

SPIM

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Ecole Doctorale SPIM SPIM Doctoral School

Sciences Physiques pour l'Ingénieur et Microtechniques

Engineering Sciences and Microtechnologies

<https://spim.ubfc.fr/>
<https://collegedoctoral.ubfc.fr>

<https://fr.linkedin.com › ed-spim-60976b133>



Missions of the Doctoral Schools in France

- Ensure the quality of PhD student recruitment .
- Ensure the quality of the thesis
- Ensure the quality of PhD student supervision and ensure respect for the Charter of theses
- Monitor the PhD students
- Complete the training of PhD students at a high level
- Contribute to the coherence and international visibility in the supply of doctoral training institutions
- Give the opportunity for PhD students to prepare and defend their theses in the best conditions
- Organize scientific exchanges between PhD students (with associations)
- Prepare and help for the professional integration of graduates

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Presentation: SPIM doctoral school

The Doctoral School of Engineering Sciences and Microtechnologies (ED SPIM, ED37) is under the governance of the Doctoral College of the University of Bourgogne Franche-Comté COMUE UBFC :

<https://collegedoctoral.ubfc.fr>

The doctoral college UBFC groups together 6 doctoral schools and 1700 PhD students.

UBFC: Public establishment created by the Decree of 1 April 2015. The COMUE (Community of Universities and Establishments) groups together seven higher education and research establishments.



Governance

Director (Th. Leblois) and one Deputy Director (P. Marquié)

SPIM doctoral school board: 25 members

First part (institutions and research units): 13 + 2

FEMTO-ST: 7 representatives (1 representative from each department) + 1 Ing,

ImViA: 1 + 1 Ing, CIAD: 1, LIB: 1

DRIVE: 1

Nanomedecine Lab : 1

ICB : 1

Second part: 10 members :

- 5 PhD students elected with a key distribution (3 Besançon, 1 Dijon and 1 Belfort)

5 representatives from outside of Doctoral School (1 KIT, 1 BFC representative, 2 socio economic sector, 1 PMT) → **Vote for 4 new PhD student representatives**

Permanent invited members:

- the Director and the Deputy Director
- The Directors of the laboratories
- The administrative staff

The active participation in the BC gives you 8h on your PIF for 3 years

A steering committee (5 members representative of 5 specialities / different geographical sites)

A training committee (20 members approximatively)

Missions of the SPIM doctoral school committee

1/ The SPIM DS board approves the scientific policy, the budget allocation policy, the rules for the registration of PhD students, the allocation of doctoral contracts to the supervising teams, the training program and the internal regulations. It examines the results of the doctoral school's activities.

The DS board determines the number of doctoral contracts per research unit on the basis of criteria such as the number of active and available executive staff members, the average duration of the thesis, the number of theses abandoned, quality of supervision...

2/ The Doctoral School's steering committee examines all of the selected applications and sends back to the supervising teams the applications that are approved by the doctoral school.

In the event of a major conflict between the PhD student and the thesis supervisor or the director of the lab, and in accordance with the terms of the UBFC thesis charter, mediation will be organized via the doctoral school steering committee.



- The role of the commission is to make proposals to improve the SPIM's training program.
- The committee gives its opinion on the creation or ending of a training course.
- It creates evaluation sheets. It gives its view on the assessment of a training course, taking into account the evaluation sheets submitted by PhD students.
- It contributes to the setting up of the calendar and the organization of the courses.
- 3 meetings per year

PhD students should participate in the TC :

- to better understand how our DS works
- to be involved in the choices of new training offers
- to be aware of the most popular and requested courses by PhD students

The active participation in the TC gives you 5h on your PIF for 3 years

Composition of the training committee (TC)

1	Thérèse Leblois	Director ED SPIM	10	Cécile Berriet	FEMTO-ST/ DMA
2	Patrick Marquié	Deputy-Director ED SPIM	11	Marie-Laure Betbeder	FEMTO-ST/ DISC
3	Fabrice Devaux	FEMTO-ST/Optics	12	Stéphane Galland	CIAD
4	Sébastien Euphrasie	FEMTO-ST/MN2S	13	Souhaila Boublouh	PhD student FEMTO-ST / optics
5	Yannick Benezeth	ImViA	14	Olivia Ben M'Barek	PhD student FEMTO-ST/MN2S
6	Nader Mbarek	LiB	15	Pierre Romet	PhD student CIAD
7	Enrico Rubiola	FEMTO-ST / TF	16	XXX?	PhD student ImViA?
8	Cécile Langlade	ICB	17	XXX?	PhD student DRIVE ?
9	François Lanzetta	FEMTO-ST/Energy	18	XXX?	PhD student ICB?

- Caroline Delamarche (Manager of the doctoral office, UTBM), Emilie Faivre and Dolores Kamtchueng-Foping (Office of Doctoral Studies, Besançon)

web sites: <https://spim.ubfc.fr> and <https://collegedoctoral.ubfc.fr>
 email: ed-spim@ubfc.fr

Director: Pr. Thérèse Leblois

Deputy Director: Pr. Patrick Marquié

Doctoral School secretariats:

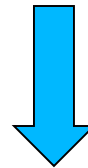
UFC :	Alika Rossetti	03.81.66.66.02
(Administrative Director– assistant manager)	alika.rossetti@ubfc.fr	
UTBM - NFC :	Coraline Delamarche	03.84.58.31.39
	caroline.delamarche@ubfc.fr	
UB :	Fouziya Moustakim	03.80.39.58.17
	fouziya.moustakim@ubfc.fr	
Financial Management :	Vincent Jobard	03.80.40.34.54
	vincent.jobard@ubfc.fr	
Transversal training:	Emilie Faivre	03.63.08.26.46
	emilie.faivre@ubfc.fr	
Specific training SPIM	Dolores Kamtchueng-Foping	03.63.08.26.46
	dolores.kamtchueng-foping@ubfc.fr	
Courses Nord Franche-Comté :	Caroline Delamarche	03.84.58.31.39
	caroline.delamarche@ubfc.fr	

What is your Doctoral School ?

Boundaries of ED SPIM

8 Research Units:

- FEMTO-ST Institute (7 departments: Besançon, Belfort, Montbéliard)
- Nanomédecine Lab (Besançon, Belfort Sévenans)
- ICB through 2 axes of the laboratory (Sévenans)
- DRIVE (Nevers, Auxerre)
- ImViA (Dijon, Le Creusot)
- CIAD (Dijon, Belfort)
- LIB (Dijon)
- ELLIAD (Belfort)



Information sciences and technology / Engineering and systems science
Burgundy - Franche-Comté



What is your Doctoral School ?

Scientific Strategy of the SPIM Doctoral School

- Research activities: Information sciences and technology / Engineering science
- Support the international exchanges and the cooperation between teams
- Give a training program well adapted to PhD needs and at high level
- Ensure excellence from recruitment to thesis defense

Main scientific themes:

- Microsystems and microtechnologies
- Optics, microscopy, telecommunication
- Mechanics, mechatronics, materials
- Information sciences
- Control of complex systems
- Electronics
- Energy
- Time and frequency

Specialities of PhD:

- Control
- Mechanics
- Materials
- Energy
- Computer science
- Energy and mechanics
- Optics and photonics
- Electrical engineering
- Microtechnology
- Instrumentation

Research laboratories : FEMTO-ST, ICB, ImViA, DRIVE, Nanomedecine Lab, CIAD, LIB, ELLIADD

HDR: 226 (active researchers as defined in HCERES)

- | | |
|-----------------------|-------------|
| - FEMTO-ST: 126 | - DRIVE: 13 |
| - Nanomédecine Lab: 4 | - ImViA: 28 |
| - ICB: 15 | - CIAD: 9 |
| - LIB: 14 | - ELLIAD: 1 |

Doctoral enrollments 2020/2021: 390 Joint Supervision: 35

- | | |
|------------------------|---------------------------|
| -Control: | - Electrical engineering: |
| -Mechanics: | - Optics, photonics: |
| -Material: | - Microtechnics: |
| -Energy: | - Computer sciences: |
| -Energy and mechanics: | - Instrumentation: |

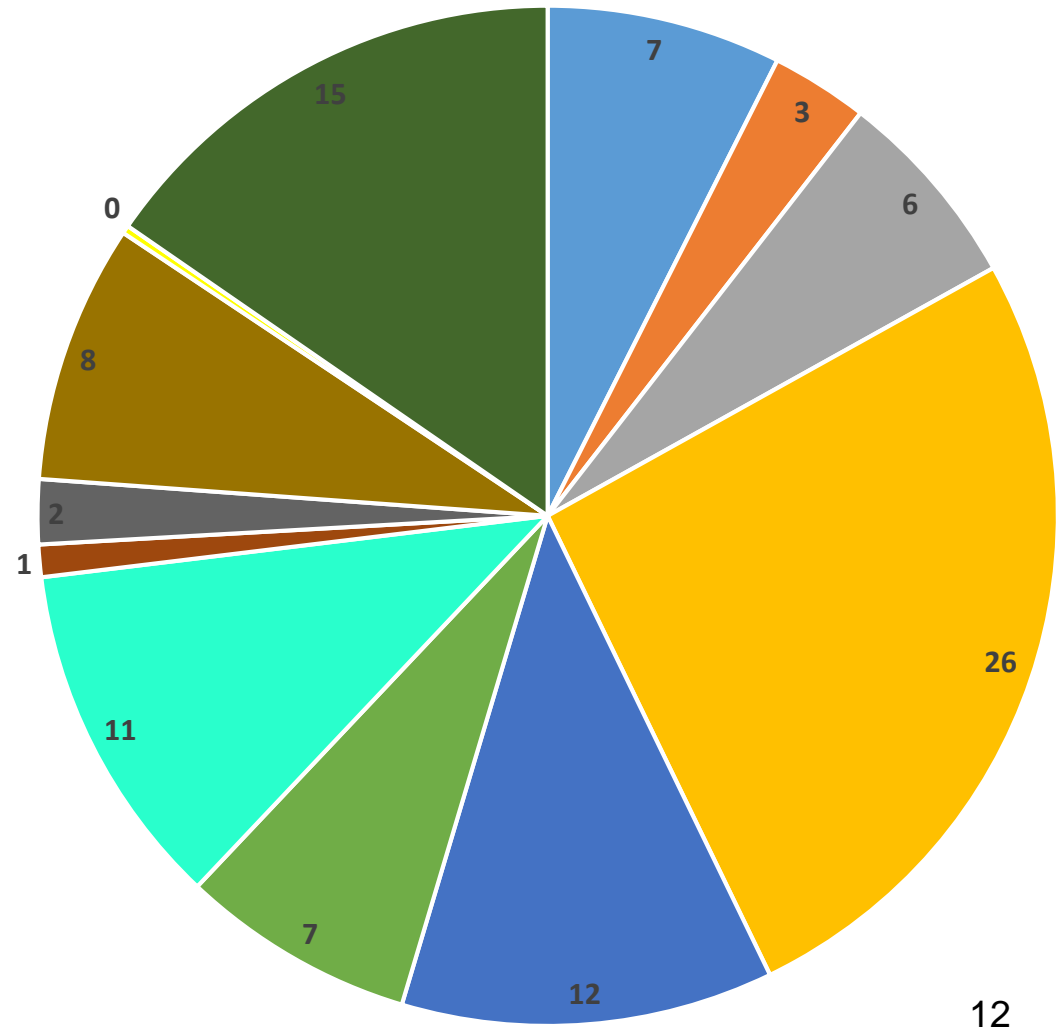
Defended thesis in 2021: 65 Defended thesis in 2020: 85

Average duration of a PhD currently: 41 months

→ objective: max 40 months

% PhD students / Specialities

- Automatique
- Énergétique
- Génie électrique
- Informatique
- Instrumentation et informatique de l'image
- Matériaux
- Mécanique
- Mécanique et Energétique
- Microtechniques
- Optique et photonique
- Sciences et technologies industrielles
- Sciences pour l'Ingénieur

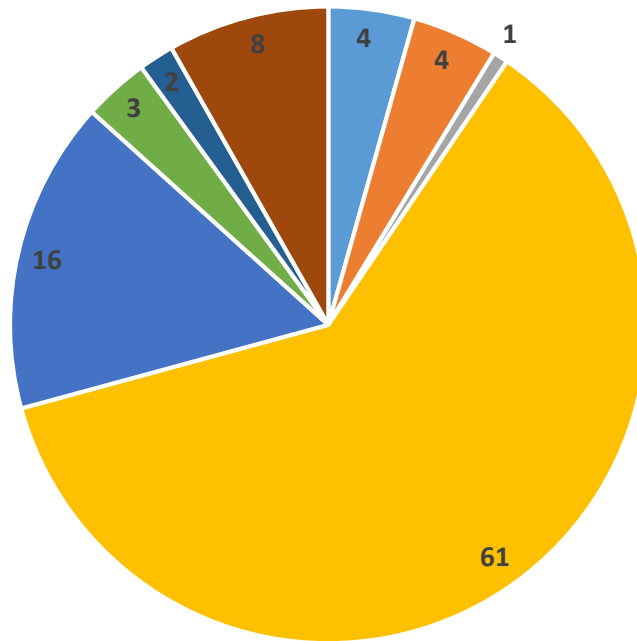


SPIM PhD Students:

390 (2020-21) **47 nationalities**

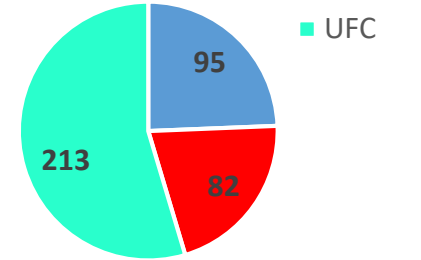
295 (2021-22 at 2021-11-15)

% PhD students / RU

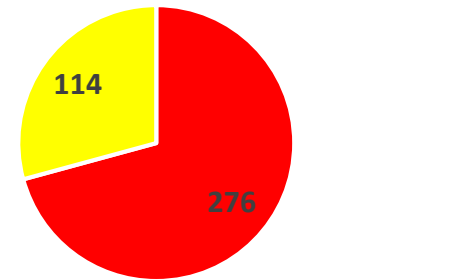


■ CIAD ■ DRIVE ■ ELLIAD ■ FEMTO-ST ■ ImVIA ■ LIB ■ NIT ■ ICB

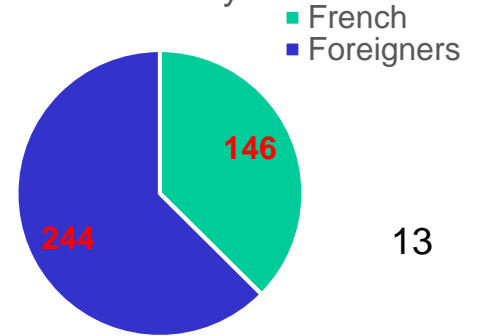
Establishment



Gender



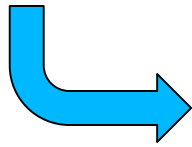
Nationality



13

As PhD student, you are in the same time :

- A student
- An employee, professional of the research for your laboratory



You must respect the procedures of your institution, your company, your laboratory and your doctoral School

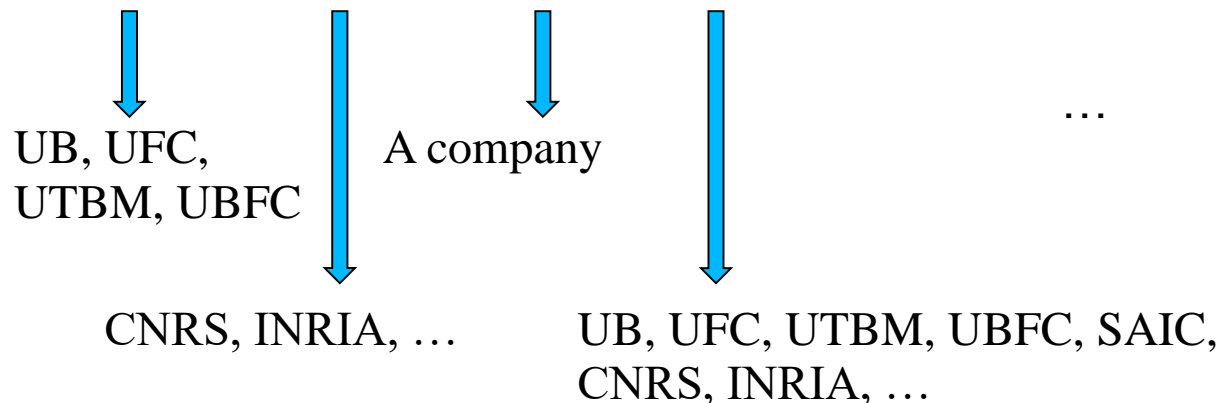
Nature of your contract:

All PhD students have a funding for doing their research excepted few cases: people from the industry or academic domains who are already employed as engineer or teacher...

Nature of your contract:

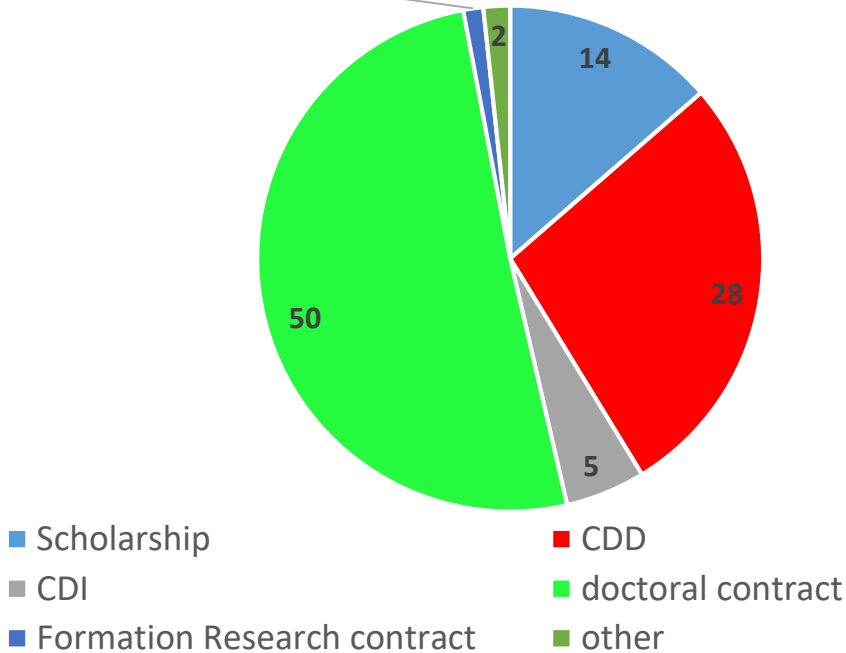
- ➔ You have a funding (ANR, MESRI, establishment, BFC region, Europe, company...)
- ➔ You have an employer (UB, UFC, UTBM, CNRS, UBFC, company)
- ➔ Your contract (for 3 years) depends on your employer:

CD institution coll.	CD research institution	CIFRE	Research contract	Employed (not full time)	Funding from other countries (CSC...)	Other
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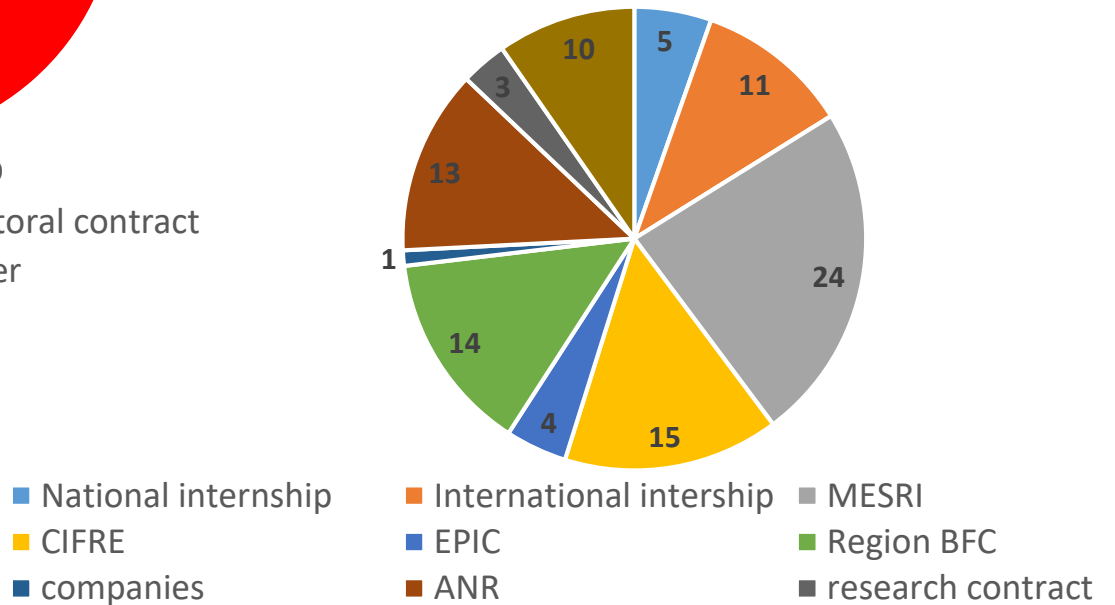


Some data (2020-2021):

1 % PhD students /type of contract



% PhD students / funding



Depending on your contract and your employer, the procedures for the PhD student can be different:

- Case of the Doctoral Contract (« Contrat Doctoral »)
 - your employer is an institution (UB, UFC, UTBM, UBFC, CNRS, ...)
 - complementary activities (teaching, consulting in a company, mentoring) are possible but strictly defined through an amendment (defined by the law) and the salary is also defined by the law. Number of hours ≤ 64 h
- Case of fixed term contract (« contrat à durée déterminée »)

Complementary activities are possible with the agreement of the supervisor

All the procedures are indicated on the website <https://www.SPIM.ubfc.fr> or given by the administrative staff : <https://collegedoctoral.ubfc.fr/>

- For enrollment (every year)
- To know the form you have to fill for displacements / funding
- To know the general / specific... courses and to prepare your training plan (PIF)
- To prepare your defense (time to respect, reviewers, committee, visioconference....)

Example:

when you want to move for your research activities (conferences, visiting a research team, ...), you need to do **a mission order** from your employer. Please, respect the deadlines.

The thesis follow-up committee is **compulsory** according to the May 2016 decree

First year: a questionnaire for PhD student and a questionnaire for the supervisor

- Independent contact with PhD students and supervisors if the answers to the questionnaires differ.

Systematic mid-term interviews (2nd year interview):

- Objective: Evaluate the progress of the thesis work and possibly influence the thesis organization
- Process: a preliminary questionnaire (PhD and supervisors) followed by an interview (March-May)
- Participants: PhD student, supervisors, a representative of the doctoral school, the local member of the research unit.

→ For any problem, please contact the doctoral school as soon as possible

For a 4th , 5th or 6th registration, interview to decide the relevance of re-enrollment

Objective: defense after 36 months

Financial support (max 1000€/ year / PhD student):

- Financial support (50%) for participation in international conferences, thematic schools, periods in foreign laboratories
- Financial support (50%) for days and scientific exchanges between PhD: workshop...
- International training and exchanges
- Registration in associations (IEEE, OSA, SPIE,)
- Financial support (50%) for a foreign member in the defense committee

Technical support:

- Preparation of joint supervision contract between UBFC and foreign university

Examples of cooperation:

- Involvement for Student chapters (OSA, SPIE, IEEE Chapter)
- ERASMUS Mundus « TARGET » (3 PhD exchanges)
- FORMITEC and SMYLE (european support for EPFL/UFC cooperation)
- Joint supervision contracts

Individual Training Plan

Within the three years of doctoral work, the PhD student must follow a **training equivalent to 100 hours**. The training courses must be distributed according to the following quota:

- **"Science"** training (40 hours minimum) → *to be chosen from the "Sciences" courses of the SPIM catalog - link:*
http://www.adum.fr/script/formations.pl?site=UBFC&matricule_resp=43730
- Training **"Scientific and technical tools"** (20 hours minimum) → *to be chosen from the "Scientific and technical tools" courses in the SPIM catalog.*
- **General training** (20 hours minimum) → *to be chosen from the catalog of cross-curricular courses. It has the following 8 sections:*
 - Languages, Career pursuit,
 - Knowledge and teaching tools,
 - Management and entrepreneurship,
 - Communication,
 - **Research ethics and scientific integrity (mandatory 9h)**
 - **Open sciences (mandatory 3h)**
 - International scientific culture and valorization ,
 - Documentary training...

Contacts :

- Emilie.Faivre@ubfc.fr
- morgan.poggioli@ubfc.fr

Available Training Plan

- Each UBFC PhD student is allowed up to 7 transversal training courses *per* academic year. Beyond this number, he/she will be entitled to attend **specific courses** offered by his/her doctoral school.
- All doctoral college/ doctoral school training courses are free of charge

Contacts specific training SPIM: Dolores.kamtchueng-foping@ubfc.fr
Caroline.delamarche@ubfc.fr

Available courses

<http://www.ubfc.fr/ecoles-doctorales/catalogue-de-formations/>
+ registration on ADUM :
<https://www.adum.fr/>



FORMATION	Intervenants	Durée (équivalent heures CM)	Capacité	Site
Climate Change and European Energy Transition	Thierry de LAROCHELAMBERT	28		BELFORT
Cloud computing	Ana ROXIN			DIJON
Scientific instruments	Enrico RUBIOLA	15	30	BESANCON
Engineering of devices : anisotropy of materials and functional properties	Ausrine BARTASYTE	14	15	BESANCON
Micro and Nano Robotics : design, fabrication and task realization	Cédric CLEVY / Philippe LUTZ / Aude BOLOPION / Kanty RABENOROSOA	14	15	BESANCON
Modélisation Agent et Simulation des Phénomènes Complexes	Christophe LANG / Nicolas MARILLEAU	12	16	BESANCON
Phase Noise and Frequency Stability in Oscillators	Enrico RUBIOLA	15	30	BESANCON
Physical acoustics: acoustic and elastic waves	Vincent LAUDE	14	14	BESANCON
The Web of data : from WWW to GGG -	Ana ROXIN	14		DIJON
The remarkable landscape of nonlinear science	John DUDLEY	6	50	BESANCON
Highlights in microtechnology	EPLC (Neuchâtel) et FEMTO -ST			NEUCHATEL
The 4th Industrial Revolution from sensors to smartphone	Jérôme ROSSIGNOL	14	11	DIJON
Mathematical modelling: cells, tissues, organs (nouvelle formation)	Raluca SEFTIMIE	14	25	BESANCON
Hybrid Energy Systems		14		BELFORT
Hyperelastic Materials		14		SÉVENANS
Machine Learning By Practise (for computer science & Engineering students)		14		BELFORT
Thermal Spray Fundamentals		14		SÉVENANS
Approches de soft-computing en optimisation combinatoire et reconnaissances de formes		10		BELFORT

Forecasted Specific SPIM training courses 2021-2022

Sciences



FORMATION	Intervenants	Durée (équivalent heures CM)	Capacité	Site
Gestion de projet		10		BELFORT
Ingénierie robuste et optimisation d'expériences		10		BELFORT
Introduction à la simulation de vie en réalité virtuelle et au jeu sérieux		10		BELFORT
La démarche expérimentale : capteurs et mesures		10		SÉVENANS
Cleaning, splicing and processing optical fibers Acronym	J-C. BEUGNOT / Gil FANJOUX	14	10	BESANCON
Microfabrication technology	Franck CHOLLET			BESANCON
LabVIEW, des fondamentaux aux structures évoluées pour l'instrumentation et le contrôle-commande (session 1)	Patrick NECTOUX	14	6	BESANCON
LabVIEW, des fondamentaux aux structures évoluées pour l'instrumentation et le contrôle-commande (session 2)	Patrick NECTOUX	14	6	BESANCON
LabVIEW, des fondamentaux aux structures évoluées pour l'instrumentation et le contrôle-commande (session 3)	Patrick NECTOUX	14	6	BESANCON
Science Communication	John DUDLEY	6	50	BESANCON
Lancement d'une start-up innovante avec DECA-BFC: fondamentaux et retours d'expérience Innovative tech startups' challenges (nouvelle formation)	Sylvain COMPAGNON / Antoine PONCE / Fanny ROBICHON / Sophie MAGNIEZ	11,5	20	BELFORT

Forecasted Specific SPIM training courses 2021-2022
Scientific and technical tools



Training courses which **are not on the lists** provided and approved by the ED SPIM must be subject to **prior validation** by the ED, to be included in the Individual Training Plan (PIF). All training validation requests, once validated by the ED, must be **deposited on your ADUM account**.

- Congress tutorials can be accepted under "Science" or "Scientific and technical tools" or "General: transversal" according to their content.
- **Seminar, congress are not part of PIF.**
- E-learning : 3 MOOCs max
- Thematic school: 20h max in sciences per thematic school
- Master courses: 20h max in the PIF

The PIF must be provided for each re-enrollment.

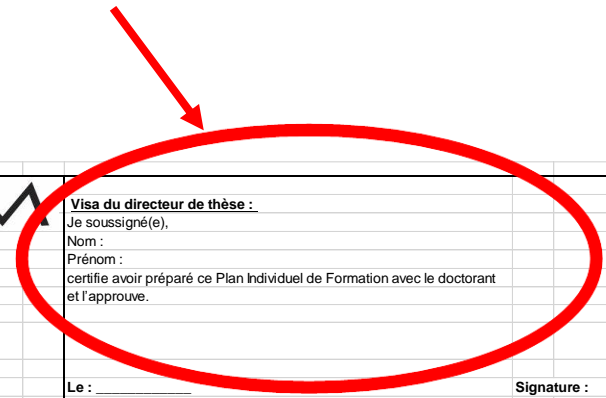
Ensure that the PIF is complete prior to any request for authorization of the PhD thesis defense (the summary of training courses followed by the PhD student, approved by the director of ED).

•SPECIAL CASES :

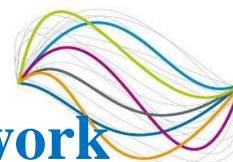
- Students in international joint supervision living abroad → Follow the courses offered by their institutions and enroll in training courses offered by ED SPIM during their visits to France *
- Employees of a company or CIFRE → Have the possibility to follow the trainings offered within the framework of their companies*
- **ICE (Itinéraire Chercheur Entrepreneur) → should follow, 120h in 2 years on business management and administration proposed by Pépite. Therefore, they are exempted from performing other training.**

* Please contact the Doctoral school for the possibility to reduce the total number of training hours.

The PIF must be provided for each re-enrollment.



DOCTORANT / PhD STUDENT		SPIM		Visa du directeur de thèse : Je soussigné(e), Nom : _____ Prénom : _____ certifie avoir préparé ce Plan Individuel de Formation avec le doctorant et l'approuve. Le : _____ Signature : _____		
NOM / Name : _____ Prénom / First name : _____ Dept recherche / Research dept : _____ Année de thèse en cours / Year thesis in progress : _____ Projet professionnel / Professional project with PhD : _____ (recherche publique, enseignement, recherche et développement (entreprise), création entreprise, autres) public research, professor, teacher, research and development (company, other) Informations complémentaires sur le projet professionnel / Complementary informations on the professional project : _____		Nombre arrondi de mois de séjour hors université (thèse CIFRE, co-tutelle, ...): _____ Rounded number of month outside university (thèse CIFRE, co-tutelle, ...) Remarques / remarks : _____				
ANNEE 1 / Year 1		ANNEE 2 / Year 2		ANNEE 3 / Year 3		TOTAL
INTITULE FORMATION		INTITULE FORMATION		INTITULE FORMATION		
HRES		HRES		HRES		
FORMATION GENERALE/GENERAL EDUCATION		FORMATION GENERALE/GENERAL EDUCATION		FORMATION GENERALE/GENERAL EDUCATION		
0		0		0		0
OUTILS SCIENTIFIQUES ET TECHNIQUES / SCIENTIFIC AND TECHNICAL TOOLS		OUTILS SCIENTIFIQUES ET TECHNIQUES / SCIENTIFIC AND TECHNICAL TOOLS		OUTILS SCIENTIFIQUES ET TECHNIQUES / SCIENTIFIC AND TECHNICAL TOOLS		
0		0		0		0
SCIENCES*		SCIENCES*		SCIENCES*		
<i>Cours ED/ PhD School training</i>		<i>Cours ED/ PhD School training</i>		<i>Cours ED/ PhD School training</i>		
<i>Tutoriaux congrès/ Congress tutorials</i>		<i>Tutoriaux congrès/ Congress tutorials</i>		<i>Tutoriaux congrès/ Congress tutorials</i>		
<i>Ecoles d'été / Summer schools</i>		<i>Ecoles d'été / Summer schools</i>		<i>Ecoles d'été / Summer schools</i>		
<i>Cours autres établissements /Training other institutions</i>		<i>Cours autres établissements /Training other institutions</i>		<i>Cours autres établissements /Training other institutions</i>		
0		0		0		0
TOTAL :		TOTAL :		TOTAL :		0

**1) Two websites: <https://www.docteurs-spi.org/>**

Very complete information for graduates (employment, networking, companies, labs..)

<https://www.redoc-spi.org/>

News, partners, companies, Thesis proposals

2) Two LinkedIn Groups:

Opportunities to exchange with the Community in its diversity of specialities, professional backgrounds and nationalities.

2-1 A LinkedIn Group open to PhD students

<https://www.linkedin.com/groups/12092465/profile>

2-2 A LinkedIn Group open to PhDs & PhD students in their third year of thesis (publishing a carefully completed LinkedIn profile):

<https://www.linkedin.com/groups/12092465/profile>

UBFC Alumni network

Alumni network provides support and direct contact with its community of current and former PhD students, as well as partners such as laboratories and recruiters

<https://www.ubfc.fr/formations/insertion-professionnelle/reseau-ubfc-alumni/>



The doctoral schools

Doctoral training is organised within the doctoral schools (DSs). In Bourgogne Franche-Comté, they are the responsibility of UBFC (since the transfer of the doctoral mission on 1 January 2017) and of its Doctoral College.

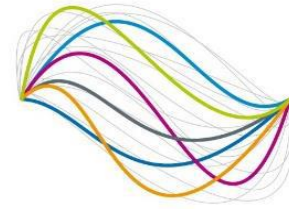
Article 3 of the decree of 25 May 2016 that sets the national framework of the course of training and terms leading to the award of the national doctoral degree defines the DSs' missions:

- 1° They implement an admission policy for PhD students, based on explicit and public criteria, let students know about admission conditions, the required skills, fundings likely to be granted, and the nature, quality, and rate of professional activity after graduation. They take part to the search for financing, and offer to grant funds so as to allow PhD students to prepare and defend their thesis in the best possible conditions;
- 2° They organise scientific exchanges between PhD students and the scientific community; they offer PhD students training activities that favour interdisciplinarity and the acquisition of a broad scientific culture including knowledge of the international research framework;
- 3° They ensure that each PhD student is trained in the ethics of research and in scientific integrity;
- 4° They ensure that a quality procedure of doctoral training is implemented, notably by setting up PhD students' individual follow-up committees, and offer supervisors to attend a training course or receive specific support;
- 5° They define and implement devices to support students in their post-graduate career in the public and private sectors, and organise the follow-up of the trained doctors' professional course in link with the relevant institutions;
- 6° They contribute to opening up at the European and international scales within the framework of cooperation actions with foreign higher-education institutions or research centers;
- 7° They give their opinion when research units or teams wish to integrate the DS.

The doctoral schools gather all the PhD students from Bourgogne Franche-Comté. Each DS has a well-defined scope in terms of disciplinary fields and doctoral specialties it delivers.

web site: <https://collegedoctoral.ubfc.fr>

SPIM



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DOCTORAL SCHOOL SPIM

in Recherche

HOME DOCTORAL SCHOOL THESIS HDR FORMATIONS CAREER POST-DOCTORAL POSITION EVENTS USEFUL LINKS RESOURCES | FAQ

UBFC

REGISTRATIONS / RE-REGISTRATIONS FOR 2021/2022

CLICK HERE

About

Welcome to the SPIM Doctoral School !
The Doctoral School « Sciences Physiques pour l'Ingénieur et Microtechniques » (ED SPIM, ED37) is part of the doctoral college of the Université de Bourgogne Franche-Comté (COMUE UBFC).



NATIONAL NETWORK OF DOCTORAL SCHOOLS SPI

18 September 2022



THE 2021/2022 RECRUITMENT CAMPAIGN FOR DOCTORAL CONTRACTS IS OPEN!

18 September 2022



ÉCOLE DOCTORALE SPIM

in Recherche

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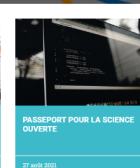
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Bienvenue à l'École Doctorale SPIM !
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