

# Master Sciences cognitives – Parcours : Linguistique Computationnelle / Computational Linguistics

SCIENCES, TECHNOLOGIES, SANTÉ

---

## Présentation

### General cog-SUP organization

The master's student must register to one of the tracks. These tracks ensure the acquisition of genuine expertise in the concepts, methods, and techniques specific to each discipline, enhancing the clarity of skills associated with the diploma. The program establishes a common cultural foundation from the first year (M1) through a core curriculum and introductory courses to the different disciplines. In the second year (M2), the majority of courses are fully interdisciplinary and open to students from all tracks. Our goal is to cultivate cognitivists equipped with both robust disciplinary expertise and a broad interdisciplinary culture, essential elements for fostering meaningful collaboration across disciplines.

### Specific to the track Computational Linguistics

The Computational Linguistics track provides comprehensive training in the models and methods of natural language processing, from the linguistic and mathematical foundations of deep neural networks to the applications of large language models for information access, dialog systems, and machine translation. Its position within the cog-SUP Master's program in Cognitive Sciences, offers a unique gateway to computational psycholinguistics and neurolinguistics, allowing exploration of the interfaces between language, perception, memory and action, with applications in robotics and human-machine interaction. At the end of their training, students will have a thorough understanding of the concepts, methods and techniques of natural language processing and artificial intelligence, and their implementation in advanced language information processing systems.

The courses on offer cover a wide range of topics, from linguistic modeling in phonology, syntax and semantics, to the algorithmic foundations of language processing, speech processing and deep learning – in the first year; the second year offers more in-depth studies in psycholinguistics and computational field linguistics on the one hand, and in more applied fields such as machine translation, text mining, dialogue systems and information retrieval on the other hand. Students can also choose elective courses offered in other Masters programs offered by partner universities, to further enrich and/or specify their knowledge.

The Computational Linguistics track thus offers a unique opportunity to acquire in-depth experimental and modeling expertise in the field of natural language processing, a central theme of generative artificial intelligence, whose applications are having a major impact on the current digital transitions that are transforming our societies.

Students who graduate from this program are likely to take up positions in artificial intelligence research and development teams in the public or private sector (from large international corporations to SMEs and start-ups) and also in data driven linguistics. Their education will prepare them to work effectively in highly multidisciplinary environments.

## Programme

### STAGE

---

**Stage** : Obligatoire

**Durée du stage** : M1 optionnel / M2 obligatoire

**Pour en savoir plus, rendez-vous sur > [u-paris.fr/choisir-sa-formation](https://u-paris.fr/choisir-sa-formation)**

## Admission

### Droits de scolarité :

National tuition fees are set annually by the Ministry of Higher Education and Research. They are supplemented by compulsory and optional contributions, depending on the student's individual situation.

## Contacts

### Co-responsable de la mention

Laura Dugué

[laura.dugue@u-paris.fr](mailto:laura.dugue@u-paris.fr)

### Co-responsable de la mention

Mehdi Khamassi

[mehdi.khamassi@sorbonne-universite.fr](mailto:mehdi.khamassi@sorbonne-universite.fr)

### Co-responsable du parcours

Benoît Crabbé

[benoit.crabbe@u-paris.fr](mailto:benoit.crabbe@u-paris.fr)

### Co-responsable du parcours

François Yvon

[francois.yvon@sorbonne-universite.fr](mailto:francois.yvon@sorbonne-universite.fr)

### Secrétariat pédagogique

[secretariat@cog-sup.fr](mailto:secretariat@cog-sup.fr)

## En bref

### Composante(s)

UFR des Sciences fondamentales et biomédicales, UFR  
Linguistique

### Niveau d'études visé

BAC +5 (niveau 7)

### ECTS

120

### Public(s) cible(s)

- Étudiant

### Modalité(s) de formation

- Formation initiale
- Formation professionnelle

### Langue(s) des enseignements

- Anglais

Pour en savoir plus, rendez-vous sur > [u-paris.fr/choisir-sa-formation](https://u-paris.fr/choisir-sa-formation)