



ORGANISATION AND CONTENT OF THE PROGRAMME

The Master's degree includes 1,030 hours of teaching, excluding internships.
All the courses of the Master's degree are taught in French

The programme focuses on two main areas: on the one hand, computer science with some mathematics (statistics), and on the other, courses relating to disabilities, compensation, technical aids and accessibility. The latter are grouped together in the teaching unit (UE) entitled "Multidimensional approaches to disability", which is taught in all four semesters of the Master's degree.

Master year 1 (M1)

The first semester (S1) focuses on acquiring basic IT skills and knowledge: algorithms and systems, object programming, databases and server- and client-side web programming.

A course (EC) on disabilities and the various forms of compensation (EC Disabilities and compensation 1) is taught by different lecturers and explores the main types of disabilities, the barriers encountered by disabled people in terms of social participation, and the means of compensation available to them. A course on ergonomics is also taught.

Students study a modern language, namely, French Sign Language (FSL) proposed by the Engineering, Cognition and Disability (ICH) Department or another language taught at the university's Centre for Languages. They also take a course on digital audiovisual techniques and a free course.

In the second semester (S2), the course on disabilities (EC Disabilities and compensation 2) follows the same principle. The computer science courses explore the notions of tangible and mobile interfaces (i.e., human-machine interactions, introduction to mobile applications, connected devices) as well as the perception-decision-action loop. In addition, the students undertake an individual project in the domain of internet accessibility.

Semester 1	Semester 2
<p>UE Basic computer science (8 ECTS* - 114h)</p> <ul style="list-style-type: none"> EC Basic algorithms and Python EC Systems EC Object programming 	<p>UE Tangible and mobile interfaces (8 ECTS - 114h)</p> <ul style="list-style-type: none"> EC Human-machine interaction and collaboration EC Java and mobile interfaces EC Networks and connected devices
<p>UE Web programming (8 ECTS - 114h)</p> <ul style="list-style-type: none"> EC Databases EC Client-side web programming EC Server-side web programming 	<p>UE Perception-Decision-Action (4 ECTS - 60h)</p> <ul style="list-style-type: none"> EC Signal processing and artificial perception EC Decisions and statistics
<p>UE Communication tools 1 (5 ECTS - 75h)</p> <ul style="list-style-type: none"> EC Modern language (LSF or other) EC Digital audiovisual techniques EC 3D conception 	<p>UE Project (12 ECTS - 39h)</p> <ul style="list-style-type: none"> EC Project EC Modern language (LSF or other)
<p>UE Multidimensional approaches to disability 1 (9 ECTS - 115h)</p> <ul style="list-style-type: none"> EC Disabilities and compensation 1 EC Ergonomics EC Lecture series 1 	<p>UE Multidimensional approaches to disability 2 (6 ECTS - 85h)</p> <ul style="list-style-type: none"> EC Disabilities and compensation 2 EC Lecture series 2

*European Credit Transfer and Accumulation System

Master year 2 (M2)

Semester 3 (S3) features an in-depth study of mobile applications, connected devices, and intelligent agents, which are explored through individual projects: after a series of introductory lectures, students are attributed individual mini projects that are supervised. A collaborative technical project is also conducted in a group of around four students.

In addition, students take two courses on scientific communication and another on the neuroscience and psychology of disability. They also benefit from a modern language course.

The last semester (S4) is dedicated to an internship and the lecture series.

Semester 3		Semester 4	
UE Ambient intelligence (pool) (9 ECTS - 54h) EC Mobile programming (<i>course + supervised mini projects</i>) EC Connected devices (<i>course + supervised mini projects</i>) EC Intelligent agents (<i>course + supervised mini projects</i>)		Internship (minimum 5 months - 26 ECTS)	
UE Collaborative technical project (13 ECTS - 51h) EC Collaborative technical project (<i>12h of supervision per group of 4 students</i>) EC Project management			
UE Communication skills 3 (4 ECTS - 60h) EC Modern language (LSF or other) EC Oral scientific communication skills EC Written scientific communication skills			
UE Multidimensional approaches to disability 3 (4 ECTS - 70h) EC Neuroscience and psychology of disability EC Lecture series 1	UE Multidimensional approaches to disability 4 (4 ECTS - 70h) Modern language (LSF or other) (<i>1 EC to be chosen</i>) EC Lecture series 2		

The initiation to research is notably offered through the lecture series and the collaborative project for which students are encouraged to use research methods: state of the art, choice of hypotheses, evaluation methodology and written report with a bibliography.

- **Lecture series (throughout the year)**

Throughout the year, M1 and M2 students participate in the lecture series (a specific clause in the internship convention allows students to participate during S4). Around 40 to 50 lectures are available to students throughout the 2 years of the Master's programme. The lectures are given by industry experts, academics and members of civil society from the civil service, local authorities and medical sector working in the area of disability compensation. The lecture series (except for specific cases) is open to the public. It is broadcast live on the internet, notably to benefit students completing an internship far from Paris.

Every year, a lecture taught jointly with other Master's degrees (Lille, Metz, etc.) and organised online with IFRATH (Institut Fédératif de Recherche sur les Aides Techniques pour personnes Handicapées) is given as part of the lecture series.

Finally, the students are required to participate in the "Handicap" conference (organised by IFRATH in even-numbered years) and the Young Researchers (JCJC) Conference (organised by IFRATH in odd-numbered years). Over the two years of the Master's programme, students therefore participate in both the Handicap and JCJC conferences.

- **Tutored project**

In **M1**, a non-profit project (e.g., association for disabled people, local authority, non-profit organisation) is compulsory. A student (sometimes two students) will collaborate with a non-profit organisation on a specific project. The project must follow strict guidelines and produce a defined outcome.

This project represents a total of 150 hours. It concludes with a written report and oral defence.

In **M2**, a supervised collaborative technical project is compulsory. This original multidisciplinary project is undertaken by teams of students on the topic of the Master's speciality known as HANDI (Technology and Disability). For each student, the project represents around 1 to 2 months of work per person. It must be finished by February with the writing of a report and a public oral defence in front of a jury.

[Link to the Master's page\(in French\)](#)