Welcoming and Training of international high-level post-docs in Normandy Fellowship Programme

Guide for applicants call #2

June 6th – October 14th 2022

V4.0 4-Oct-22

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska - Curie Grant Agreement N° 101034329
Table of contents

| History of changes | .......................................................... | 3 |
| Definitions | .......................................................... | 4 |
| 1. The WINNINGNormandy programme | .......................................................... | 6 |
| 1.1 Overview of the programme | .......................................................... | 6 |
| 1.2 Expected projects | .......................................................... | 7 |
| 1.3 Grant allowances | .......................................................... | 8 |
| 1.4 Insurances, taxes and visa | .......................................................... | 9 |
| 2. Eligibility requirements | .......................................................... | 10 |
| 2.1 Applicant | .......................................................... | 10 |
| 2.2 Applications | .......................................................... | 10 |
| 2.3 Equal opportunities | .......................................................... | 11 |
| 3. Evaluation and selection | .......................................................... | 13 |
| 3.1 Schedule | .......................................................... | 13 |
| 3.2 Evaluation and selection process | .......................................................... | 13 |
| 3.3 Evaluation criteria | .......................................................... | 14 |
| 3.4 Results’ publication | .......................................................... | 15 |
| 3.5 Acceptation of the Fellowship | .......................................................... | 16 |
| 3.6 Reserve list | .......................................................... | 16 |
| 3.7 Redress procedure | .......................................................... | 16 |
| 4. Career guidance | .......................................................... | 17 |
| 4.1 Supervisors | .......................................................... | 17 |
| 4.2 Mentoring | .......................................................... | 17 |
| 5. Training programme | .......................................................... | 17 |
| 6. EURAXESS in Normandy | .......................................................... | 19 |
| Appendix 1: List of host institutions | .......................................................... | 21 |
| Appendix 2: List of Norman research units | .......................................................... | 27 |
| Appendix 3: Guidelines for creating your account and submitting your application on the platform | .......................................................... | 28 |
| Appendix 4: List of panel structure | .......................................................... | 34 |

Contact: winning@normandie.fr
# History of changes

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0</td>
<td>26 June 2021</td>
<td>Initial document for call#1</td>
</tr>
<tr>
<td>V2.0</td>
<td>27 July 2021</td>
<td>Details added regarding evaluation and selection process (part 3.3).</td>
</tr>
<tr>
<td>V3.0</td>
<td>2 June 2022</td>
<td>Revised document for call #2</td>
</tr>
<tr>
<td>V4.0</td>
<td>4 October 2022</td>
<td>Additional information about salary calculation</td>
</tr>
</tbody>
</table>
**Definitions**

**Academic sector** refers to public or private higher education establishments awarding academic degrees, public or private non-profit research organizations for whom one of the main objectives is to pursue research or technological development, and international European interest organizations.

**Beneficiary** is the legal entity that signs the Grant Agreement and has the responsibility for the proper implementation of the action. (i.e. Normandy Region).

**Experienced Researcher (ER) or Fellow** must, at the date of the deadline of the WINNINGNormandy call, be in possession of a doctoral degree or have at least four years of full-time equivalent research experience.

**Fellow**: researcher funded by the WINNINGNormandy programme.

**Full-Time Equivalent (FTE) Research Experience** is measured from the date when a researcher obtained the degree entitling him or her to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started or envisaged. Periods of inactivity in research (e.g. unemployment, periods of employment outside research, parental or long-term sick leave) do not count towards the time of research experience, according to the European Commission’s (EC) definition. Each applicant that has not yet her/his PhD diploma needs to fill in the full-time equivalent research experience table in the application form.

**Grant Agreement**: this is the funding agreement concluded between the European Commission and the Beneficiary (i.e. Normandy Region)

**Gross salary**: It is the amount given by the Funding Organisation to the Host Institution that recruits the Fellow, the net salary corresponds to the gross salary minus employee’s and employer’s contributions (please refer to the FAQ for further information).

**Host Organisation/Institution**: The legal entity employing, supervising and training the Fellow during the Fellowship. In WINNINGNormandy, only the academic partners can employ Fellows and be Host Organisations.

**Keywords** will allow the Programme Management Team to identify the relevant experts for the evaluation phases. They are based on the panel structure for ERC calls and can be found in Appendix 4 and on the project webpage under the section “Documents to download”.

**Mentors** will be available in the Partner Organisations from the extra-academic sector to ensure intersectoral exposure of the Fellows. The mentor can also come from academic sector if this is an interdisciplinary or international project. If a secondment is planned during the Fellowship, the mentor can also belong to the Secondment organisation.

**Mobility Rule**: There is no restriction of nationality but the applicant must have not resided or performed his/her main activity in France more than 12 months in the last 3 years immediately before the WINNINGNormandy call deadline.

**Non-Academic or Extra-Academic sector** means any socio-economic actor not included in the academic sector and fulfilling the requirements of the Horizon 2020 Rules for Participation Regulation EU No 1290/2013.
Partner Organisations contribute to the implementation of the action, but do not sign the Grant Agreement.

Programme Management Team (PMT) is a support to the Steering Committee in charge of the day-to-day management of all phases of the programme, notably including the dissemination of the calls, support to applicants, coordination of the selection and evaluation processes, communication of results, and administrative support to each fellow during their fellowship including management of the training programme, overseeing the results dissemination & exploitation.

Personal Career Development Plan (PCDP) is a written list of the short and long-term objectives that Fellows have pertaining to their Fellowship. It will be established at the beginning of the Fellowship period and will give a brief overview of the research project accomplishments expected and the skills the Fellow will develop during his/her Fellowship. The plan should be revised regularly. The PCDP framework can be found on the webpage of the project.

Regional Scientific Committee (RSC) ensures that the general criteria of the project and the regional strategies (smart specialization strategy (S3), economic development and R&I policies,..) are respected and applied by all partners. RSC will promote best practices throughout all partner institutions, and ensure the impact expected from the project. Official awarding decision will be formally validated by this Regional Scientific Committee.

Secondment: Short research stays up to 3 months over the 2-year Fellowship, notably at the extra-academic partner organisations (or at other organisations that are not yet partners of the programme).

Smart Specialisation Strategy (S3): In the framework of the 2021-2027 EU programming period, Normandy Region has chosen to focus on 6 main research & innovation domains. WINNINGNormandy applications must be based on one of them at least.

Steering Committee (SC) is the executive body, which proposes the overall orientation and strategy to Regional Scientific Committee, and is responsible for project implementation & progress, reporting, conflict resolution & risk management, IPR, exploitation & dissemination actions, gender equality & research integrity, and manages the allocation of resources.

The Supervisor is the scientist appointed by the Host Institution to supervise the Fellow throughout the whole duration of the action (e.g. his/her research project).
1. The WINNING Normandy programme

1.1 Overview of the programme

Normandy Region wishes to contribute to the current challenges and transitions (changes in climate balances, loss of biodiversity, potential crises at the health, economic and social levels, etc.) and to build the solutions of tomorrow, in line with the characteristics of its territory, its specificities and its strengths in terms of innovation.

The WINNING Normandy - WelcomINg and TraiNING of international high-level post-docs in Normandy programme aims to promote attractive research careers in the Normandy Region in France by funding individual-driven research training and career opportunities for Experienced Researchers (ER) i.e. post-doctoral level Fellows. These Fellows will be selected within the context of the currently endorsed 6 Smart Specialisation Areas (see Fig. 1), following an open, transparent, merit-based and equitable selection procedure based on international peer review.

40 two-year postdoctoral Fellowships will be recruited in two calls in 2021 and 2022 (see Schedule 3.1).

20 fellows have been recruited following the 1st call.

The choice of the Host Institution and the research topic is entirely left to the Experienced Researchers based on individual-driven international mobility. The research topic must meet one or several of the 6 areas of the 2021-2027 Norman Smart Specialization Strategy (S3):

![Fig. 1: Smart Specialisation Areas in Normandy](image-url)
The consortium gathers the leading interdisciplinary higher education institutes, research organisations and large infrastructures in the region (see the list of the Host Institutions in Appendix 1 and of eligible laboratories in Appendix 2), as well as over 20 industrial partners (large groups, SMEs, start-ups) operating in the areas of Smart Specialisation (see the list of the WINNINGNormandy partners in Appendix 1).

Academic Partners will be the Host Institutions and will recruit the Fellows. They could also propose trainings.

Extra-Academic Partners will propose secondments and trainings. Mentors can also belong to Extra-Academic Sector.

These partners will thus strongly contribute to the implementation of the programme by recruiting and hosting research Fellows, providing secondments and/or specific training, intersectoral mentoring, networking and business opportunities. Several actors in human resources, project management, entrepreneurship and outreach complete the partnership to drive together the specifically tailored transferable skills training programme, personalised career development plan, and encourage results exploitation and large dissemination.

1.2 Expected projects

WINNINGNormandy follows the MSCA-COFUND principle of “individual-driven mobility”. The candidates will have the freedom to build their research project within the 6 areas of the S3 defined for 2021-2027, choose their supervisor as well as secondment organisation and mentor, if it is relevant to their project.

Projects must be hosted in one of the Host Institutions of Normandy Region (see details in Appendix 1).

Projects aiming at developing intersectoral and/or international collaborations are strongly recommended.

- Intersectoral and/or interdisciplinary Secondments, visits, and mentoring are encouraged. Fellows will be given the opportunity to spend up to 2-3 months over their 2-year Fellowship contract in the Extra-Academic sector or the academic sector if the interdisciplinary dimension is demonstrated. Some are already partners of WINNINGNormandy (see the list of the in Appendix 1). It is not mandatory to have a secondment in Normandy, it can be elsewhere in France or abroad. It is also not mandatory to declare a secondment at the submission phase. Nevertheless, it is strongly encouraged as it counts as one of the evaluation sub-criteria.
The Fellows will benefit from the existing international collaborations and networks developed by the Host Research Institutions (including international Secondment/mentoring opportunities).

1.3 Grant allowances

WINNINGNormandy grant covers the following standard allocation for each Fellow (full-time rates), covered through the Regional Council of Normandy and EC co-funding:

- Living allowance: 66,480€ /year (gross salary of 5,540€/month before employee’s and employer’s taxes, please see FAQ for further information); Net salary to be expected is ~3100€ (depending on your personal situation and host institutions).
- Mobility allowance: 3,600€ /year (300€/month). This allowance can, for example, cover the travel costs of family visits or provide support for housing in Normandy, this allowance is (exonerated from income tax but subject to social contributions).

Salaries received by the Fellows are liable for taxes and/or other deductions governed by the French law.

In addition to the above categories, the Host Institution will be granted for each Fellow the following allowances in order to implement the project:

- Travel allowance: 2,400€ /year (200€/month), covering registration fees, travel and subsistence expenses, to be used by the ER for career development purposes, incl. participation to conferences, events;
- Research costs: 4,800€ /year (400€/month), will permit to cover the expenses linked to the research project implementations. It covers also publication costs;

Eventually, the WINNINGNormandy budget covers also the cost of the network-wide training programme 1,920 € / year (160 €/month), and administrative costs 7 800 € / year (650 €/month), used directly by the Regional Council of Normandy for these expenses.
No further additional funding (e.g. overheads) will be available from the Regional Council of Normandy nor the EC. It is up to the Host Organisations to internally ensure prior to the Fellowship application that adequate resources/funds to cover other kind of necessary costs in relation to a specific applicant are in place.

In addition, in agreement with French law, a family allowance will be allocated to Fellows (as for every public employee) on the basis of the number of children in their current and permanent care. The amount of the allowance varies depending on the number of children (around 70€ for 2 children, up to 400 € for 4 children).

Employment conditions include full social security coverage (including parental and sick leave), contributions to the pension scheme, and unemployment benefits once the contract is over. Employment contracts also include workplace accident insurance. Legal working hours in France are fixed at 35 hours per week for a full-time position. All employees are entitled to 25 days of paid holiday per year.

Depending on internal agreements, there can be some variations within the Host Institutions regarding the number of working hours per week and days of paid holidays.

1.4 Insurances, taxes and visa

Fellows are neither agents nor employees of the Normandy Regional Council. It accepts no liability for any wrongdoing, damage, actions or activities of Fellows or host laboratories within the framework of WINNING Normandy Fellowship (and beyond), including with respect to health & safety, insurances, taxes, research costs etc. The Fellow will be under employment contract with the Host Organisation and therefore an employee of it. The Regional Council is not in a position to provide any medical, accident, social insurance coverage and support. The Host Organisation in hosting the Fellow has the responsibility of protecting both itself and the Fellow as appropriate to French legislation, e.g. providing the social security, in line with national and European standards and regulations. The Fellow is fully responsible to ensure that any of his/her accompanying family members staying in France are covered in terms of social security, medical, accident schemes and other necessary schemes where applicable and provided with the adequate level of protection, during the whole Fellowship. It is the responsibility of the Fellows and Host Organisation(s) to ensure the payment of any taxes which may be levied upon by the appropriate national authority, in relation to the Fellowship. The Regional Council cannot be held responsible for visa applications and any related outcomes; we encourage the selected applicants to apply for a visa with the Host Organisation’s help, if one is needed, as soon as
possible as visa applications can take time and this point should be carefully considered when identifying the initial start date of the Fellowship.

Useful information, and help provided for administrative issues can be found in:

2. Eligibility requirements

2.1 Applicant

At the date of the call deadline, the candidate has to meet the following criteria:

- Compliance with the Marie Sklodowska-Curie Mobility Rule: applicants must not have resided or carried out their main activity (work, studies, etc.) in France for > 12 months in the last three years before the WINNINGNormandy call deadline;
- Applicants must be in possession of a doctoral degree (or have at least four years of full-time equivalent research experience);
- Applicants must choose a host research (~100 laboratories) group in the Normandy Region (see the list of the eligible laboratories in Appendix 2), working in one or several 6 Smart Specialisation Areas (S3) of the Region to develop the research project of their choice.

2.2 Applications

Applications must fulfil the following requirements:

- Applications should be written in English (see the application form);
- Keywords must match with structure panels listed in Appendix 4 and are limited to 200 characters (i.e. 5-6 keywords);
- All the sections of the application form must be fully completed, within the page limit;
- It is mandatory to keep the application form template (do not suppress the frame);
- Applications must be submitted through the online submission system at https://monespace-aides.normandie.fr/aides/#/crno/connexe/F_NTEL006ENS/depot/simple (see Appendix 3 for further explanations). Applications sent by email or postal mail will not be considered for evaluation;
- Applications must be received before the call deadline (see Schedule 3.1);
- Any ethical issues must be underlined and specified in the self-assessment ethic evaluation form. Do not forget to justify the issues raised by your self-assessment.
The application must include all and only the following documents in .pdf format and with the mandatory naming (see application form template):

- Application Form (administrative data, host research unit details, declarations...);
- Research project description;
- Curriculum Vitae and track record: please use the frame;
- Ethics self-assessment form;
- Proof of identity;
- PhD degree transcript and/or appropriate work certificate(s);
- 2 recommendation letters;
- Other documents if applicable

It is not allowed to submit several project proposals. Only the first project proposal will be taken into account in the evaluation process if an applicant submits several proposals. The Programme Management Team reserves the right to ask for additional evidence during the eligibility check phase.

All documents must be named as follows:
- "ProjectAcronym_NameApplicant_TypeofDocument”

Please do not modify the template of the form for the submission and keep the frame. All applications without the requested template will be rejected

2.3 Equal opportunities

WINNINGNormandy commits to take all measures to implement the principles set out by the European Commission in the European Charter for Researchers and the Code of Conduct for the Recruitment of the Researchers, in particular regarding:

- Working conditions;
- Transparent recruitment process based on merit;
- Career development
The WINNINGNormandy programme aims at driving standards of research management, including the Human Resources Strategy for Researchers (HRS4R), in an international setting. This is a goal shared with the partners that are committed to implement the European charter for researchers, and HR4SR principles.

The current implementation of the Charter & Code principles and measures will guarantee a quality label and make them more attractive to international researchers looking for a new employer/academic host. Three academic partner organisations of the programme, INSERM, CNRS and INSA (member of Normandy University COMUE), obtained the Human Resources Strategy for Researchers (HRS4R) label respectively on 2016, 2017 and 2019. Benefitting from this experience, several other partners are currently working on it. The project being a driving force to implement these principles in the context of WINNINGNormandy, all the consortium partners will develop far more open, transparent and merit-based recruitment processes. In return this will raise the quality of the recruited international candidates in general by the partner organisations.

There are 40 principles to promote the mobility and careers of researchers in the ERA in terms of recruitment and working conditions divided into four main axes:

- Ethical principles and professional responsibilities;
- Recruitment, career development, mobility;
- Working and safety conditions, professional environment;
- Training

The Normandy Region aims at combatting any prejudices and differences in the treatment and consideration of equal opportunities by highlighting needed corrective actions to mitigate imbalances.

In WINNINGNormandy, the Normandy Region agrees to adopt the following measures:

- Complying with the gender balance recommendation of the EC at all levels by: (1) promoting gender-balanced management bodies, committees and international independent expert pool; (2) aiming at welcoming to the highest extent possible and with equal merits an identical number of female and male Fellows; (3) conveying awareness on sex-and-gender in research projects through transferable skills training;
- No discrimination regarding nationality, ethnic origin, disability/special needs, sexual orientation, religion, career break, etc. will take place in the evaluation and selection process. No age limits will be applied;
- Supplementary MSCA Special Needs Allowance (max 60,000 € per researcher) will be solicited for the Fellows for who the long-term physical, mental, intellectual or sensory impairments are as such that their participation in WINNINGNormandy would not be possible without extra financial support;
- Support will be offered to migrant/refugee researcher in collaboration with the Science4Refugees initiative;
- Applicants (F/M) who have had career interruptions due to parental leave (including child birth during PhD), career break, compulsory military service, intersectoral and non-academic mobility such as working for industry, or long illnesses are eligible. It will be taken into account during evaluation process;

3. Evaluation and selection

3.1 Schedule

The provisional schedule for the evaluation and selection process is:

➢ For the 1st call:

3.2 Evaluation and selection process

There will be substantial involvement, at all stages of the selection process, of independent international expert evaluators. Based on the principles of the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers, the selection process will be as follows (see figure below):
3.3 Evaluation criteria

**1st step**
Evaluation & selection criteria

- **Research project (excellence)**
  - Quality, innovative aspects and feasibility of the research programme
  - Interdisciplinary and international aspects of the project
  - Exposure to intersectoral sector: contribution and relevance of the extra-academic sector to the research project
  - 50%

- **Application qualifications**
  - Quality of the CV
  - Track record (publications, oral presentations (invited or not), grants, prizes, patents, etc.)
  - 30%

- **Career development**
  - Impact of the project on the professional career development
  - 20%

**2nd step**
Interviews

- **Research project (impact et implementation)**
  - Quality and novelty of the research project
  - Coherence and effectiveness of the work plan
  - Alignment with the Regional strategic perimeter / specialisation areas
  - 40%

- **Profile of the candidate**
  - Work experience both in academic and private sector
  - International experience
  - Cross-domain experience
  - 30%

- **Potential of the candidate**
  - Potential for leadership
  - Openness and creativity, communication and management skills
  - Career path vision
  - 30%
<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.</td>
</tr>
<tr>
<td>1</td>
<td>Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.</td>
</tr>
<tr>
<td>2</td>
<td>Fair. Proposal broadly addresses the criterion, but there are significant weaknesses.</td>
</tr>
<tr>
<td>3</td>
<td>Good. Proposal addresses the criterion well, but a number of shortcomings are present.</td>
</tr>
<tr>
<td>4</td>
<td>Very Good. Proposal addresses the criterion very well, but a small number of shortcomings are present.</td>
</tr>
<tr>
<td>5</td>
<td>Excellent. Proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.</td>
</tr>
</tbody>
</table>

The applicants should reach a threshold score of 10/15 from the 1st step (paper evaluation) to be interviewed based on the weighted scores assigned by the experts. After agreement on the paper selection ranking list by Steering Committee (SC), the 40 best candidates will be invited for an interview. Should there be any ex-aequo, it is possible that more than 40 (up to 50) applicants may need to be interviewed. Priority will be given first to the higher score obtained for the “research project” criterion then to the “applicant qualifications/profile of the candidate” criterion and finally to the “career development/potential of the candidate” criterion. A threshold score of 10/15 is also established to be selected and enrolled in the main and reserve lists. In case of ex-aequo after the 2nd step, candidates will be discussed in an iterative process considering both performances during the paper review and interview process, with final approval of Regional Scientific Committee. The same priorities as for the 1st step will be applied according to the weight of each criterion. The WINNINGNormandy project will also comply with the gender balance recommendation of the EC at the selection level by aiming at welcoming to the highest extent possible and with equal merits an identical number of female and male fellows.

3.4 Results’ publication

The Project Management Team (PMT) will provide the following information to the successful candidates:

- **1st step**: once the evaluation/review has been conducted by the experts, information, will be provided by e-mail to the successful candidates, including the interview details (30-minute audition in English including a 15-minute presentation and a 15-minute discussion) and instructions (including practical information, presentation file format...). The interview date will be scheduled about one month before;
• **2nd step**: once the interview/selection has been made, information will be provided to the candidates by e-mail within two weeks following the last interview and will include ranking position, scores and comments assigned by experts from the 1st step and interviewers from the 2nd step.

In addition, a short feedback with identified weaknesses and strengths will be given to 1st step unsuccessful candidates useful to improve their future applications.

### 3.5 Acceptation of the Fellowship

If the Fellow is selected, he/she must send a letter of his/her acceptance to winning@normandie.fr within two weeks from the notification of success and must start his/her project no later than 6 months after the publication of the results.

If the Fellow does not answer in due time or if he/she refuses or withdraws his/her application, the Fellowship will be offered to another applicant (in the descending order of the reserve list).

### 3.6 Reserve list

He/she will be then contacted by email. The reserve list will stay open for 6 months.

### 3.7 Redress procedure

All candidates will have the right to access a redress procedure if they feel that there has been a shortcoming in the way their proposal was evaluated, or if they believe that the results of the eligibility checks are incorrect. All requests for redress will be treated in confidence by the Programme Management Team (PMT): winning@normandie.fr

The redress procedure will only evaluate the evaluation procedure and perceived incorrect application of the eligibility criteria and not the scientific judgement of the evaluation and selection committee members. In case the redress is deemed justified, the application will again be evaluated and/or a new interview will be carried out.
4. Career guidance

4.1 Supervisors

In WINNINGNormandy, supervisors are members of the Host Institutions’ research groups. They can be group leaders (research directors employed by organisations such as CNRS or Inserm or university professors) or advanced researchers integrated within a department/research group. They are requested to have a solid international academic track records, supervision experience and good connexions with the extra-academic world/international networks. At least one senior scientist will supervise each Fellow, and a mentoring scheme can be developed. The Supervisor(s), Mentors, and Steering Committee (SC) will assess the progress of the Personal Career Development Plan (PCDP) of the Fellow. Agreed in the beginning of the programme and reviewed every six months, the PCDP will include a personalised analysis of the requirements and goals of the planned training and career guidance, and concrete measures and objectives to achieve the goals. The Supervisors and Fellows can consult the Programme Management Team (PMT) in case of scientific or interpersonal issues: winning@normandie.fr

4.2 Mentoring

Mentoring is a one-to-one relationship between a Mentor and a mentee, and is highly important to develop as an independent researcher. In addition to a Supervisor, each Fellow can benefit from a Mentor from the Extra-Academic Sector to ensure intersectoral supervision (or from academic sector if interdisciplinary or international project). Mentors will give support, advice and guidance, bring a network and provide prospects for future employment, thus motivating Fellows and contributing to reduce any insecurity in their professional future. The Mentors will be selected by the Fellow in collaboration with the host Supervisor. If a Secondment is planned during the Fellowship, the mentor can belong to the Secondment Organisation or not. The mentor has in preference a different scientific background from the Fellow. WINNINGNormandy will propose dedicated training sessions and guidance for Mentors, to help them to implement an effective and appropriate mentoring support. The mentoring scheme will consist in at least 3 interactions per year between the Mentor and the mentee based on proactive communication (e.g. phone calls, video conferences, emails) and one face-to-face meeting per year if possible. The mentee will perform a summary report after each interaction, validated by the Mentor.

5. Training programme

In accordance with its strategy, the WINNINGNormandy will offer a novel international, interdisciplinary and intersectoral training programme for research Fellows.
The training programme will cover scientific, academic and industrial topics in the identified Smart Specialisation (S3) areas as well as hands-on knowledge in non-research oriented transferable skills and will be in phase with the career planning as defined in the PCDP. The programme will consist in:

- **Local training** that is provided by the respective Host (and Secondment if any) Organisations. It will cover advanced research skills training within the appropriate discipline(s) of Fellows and it will allow to gain new research skills. In addition, some transferable skills modules are locally provided to the Fellows as described below. The local training also covers the digital training options for self- and continuous learning, including French language courses.

- **Network-wide training events organized by the consortium**: The consortium will provide high-level and specifically designed support and additional training concentrating in non-research oriented transferable skills and interdisciplinary exchanges and popularisation. The training is created in strong collaboration with the extra-academic professionals involved in the project as Partner Organisations.

![Figure 1: 3 subdomains of the network-wide training on transferable skills](image)

<table>
<thead>
<tr>
<th>1. Personal effectiveness; The development of personal qualities and training in approaches to be an effective researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career development</td>
</tr>
<tr>
<td>Personal development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Research governance and entrepreneurship; Knowledge of the professional standards and requirements, benchmarking and results exploitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and industry: Cross-fertilisation</td>
</tr>
<tr>
<td>Professional responsibility</td>
</tr>
<tr>
<td>Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Engagement, influence and impact; The knowledge and skills to work with others and ensure the wider impact of research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working with others &amp; engagement</td>
</tr>
<tr>
<td>Communication &amp; Dissemination</td>
</tr>
<tr>
<td>Societal impact</td>
</tr>
</tbody>
</table>

**Research/discipline related skills**

- Applicants can choose to develop specialized research skills and expertise beyond their PhD research, or broadening their skills portfolio in fields of research adjacent to their PhD topic.
- **high-level transversal core facilities** and state-of-the-art platforms coordinated by expert researchers and permanent staff;
- participate in the training events and meetings provided by the host, or Norman scientific networks in which they belong to.
The Fellows will benefit from scientific training beyond the host research group competencies during secondments (typically up to 2-3 months over their 2-year Fellowship). Secondments are optional but strongly supported and taken into account for the evaluation.

- These secondment opportunities will be offered by (but not limited to) 23 extra-academic partner organisations covering a large scope from SMEs to world-leading industries. The Fellow is also free to propose an interdisciplinary or international secondment.

### Network-wide training

- Non-research oriented transferable skills (leadership and management skills, communicational and interpersonal skills, entrepreneurial abilities and creativity skills, knowledge in research integrity and ethics,..) and interdisciplinary exchanges and popularisation supporting the career development.

Dedicated sessions on:

- Research integrity; personal development; plan the career;
- Implement a research project;
- Get to know each other, networking opportunities & methods;
- Methods & media, open science, pitch & writing challenge;
- Exploit the results by different means, next steps in the career, post-doc contest awards.

---

6. EURAXESS in Normandy

Euraxess in Normandy consists of three Services Centres located in the 3 main cities of Normandy: Caen, Le Havre and Rouen. It is coordinated by the Community of Universities and Institutions (ComUE) Normandie Université and hosted by its members and associates.

[www.euraxess-normandie.fr](http://www.euraxess-normandie.fr)

Euraxess in Normandy provides services to help people settle in, seven of which have been defined as priorities:

**Arrival and working conditions**

- Departure conditions and formalities
- Entry conditions/visas
- Work permits

**Living conditions**

- Accommodation
• Banking

Health
• Health insurance
• Medical care

Euraxess in Normandy offers support throughout the mobility project, as well as to the accompanying families:
1. Before arrival – on arrival – during the stay in France
2. Spouse and child(ren)
Appendix 1: List of host institutions

This list includes the academic and non-academic institutions members of WINNINGNormandy. The academic members will recruit the successful applicants and provide trainings. The non-academic members will provide trainings, secondments, mentoring... Other non-academic organizations can provide secondments...

<table>
<thead>
<tr>
<th>ACADEMIC INSTITUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communauté d'Universités et établissements Normandie Université - COMUE NU</td>
</tr>
<tr>
<td>Université Le Havre Normandie - ULHN</td>
</tr>
<tr>
<td>Université de Caen Normandie - UNICAEN</td>
</tr>
<tr>
<td>Université de Rouen Normandie - URN</td>
</tr>
<tr>
<td>Institut National des Sciences Appliquées Rouen Normandie - INSA</td>
</tr>
<tr>
<td>ENSICAEN</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Centre National de la Recherche Scientifique - CNRS</td>
</tr>
<tr>
<td>Institut National de la Santé et de la Recherche Médicale - INSERM</td>
</tr>
<tr>
<td>Grand Accélérateur National d’Ions Lourds - GANIL</td>
</tr>
<tr>
<td>Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail - ANSES</td>
</tr>
</tbody>
</table>

**NON-ACADEMIC INSTITUTIONS**

<p>| Normandie Incubation | ![Normandie Incubation Logo] |</p>
<table>
<thead>
<tr>
<th>Association</th>
<th>Logo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relais d'Sciences</td>
<td></td>
</tr>
<tr>
<td>Association Bernard Gregory</td>
<td></td>
</tr>
<tr>
<td>L-Up</td>
<td></td>
</tr>
<tr>
<td>ALGAIA</td>
<td></td>
</tr>
<tr>
<td>Samabriva</td>
<td></td>
</tr>
<tr>
<td>Société Atlantique de Mariculture</td>
<td></td>
</tr>
<tr>
<td>AQUIMER</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>Logo</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------</td>
</tr>
<tr>
<td>EDF LNHE</td>
<td><img src="image" alt="EDF Logo" /></td>
</tr>
<tr>
<td>SiemensGamesa/Adwen</td>
<td><img src="image" alt="Siemens Gamesa Logo" /></td>
</tr>
<tr>
<td>TOTAL Energies</td>
<td><img src="image" alt="TOTAL Energies Logo" /></td>
</tr>
<tr>
<td>WPD think energy</td>
<td><img src="image" alt="WPD Logo" /></td>
</tr>
<tr>
<td>ArianeGroup</td>
<td><img src="image" alt="ArianeGroup Logo" /></td>
</tr>
<tr>
<td>Manoir Industries</td>
<td><img src="image" alt="Manoir Industries Logo" /></td>
</tr>
<tr>
<td>Company</td>
<td>Logo</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Safran Nacelles</td>
<td><img src="image" alt="Safran Nacelles Logo" /></td>
</tr>
<tr>
<td>Safran Tech</td>
<td><img src="image" alt="Safran Tech Logo" /></td>
</tr>
<tr>
<td>Faurecia</td>
<td><img src="image" alt="Faurecia Logo" /></td>
</tr>
<tr>
<td>2SN</td>
<td><img src="image" alt="2SN Logo" /></td>
</tr>
<tr>
<td>SOGET</td>
<td><img src="image" alt="SOGET Logo" /></td>
</tr>
<tr>
<td>APTAR Pharma</td>
<td><img src="image" alt="APTAR Pharma Logo" /></td>
</tr>
<tr>
<td>Brand</td>
<td>Logo</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>EtapLab</td>
<td>ETAP-Lab</td>
</tr>
<tr>
<td>Leica</td>
<td>Leica</td>
</tr>
<tr>
<td>Op2lysis</td>
<td>Op2Lysis</td>
</tr>
<tr>
<td>ORIL Industries</td>
<td>ORIL Industrie</td>
</tr>
<tr>
<td>Orange</td>
<td>orange</td>
</tr>
<tr>
<td>SAAGIE</td>
<td>Saagie</td>
</tr>
<tr>
<td>Toshiba</td>
<td>TOSHIBA</td>
</tr>
</tbody>
</table>
Appendix 2: List of Norman research units

Please refer to the list available on the project webpage:
https://www.normandie.fr/sites/default/files/2022-05/BDD_Research%20Units_2022Call2.xlsx
Appendix 3: Guidelines for creating your account and submitting your application on the platform

Click on « créer un compte »: create an account
Connexion information:
User ID
Password (X2)

Personal data:
Title
Last name
First name
Email address (X2)
You have received a confirmation email in order to activate your account (check your spams if necessary).
Then go back to the identification screen and login.
Dans cet espace, vous pouvez modifier vos informations personnelles et accéder à vos demandes d’aides

Mes services

Mes demandes d’aide

Déposer une demande

Suivre ou compléter mes demandes

Click on « déposer une demande » : submit your application

Here, you can have access to your application either if you have saved it or if it is submitted and ongoing.
You can search for the correct procedure by entering “winn” for example then click on “COFUND-WINNINGNormandy”
You can start submitting your application!
Appendix 4: List of panel structure

Please find below the necessary keywords to be indicated in your application, please choose 5 or 6 of them that reflect your project. It will help selecting the experts.

**PHYSICAL SCIENCES AND ENGINEERING**

**PE1 Mathematics**
All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics
PE1_1 Logic and foundations
PE1_2 Algebra
PE1_3 Number theory
PE1_4 Algebraic and complex geometry
PE1_5 Lie groups, Lie algebras
PE1_6 Geometry and global analysis
PE1_7 Topology
PE1_8 Analysis
PE1_9 Operator algebras and functional analysis
PE1_10 ODE and dynamical systems
PE1_11 Theoretical aspects of partial differential equations
PE1_12 Mathematical physics
PE1_13 Probability
PE1_14 Mathematical statistics
PE1_15 Generic statistical methodology and modelling
PE1_16 Discrete mathematics and combinatorics
PE1_17 Mathematical aspects of computer science
PE1_18 Numerical analysis
PE1_19 Scientific computing and data processing
PE1_20 Control theory, optimisation and operational research
PE1_21 Application of mathematics in sciences
PE1_22 Application of mathematics in industry and society

**PE2 Fundamental Constituents of Matter**
Particle, nuclear, plasma, atomic, molecular, gas, and optical physics
PE2_1 Theory of fundamental interactions
PE2_2 Phenomenology of fundamental interactions
PE2_3 Experimental particle physics with accelerators
PE2_4 Experimental particle physics without accelerators
PE2_5 Classical and quantum physics of gravitational interactions
PE2_6 Nuclear, hadron and heavy ion physics
PE2_7 Nuclear and particle astrophysics
PE2_8 Gas and plasma physics
PE2_9 Electromagnetism
PE2_10 Atomic, molecular physics
PE2_11 Ultra-cold atoms and molecules
PE2_12 Optics, non-linear optics and nano-optics
PE2_13 Quantum optics and quantum information
PE2_14 Lasers, ultra-short lasers and laser physics
PE2_15 Thermodynamics
PE2_16 Non-linear physics
PE2_17 Metrology and measurement
PE2_18 Equilibrium and non-equilibrium statistical mechanics: steady states and dynamics

**PE3 Condensed Matter Physics**
Structure, electronic properties, fluids, nanosciences, biological physics
PE3_1 Structure of solids, material growth and characterisation
PE3_2 Mechanical and acoustical properties of condensed matter, lattice dynamics
PE3_3 Transport properties of condensed matter
PE3_4 Electronic properties of materials, surfaces, interfaces, nanostructures
PE3_5 Physical properties of semiconductors and insulators
PE3_6 Macroscopic quantum phenomena, e.g. superconductivity, superfluidity, quantum Hall effect
PE3_7 Spintronics
PE3_8 Magnetism and strongly correlated systems
PE3_9 Condensed matter – beam interactions (photons, electrons, etc.)
PE3_10 Nanophysics, e.g. nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics
PE3_11 Mesoscopic quantum physics and solid-state quantum technologies
PE3_12 Molecular electronics
PE3_13 Structure and dynamics of disordered systems, e.g. soft matter (gels, colloids, liquid crystals), granular matter, liquids, glasses, defects
PE3_14 Fluid dynamics (physics)
PE3_15 Statistical physics: phase transitions, condensed matter systems, models of complex systems, interdisciplinary applications
PE3_16 Physics of biological systems

**PE4 Physical and Analytical Chemical Sciences**
Analytical chemistry, chemical theory, physical chemistry/chemical physics
PE4_1 Physical chemistry
PE4_2 Spectroscopic and spectrometric techniques
PE4_3 Molecular architecture and Structure
PE4_4 Surface science and nanostructures
PE4_5 Analytical chemistry
PE4_6 Chemical physics
PE4_7 Chemical instrumentation
PE4_8 Electrochemistry, electrodialysis, microfluidics, sensors
PE4_9 Method development in chemistry
PE4_10 Heterogeneous catalysis
PE4_11 Physical chemistry of biological systems
PE4_12 Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions
PE4_13 Theoretical and computational chemistry
PE4_14 Radiation and Nuclear chemistry
PE4_15 Photochemistry
PE4_16 Corrosion
PE4_17 Characterisation methods of materials
PE4_18 Environment chemistry

**PE5 Synthetic Chemistry and Materials**
New materials and new synthetic approaches, structure-properties relations, solid state chemistry, molecular architecture, organic chemistry
PE5_1 Structural properties of materials
PE5_2 Solid state materials chemistry
PE5_3 Surface modification
PE5_4 Thin films
PE5_5 Ionic liquids
PE5_6 New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles
PE5_7 Biomaterials synthesis
PE5_8 Intelligent materials synthesis – self assembled materials
PE5_9 Coordination chemistry
PE5_10 Colloid chemistry
PE5_11 Biological chemistry and chemical biology
PE5_12 Chemistry of condensed matter
PE5_13 Homogeneous catalysis
PE5_14 Macromolecular chemistry
PE5_15 Polymer chemistry
PE5_16 Supramolecular chemistry
PE5_17 Organic chemistry
PE5_18 Medicinal chemistry

PE6 Computer Science and Informatics
Informatics and information systems, computer science, scientific computing, intelligent systems
PE6_1 Computer architecture, embedded systems, operating systems
PE6_2 Distributed systems, parallel computing, sensor networks, cyber-physical systems
PE6_3 Software engineering, programming languages and systems
PE6_4 Theoretical computer science, formal methods, automata
PE6_5 Security, privacy, cryptology, quantum cryptography
PE6_6 Algorithms and complexity, distributed, parallel and network algorithms, algorithmic game theory
PE6_7 Artificial intelligence, intelligent systems, natural language processing
PE6_8 Computer graphics, computer vision, multimedia, computer games
PE6_9 Human computer interaction and interface, visualisation
PE6_10 Web and information systems, data management systems, information retrieval and digital libraries, data fusion
PE6_11 Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)
PE6_12 Scientific computing, simulation and modelling tools
PE6_13 Bioinformatics, bio-inspired computing, and natural computing
PE6_14 Quantum computing (formal methods, algorithms and other computer science aspects)

PE7 Systems and Communication Engineering
Electrical, electronic, communication, optical and systems engineering
PE7_1 Control engineering
PE7_2 Electrical engineering: power components and/or systems
PE7_3 Simulation engineering and modelling
PE7_4 (Micro- and nano-) systems engineering
PE7_5 (Micro- and nano-) electronic, optoelectronic and photonic components
PE7_6 Communication systems, wireless technology, high-frequency technology
PE7_7 Signal processing
PE7_8 Networks, e.g. communication networks and nodes, Internet of Things, sensor networks, networks of robots
PE7_9 Man-machine interfaces
PE7_10 Robotics
PE7_11 Components and systems for applications (in e.g. medicine, biology, environment)
PE7_12 Electrical energy production, distribution, applications
PE8 Products and Processes Engineering

Product and process design, chemical, civil, environmental, mechanical, vehicle engineering, energy processes and relevant computational methods

PE8_1 Aerospace engineering
PE8_2 Chemical engineering, technical chemistry
PE8_3 Civil engineering, architecture, offshore construction, lightweight construction, geotechnics
PE8_4 Computational engineering
PE8_5 Fluid mechanics
PE8_6 Energy processes engineering
PE8_7 Mechanical engineering
PE8_8 Propulsion engineering, e.g. hydraulic, turbo, piston, hybrid engines
PE8_9 Production technology, process engineering
PE8_10 Manufacturing engineering and industrial design
PE8_11 Environmental engineering, e.g. sustainable design, waste and water treatment, recycling, regeneration or recovery of compounds, carbon capture & storage
PE8_12 Naval/marine engineering
PE8_13 Industrial bioengineering
PE8_14 Automotive and rail engineering; multi-/inter-modal transport engineering

PE9 Universe Sciences

Astro-physics/-chemistry/-biology; solar system; planetary systems; stellar, galactic and extragalactic astronomy; cosmology; space sciences; astronomical instrumentation and data

PE9_1 Solar physics – the Sun and the heliosphere
PE9_2 Solar system science
PE9_3 Exoplanetary science, formation and characterization of extrasolar planets
PE9_4 Astrobiology
PE9_5 Interstellar medium and star formation
PE9_6 Stars – stellar physics, stellar systems
PE9_7 The Milky Way
PE9_8 Galaxies – formation, evolution, clusters
PE9_9 Cosmology and large-scale structure, dark matter, dark energy
PE9_10 Relativistic astrophysics and compact objects
PE9_11 Gravitational wave astronomy
PE9_12 High-energy and particle astronomy
PE9_13 Astronomical instrumentation and data, e.g. telescopes, detectors, techniques, archives, analyses

PE10 Earth System Science

Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management

PE10_1 Atmospheric chemistry, atmospheric composition, air pollution
PE10_2 Meteorology, atmospheric physics and dynamics
PE10_3 Climatology and climate change
PE10_4 Terrestrial ecology, land cover change
PE10_5 Geology, tectonics, volcanology
PE10_6 Palaeoclimatology, palaeoecology
PE10_7 Physics of earth’s interior, seismology, geodynamics
PE10_8 Oceanography (physical, chemical, biological, geological)
PE10_9 Biogeochemistry, biogeochemical cycles, environmental chemistry
PE10_10 Mineralogy, petrology, igneous petrology, metamorphic petrology
PE10_11 Geochemistry, cosmochemistry, crystal chemistry, isotope geochemistry, thermodynamics
PE10_12 Sedimentology, soil science, palaeontology, earth evolution
PE10_13 Physical geography, geomorphology
PE10_14 Earth observations from space/remote sensing
PE10_15 Geomagnetism, palaeomagnetism
PE10_16 Ozone, upper atmosphere, ionosphere
PE10_17 Hydrology, hydrogeology, engineering and environmental geology, water and soil pollution
PE10_18 Cryosphere, dynamics of snow and ice cover, sea ice, permafrosts and ice sheets
PE10_19 Planetary geology and geophysics
PE10_20 Geohazards
PE10_21 Earth system modelling and interactions

PE11 Materials Engineering
Advanced materials development: performance enhancement, modelling, large-scale preparation, modification, tailoring, optimisation, novel and combined use of materials, etc.
PE11_1 Engineering of biomaterials, biomimetic, bioinspired and bio-enabled materials
PE11_2 Engineering of metals and alloys
PE11_3 Engineering of ceramics and glasses
PE11_4 Engineering of polymers and plastics
PE11_5 Engineering of composites and hybrid materials
PE11_6 Engineering of carbon materials
PE11_7 Engineering of metal oxides
PE11_8 Engineering of alternative established or emergent materials
PE11_9 Nanomaterials engineering, e.g. nanoparticles, nanoporous materials, 1D & 2D nanomaterials
PE11_10 Soft materials engineering, e.g. gels, foams, colloids
PE11_11 Porous materials engineering, e.g. covalent-organic, metal-organic, porous aromatic frameworks
PE11_12 Semi-conducting and magnetic materials engineering
PE11_13 Metamaterials engineering
PE11_14 Computational methods for materials engineering

LIFE SCIENCES

LS1 Molecules of Life: Biological Mechanisms, Structures and Functions
For all organisms:
Molecular biology, biochemistry, structural biology, molecular biophysics, synthetic and chemical biology, drug design, innovative methods and modelling
LS1_1 Macromolecular complexes including interactions involving nucleic acids, proteins, lipids and carbohydrates
LS1_2 Biochemistry
LS1_3 DNA and RNA biology
LS1_4 Protein biology
LS1_5 Lipid biology
LS1_6 Glycobiology
LS1_7 Molecular biophysics, biomechanics, bioenergetics
LS1_8 Structural biology
LS1_9 Molecular mechanisms of signalling processes
LS1_10 Synthetic biology
LS1_11 Chemical biology
LS1_12 Protein design
LS1_13 Early translational research and drug design
LS1_14 Innovative methods and modelling in molecular, structural and synthetic biology

LS2 Integrative Biology: from Genes and Genomes to Systems
For all organisms:
Genetics, epigenetics, genomics and other ‘omics studies, bioinformatics, systems biology, genetic diseases, gene editing, innovative methods and modelling, ‘omics for personalised medicine
LS2_1 Genetics
LS2_2 Gene editing
LS2_3 Epigenetics
LS2_4 Gene regulation
LS2_5 Genomics
LS2_6 Metagenomics
LS2_7 Transcriptomics
LS2_8 Proteomics
LS2_9 Metabolomics
LS2_10 Glycomics/Lipidomics
LS2_11 Bioinformatics and computational biology
LS2_12 Biostatistics
LS2_13 Systems biology
LS2_14 Genetic diseases
LS2_15 Integrative biology for personalised medicine
LS2_16 Innovative methods and modelling in integrative biology

LS3 Cellular, Developmental and Regenerative Biology

For all organisms:
Structure and function of the cell, cell-cell communication, embryogenesis, tissue differentiation, organogenesis, growth, development, evolution of development, organoids, stem cells, regeneration, therapeutic approaches
LS3_1 Cell cycle, cell division and growth
LS3_2 Cell senescence, cell death, autophagy, cell ageing
LS3_3 Cell behaviour, including control of cell shape, cell migration
LS3_4 Cell junctions, cell adhesion, the extracellular matrix, cell communication
LS3_5 Cell signalling and signal transduction, exosome biology
LS3_6 Organelle biology and trafficking
LS3_7 Mechanobiology of cells, tissues and organs
LS3_8 Embryogenesis, pattern formation, morphogenesis
LS3_9 Cell differentiation, formation of tissues and organs
LS3_10 Developmental genetics
LS3_11 Evolution of developmental strategies
LS3_12 Organoids
LS3_13 Stem cells
LS3_14 Regeneration
LS3_15 Development of cell-based therapeutic approaches for tissue regeneration
LS3_16 Functional imaging of cells and tissues
LS3_17 Theoretical modelling in cellular, developmental and regenerative biology

LS4 Physiology in Health, Disease and Ageing

Organ and tissue physiology, comparative physiology, physiology of ageing, pathophysiology, inter-organ and tissue communication, endocrinology, nutrition, metabolism, interaction with the microbiome, non-communicable diseases including cancer (and except disorders of the nervous system and immunity-related diseases)
LS4_1 Organ and tissue physiology and pathophysiology
LS4_2 Comparative physiology
LS4_3 Physiology of ageing
LS4_4 Endocrinology
LS4_5 Non-hormonal mechanisms of inter-organ and tissue communication
LS4_6 Microbiome and host physiology
LS4_7 Nutrition and exercise physiology
LS4_8 Impact of stress (including environmental stress) on physiology
LS4_9 Metabolism and metabolic disorders, including diabetes and obesity
LS4_10 The cardiovascular system and cardiovascular diseases
LS4_11 Haematopoiesis and blood diseases
LS4_12 Cancer
LS4_13 Other non-communicable diseases (except disorders of the nervous system and immunity-related diseases)

**LS5 Neuroscience and Disorders of the Nervous System**
Nervous system development, homeostasis and ageing, nervous system function and dysfunction, systems neuroscience and modelling, biological basis of cognitive processes and of behaviour, neurological and mental disorders
LS5_1 Neuronal cells
LS5_2 Glial cells and neuronal-glial communication
LS5_3 Neural development and related disorders
LS5_4 Neural stem cells
LS5_5 Neural networks and plasticity
LS5_6 Neurovascular biology and blood-brain barrier
LS5_7 Sensory systems, sensation and perception, including pain
LS5_8 Neural basis of behaviour
LS5_9 Neural basis of cognition
LS5_10 Ageing of the nervous system
LS5_11 Neurological and neurodegenerative disorders
LS5_12 Mental disorders
LS5_13 Nervous system injuries and trauma, stroke
LS5_14 Repair and regeneration of the nervous system
LS5_15 Neuroimmunology, neuroinflammation
LS5_16 Systems and computational neuroscience
LS5_17 Imaging in neuroscience
LS5_18 Innovative methods and tools for neuroscience

**LS6 Immunity, Infection and Immunotherapy**
The immune system, related disorders and their mechanisms, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases, innovative immunological tools and approaches, including therapies
LS6_1 Innate immunity
LS6_2 Adaptive immunity
LS6_3 Regulation of the immune response
LS6_4 Immune-related diseases
LS6_5 Biology of pathogens (e.g. bacteria, viruses, parasites, fungi)
LS6_6 Infectious diseases
LS6_7 Mechanisms of infection
LS6_8 Biological basis of prevention and treatment of infection
LS6_9 Antimicrobials, antimicrobial resistance
LS6_10 Vaccine development
LS6_11 Innovative immunological tools and approaches, including therapies

**LS7 Prevention, Diagnosis and Treatment of Human Diseases**
Medical technologies and tools for prevention, diagnosis and treatment of human diseases, therapeutic approaches and interventions, pharmacology, preventative medicine, epidemiology and public health, digital medicine
LS7_1 Medical imaging for prevention, diagnosis and monitoring of diseases
LS7_2 Medical technologies and tools (including genetic tools and biomarkers) for prevention, diagnosis, monitoring and treatment of diseases
LS7_3 Nanomedicine
LS7_4 Regenerative medicine
LS7_5 Applied gene, cell and immune therapies
LS7_6 Other medical therapeutic interventions, including transplantation
LS7_7 Pharmacology and toxicology
LS7_8 Effectiveness of interventions, including resistance to therapies
LS7_9 Public health and epidemiology
LS7_10 Preventative and prognostic medicine
LS7_11 Environmental health, occupational medicine
LS7_12 Health care, including care for the ageing population
LS7_13 Palliative medicine
LS7_14 Digital medicine, e-medicine, medical applications of artificial intelligence
LS7_15 Medical ethics

LS8 Environmental Biology, Ecology and Evolution

For all organisms:
Ecology, biodiversity, environmental change, evolutionary biology, behavioural ecology, microbial ecology, marine biology, ecophysiology, theoretical developments and modelling
LS8_1 Ecosystem and community ecology, macroecology
LS8_2 Biodiversity
LS8_3 Conservation biology
LS8_4 Population biology, population dynamics, population genetics
LS8_5 Biological aspects of environmental change, including climate change
LS8_6 Evolutionary ecology
LS8_7 Evolutionary genetics
LS8_8 Phylogenetics, systematics, comparative biology
LS8_9 Macroevolution and paleobiology
LS8_10 Ecology and evolution of species interactions
LS8_11 Behavioural ecology and evolution
LS8_12 Microbial ecology and evolution
LS8_13 Marine biology and ecology
LS8_14 Ecophysiology, from organisms to ecosystems
LS8_15 Theoretical developments and modelling in environmental biology, ecology, and evolution

LS9 Biotechnology and Biosystems Engineering

Biotechnology using all organisms, biotechnology for environment and food applications, applied plant and animal sciences, bioengineering and synthetic biology, biomass and biofuels, biohazards
LS9_1 Bioengineering for synthetic and chemical biology
LS9_2 Applied genetics, gene editing and transgenic organisms
LS9_3 Bioengineering of cells, tissues, organs and organisms
LS9_4 Microbial biotechnology and bioengineering
LS9_5 Food biotechnology and bioengineering
LS9_6 Marine biotechnology and bioengineering
LS9_7 Environmental biotechnology and bioengineering
LS9_8 Applied plant sciences, plant breeding, agroecology and soil biology
LS9_9 Plant pathology and pest resistance
LS9_10 Veterinary and applied animal sciences
LS9_11 Biomass production and utilisation, biofuels
LS9_12 Ecotoxicology, biohazards and biosafety

SOCIAL SCIENCES AND HUMANITIES

SH1 Individuals, Markets and Organisations
Economics, finance, management
SH1_1 Macroeconomics; monetary economics; economic growth
SH1_2 International trade; international management; international business; spatial economics
SH1_3 Development economics; structural change; political economy of development
SH1_4 Finance; asset pricing; international finance; market microstructure
SH1_5 Corporate finance; banking and financial intermediation; accounting; auditing; insurance
SH1_6 Econometrics; operations research
SH1_7 Behavioural economics; experimental economics; neuro-economics
SH1_8 Microeconomic theory; game theory; decision theory
SH1_9 Industrial organisation; entrepreneurship; R&D and innovation
SH1_10 Management; strategy; organisational behaviour
SH1_11 Human resource management; operations management, marketing
SH1_12 Environmental economics; resource and energy economics; agricultural economics
SH1_13 Labour and demographic economics
SH1_14 Health economics; economics of education
SH1_15 Public economics; political economics; law and economics
SH1_16 Historical economics; quantitative economic history; institutional economics; economic systems

SH2 Institutions, Governance and Legal Systems
Political science, international relations, law
SH2_1 Political systems, governance
SH2_2 Democratisation and social movements
SH2_3 Conflict resolution, war, peace building, international law
SH2_4 Legal studies, constitutions, human rights, comparative law
SH2_5 International relations, global and transnational governance
SH2_6 Humanitarian assistance and development
SH2_7 Political and legal philosophy
SH2_8 Big data in political and legal studies

SH3 The Social World and Its Diversity
Sociology, social psychology, social anthropology, education sciences, communication studies
SH3_1 Social structure, social mobility, social innovation
SH3_2 Inequalities, discrimination, prejudice
SH3_3 Aggression and violence, antisocial behaviour, crime
SH3_4 Social integration, exclusion, prosocial behaviour
SH3_5 Attitudes and beliefs
SH3_6 Social influence; power and group behaviour
SH3_7 Kinship; diversity and identities, gender, interethnic relations
SH3_8 Social policies, welfare, work and employment
SH3_9 Poverty and poverty alleviation
SH3_10 Religious studies, ritual; symbolic representation
SH3_11 Social aspects of teaching and learning, curriculum studies, education and educational policies
SH3_12 Communication and information, networks, media
SH3_13 Digital social research
SH3_14 Social studies of science and technology

SH4 The Human Mind and Its Complexity
Cognitive science, psychology, linguistics, theoretical philosophy
SH4_1 Cognitive basis of human development and education, developmental disorders; comparative cognition
SH4_2 Personality and social cognition; emotion
SH4_3 Clinical and health psychology
SH4_4 Neuropsychology
SH4_5 Attention, perception, action, consciousness
SH4_6 Learning, memory; cognition in ageing
SH4_7 Reasoning, decision-making; intelligence
SH4_8 Language learning and processing (first and second languages)
SH4_9 Theoretical linguistics; computational linguistics
SH4_10 Language typology; historical linguistics
SH4_11 Pragmatics, sociolinguistics, linguistic anthropology, discourse analysis
SH4_12 Philosophy of mind, philosophy of language
SH4_13 Philosophy of science, epistemology, logic

SH5 Cultures and Cultural Production
Literary studies, cultural studies, study of the arts, philosophy
SH5_1 Classics, ancient literature and art
SH5_2 Theory and history of literature, comparative literature
SH5_3 Philology; text and image studies
SH5_4 Visual and performing arts, film, design and architecture
SH5_5 Music and musicology; history of music
SH5_6 History of art and architecture, arts-based research
SH5_7 Museums, exhibitions, conservation and restoration
SH5_8 Cultural studies, cultural identities and memories, cultural heritage
SH5_9 Metaphysics, philosophical anthropology; aesthetics
SH5_10 Ethics and its applications; social philosophy
SH5_11 History of philosophy
SH5_12 Computational modelling and digitisation in the cultural sphere

SH6 The Study of the Human Past
Archaeology and history
SH6_1 Historiography, theory and methods in history, including the analysis of digital data
SH6_2 Classical archaeology, history of archaeology, social archaeology
SH6_3 General archaeology, archaeometry, landscape archaeology
SH6_4 Prehistory, palaeoanthropology, palaeodemography, protohistory, bioarchaeology
SH6_5 Palaeography and codicology
SH6_6 Ancient history
SH6_7 Medieval history
SH6_8 Early modern history
SH6_9 Modern and contemporary history
SH6_10 Colonial and post-colonial history
SH6_11 Global history, transnational history, comparative history, entangled histories
SH6_12 Social and economic history
SH6_13 Gender history, cultural history, history of collective identities and memories, history of religions
SH6_14 History of ideas, intellectual history, history of economic thought
SH6_15 History of science, medicine and technologies

SH7 Human Mobility, Environment, and Space
Human geography, demography, health, sustainability science, territorial planning, spatial analysis
SH7_1 Human, economic and social geography
SH7_2 Migration
SH7_3 Population dynamics: households, family and fertility
SH7_4 Social aspects of health, ageing and society
SH7_5 Sustainability sciences, environment and resources
SH7_6 Environmental and climate change, societal impact and policy
SH7_7 Cities; urban, regional and rural studies
SH7_8 Land use and planning
SH7_9 Energy, transportation and mobility
SH7_10 GIS, spatial analysis; big data in geographical studies