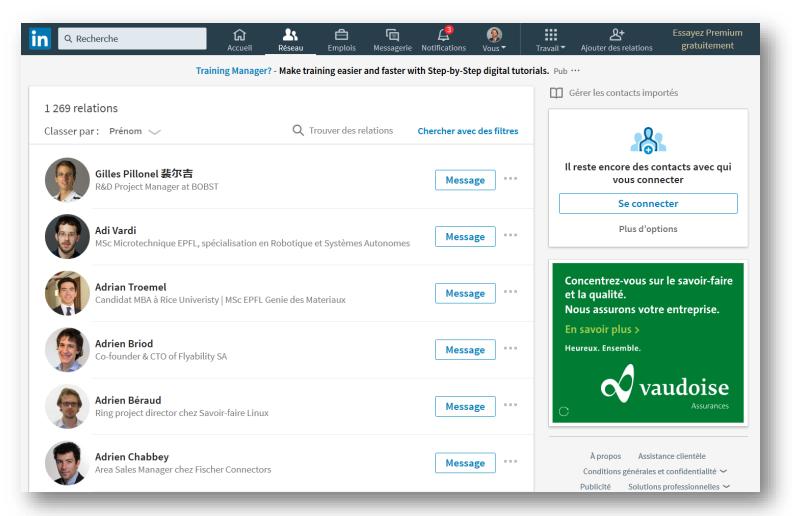
The Career Center

https://www.epfl.ch/about/recruiting/career-center/





Linked'In







Other opportunities for finding an internship

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



International platforms



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 the section deputy as soon as you have found an opportunity





How does the internship portal work?

- ☐ 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 your internship coordinator
- 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 priviledged contact with



- □ Do not use the portal for personal internship search
- □ Apply always through the portal for mandatory internship

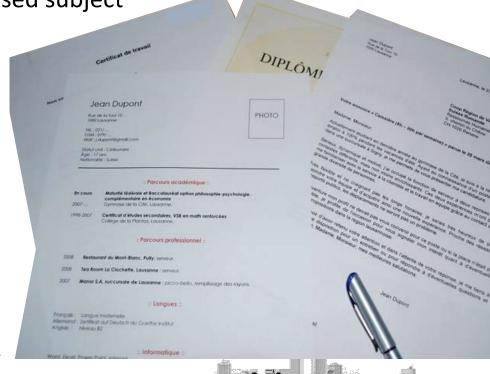


Some advice to prepare your application documents

- 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



Interview

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 and Cc the internship coordinator.
- For Master projects: Do not accept a position without having confirmed the eligibility of the project and settled the details with the academic supervisor.







Prepare your internship campaign!



This fall semester

- 1. Understanding and convincing recruiters
- 2. The CV sections
- The motivation letter
- 4. The Job interview
- 5. Communication and organization at work

Each course will be given in English and in French Information and mandatory registration here: https://epflcareer.ch/en/



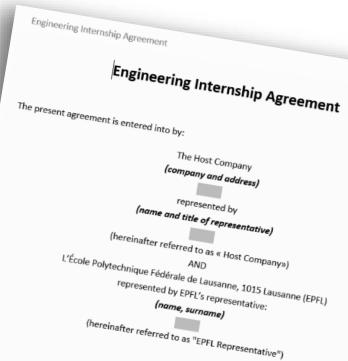


Internship agreement

- 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.
- Alternative contract proposed by the company and signed only by the student are acceptable in some cases, but the students must carefully read and comply with the content (IP issues, confidentiality,

insurances and especially non-competition clauses).

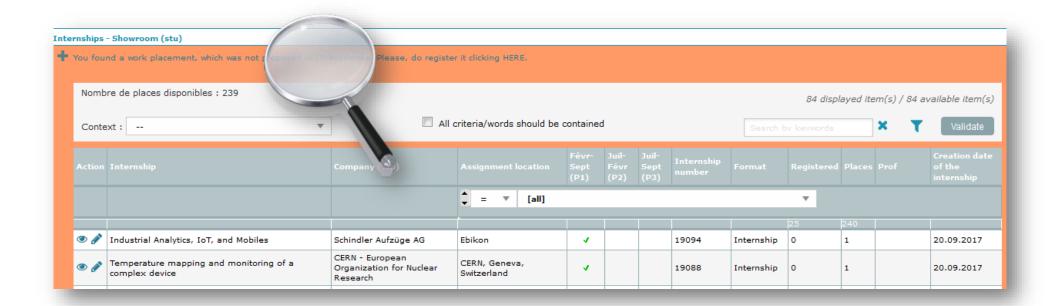
The company must accept to fill out the EPFL evaluation report at the end





Mandatory: Register internships found on your own

- Submit a short but detailed description of your internship to your section's deputy
- 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 agreement.







Update your FRAC

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

- In case of a credited internship (only EE students):
 - Semester (choose the right one: MA1; MA2; MA3)
 - Status: Internship (authorized by the section)
 - Mention in the comments « Credited internship during master course (SCS) »

If you take courses in parallel to your internship, your FRAC status should be «present» (See regulations for this on slide # 12)



Anticipate!

- ☐ 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 responsibilty to settle these formalities prior to the Internship beginning





During and after the internship

In case of problems (accident or illness, personal problems, conflict with supervisors, ...), contact urgently the Section deputy and the STI Internships coordinator.

■ 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 2 weeks prior to ending).



Internship evaluations

Company evaluation of the student (Years 2015-2020, 1400 STI students)







Mandatory Steps for a 2-6 month internship

- Find an internship position and in case you have found it by yourself, without using the IS-A portal, have the subject validated by your <u>section deputy</u>.
- ☐ Inform the <u>STI coordinator</u> 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 of EE. The signing of the agreement is mandatory.
- Transmit a copy of the agreement to the secretariat of EE.
- If you are a non-swiss/EU citizen, ask the company to request a work authorization for the duration of the internship.

 More information here. (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 according to this table FRAC EE
- In case of an SCS internship with associated credits, hand in the mandatory transversal skills report to the section deputy and internship coordinator. Latest deadline to hand in the report is 2 weeks after the internship termination.
- 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.



Best practice to set up a master thesis in industry





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



IP owner(s)



Confidentiality

Eligibility of candidate for master thesis



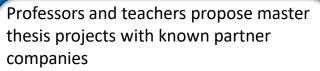


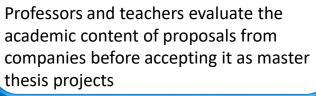
Students contact professors of their section to ask for existing industrial projects

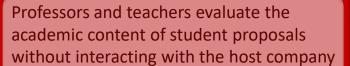


Students apply for internships on the IS-A portal and have it validated as master thesis projects by the company without involving the supervising professor

















Ideal Scenario for Master Projects in industry



Company has an idea for a master thesis project



Company discusses the project with a Professor



Company submits the proposal on the EPFL portal

Project starts under cosupervision by company and professor





Student applies for the project through the portal and gets accepted by the company



Master thesis in industry – offers on the internship portal

Action	ı Stage	Entreprise mère	Localisation du stage	Févr- Sept (P1)	Juil- Févr (P2)	Juil- Sept (P3)	Nº du stage	Format	Inscrits	Places	Prof	Date de création du stage
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②	Amélioration qualité image satellite par contrôle fin de la ligne de visée	Thales Alenia Space	Cannes, France	•			18976	Stage	0	1		14.09.2017
(4)	Experimental Physics Internship	Distran GmbH	Zurich	•			18973	PDM ou Stage	0	1	à trouver (si PDM)	14.09.2017
③	Transfer learning for field and crop adaptation in agriculture applications	ecoRobotix	Yverdon-les-Bains	•			18972	PDM ou Stage	0	1	à trouver (si PDM)	14.09.2017
③	Product Engineer	Infineon Technologies France	Aix en Provence	•			18967	Stage	0	1		14.09.2017
③	déploiment d'un système de sureté pour un site sensible	Etavis tsa	Carouge	•			18962	Stage	0	1		13.09.2017
(4)	Thermal effect and Compensation in high precision states	Etel S.A.	Bienne	•		•	18953	Stage	0	1		13.09.2017
②	Intern Manufacturing	Stryker Trauma AG	Selzach (SO)	•			18934	Stage	0	1		12.09.2017
③	Modélisation d'un processus de laminage	Constellium Valais SA	Sierre	•			18933	Stage	0	1		12.09.2017
② 	Hybrid PET/MR imaging guided radiation therapy treatment planning	Hôpitaux Universitaires de Genève	HUG Genève	,	,		18930	PDM coordonné	0	2	Prof. Thiran Jean- Philippe	12.09.2017
(4)	Various internship positions in Motion analysis Startup for applications in Sports, Health and Gaming	Gait Up	Renens	•			18922	Stage	1	2		12.09.2017
③	Various internship positions in Motion analysis Startup for applications in Sports, Health and Gaming	Gait Up	Renens	•	•		18920	PDM coordonné	0	2	Prof. Aminian Kamiar	12.09.2017
(4)	Printed freeform optics for light control	CSEM SA Muttenz	Basel	•			18915	PDM ou Stage	0	1	à trouver (si PDM)	11.09.2017





Master thesis in industry, some advice for students

 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, ...)
- Refer to the following webpage to inform the company
- Organize a meeting between the academic supervisor and the company to discuss the content and workplan of the project and settle administrative issues. 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





Master project agreement

The master thesis agreement (access for teachers only) 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 an 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





Mandatory Steps for a Master project in Industry

- 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. Make sure to comply with the following directions: Coordinated Master Thesis in Industry
- 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 (link only accessible to Professors) 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



EPFL internships on the web

https://sti.epfl.ch/research/institutes/iem/internships/



The industrial internship is an integral part of y SCHOOL OF ENGINEERING > internship has several aims such as: the immer emphasizing the importance of team work, get **ENGINEERING** requirements expected from a professional eng experience should test the student's abilities ar

Within the framework of the Master's study pla

- Internships lasting between 2 and 3 me company's departments where the stude available time, the activity could have a m acquired by the student during his cursus
- Internships lasting between 4-6 month departments where the student's knowled the activity could have a more advanced student during his cursus. In ordrer for th analysis report has to be handed in. linary project lead by
- Master thesis in industry (PdMe) should and practical aspects of an materials scien guarantee of quality for the student as we owner of the intellectual property of the i

Procedure for students

In case of a 2-6 month internship:

- Find an internship position and in case yo portal, have the subject validated by your
- . Inform the STI coordinator that you have Cancel all ongoing applications by gently important to keep a good relationship wi
- Transmit the EPFL internship agreement the employer and the section deputy of E
- . Transmit a copy of the agreement to the
- . If you are a non-swiss/EU citizen, ask the duration of the internship. More informa-
- · Once all the details of your internship internship on the IS-A internship porta

ELECTRICAL AND MICRO

rector of the Section of

THE INSTITUTE

EDUCATION EL

Bachelor of Science in Electrical

EDUCATION MT

RESEARCH

Foundation Cycle Course List

Bachelor Cycle Course List

Semester projects

Engineering

Overview

Admission criteria and application

Master of Science in Electrical Engineering

Overview

Master Cycle Course List (EE)

Electronic Circuits and Devices

Power and Energy

Internet of Things (IoT) and Computer and Communication Engineering

Information science and systems

Hands-on Labs

Master and semester projects

Completed Master Theses

Minors

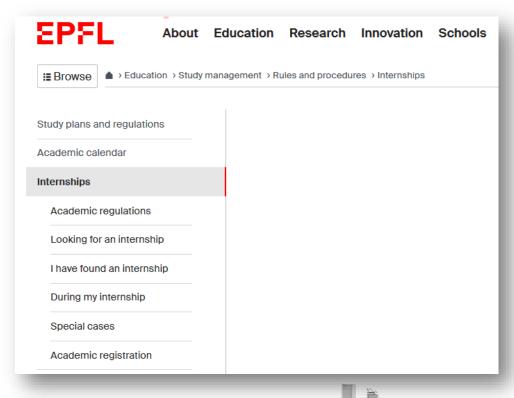
Internships MSc of Science

International program - MNIS 🔗

Admission criteria and application



https://www.epfl.ch/education/studies/en/rules-and-procedures/internships/





Important remarks

- As an EPFL student doing an internship in industry, you act as an EPFL Ambassador. Thanks to your work and positive attitude, you will leave an important impression in the company.
- This aspect is not only important for your future professional career, but also for the EPFL internship program which will benefit from this lasting impression.





Information and contacts

- For further information, please visit the internship page of your section:
 - https://sti.epfl.ch/research/institutes/iem/internships/
- ☐ EPFL webpage:
 - https://www.epfl.ch/education/studies/en/rules-and-procedures/internships/
- Depending on your inquiry, you can contact the following persons:



Hind Klinke STI Internship Coordinator



Philippe Gay-Balmaz SEL Adjunct to the SEL Director



Mrs Suzanne Manné SEL Administration



Isabelle Turpin STI-DO Administration



Questions?



Thank you for your attention

And best of success for your internship campaign!





