

M1 & M2 - HCI (Interaction) track

Academic year 25/26

Foreword

The master's program covers 2 years. This first one is called M1, the second M2. Each year includes 2 semesters and each semester is composed of 2 time periods.

Semesters' abbreviations:

S1= 1st semester of M1; S2= 2nd semester of M1

S3= 1st semester of M2; S4= 2nd semester of M2

Time periods' abbreviations:

T1= 1st half of S1; T2= 2nd half of S1; T3= 1st half of S2; T4= 2nd half of S2

T5= 1st half of S3; T6= 2nd half of S3; T7= 1st half of S4; T8= 2nd half of S4

Some courses are mandatory in each time period, while others are elective courses that you can choose among either i) a list of electives from the HCI track, ii) courses belonging to the other tracks of the computer science master of Paris-Saclay University, iii) courses offered by Telecom or ENS Paris-Saclay.

Courses from other tracks of the computer science master of Paris-Saclay University:

Artificial Intelligence:

<https://www.universite-paris-saclay.fr/en/education/master/computer-science/m1-artificial-intelligence>

Data Science:

<https://www.universite-paris-saclay.fr/en/education/master/computer-science/m1-data-science>

Internet of Things:

<https://www.universite-paris-saclay.fr/en/education/master/computer-science/m1-internet-things>

Quantum and Distributed Computer Science:

<https://www.universite-paris-saclay.fr/en/education/master/computer-science/m1-quantum-and-distributed-computer-science>

Courses offered by Telecom: <https://diva.telecom-paristech.fr/igd/allcourses.html>

Time periods for Telecom are not the same as those from Paris-Saclay, so you will need to check whether they interfere with other courses you take.

Not all classes from Telecom are open to students from Université Paris-Saclay. Only the following ones are open:

- **TP-IGR200** : Interactive 3D Application Development (pre-requisite: C++) (Mondays, Sept-Nov 2025)
- **TP-IGR201** : Interactive 2D/Mobile/Web Application Development (Thursdays & Wednesdays, Sept-Nov 2025)
- **TP-SES215**: Making Physical Representations of Data (Tuesdays & Fridays, Sept-Nov 2025)
- **TP-SES216** : Quantitative UX (Tuesdays, Nov 2025-Feb 2026)
- **TP-IGR202** : Fundamentals of Computer Graphics (pre-requisite: C++) (Mondays, Wednesdays & Thursdays, Nov 2025-Feb 2026)
- **TP-IGD301**: Human-Computer Interaction for Mixed Reality (hardware capacity constraints)
- **TP-HCI922** : Gestural and Mobile Interaction (if it opens this year)

The rules for choosing the electives are explained below:

M1 - HCI (Interaction) track

Semester 1 T1

- Mandatory courses
 - (Advanced)* Programming of Interactive System (Prog IS) 1 and 2 - 2 x 2.5 ECTS [TECHNICAL]
 - Fundamental of Human Computer Interaction 1 and 2 (Fund of HCI) - 2 x 2.5 ECTS [TECHNICAL]
 - Fundamental of eXtended Reality (Fund of XR) - 2.5 ECTS [TECHNICAL]

*Depending on your programming skills, you will be directed to either “Programming of Interactive System” or “Advanced Programming of Interactive System”.

12.5 ECTS

Semester 1 T2

- Mandatory courses
 - Design of Interactive System 1&2 (Design of IS) - 2 x 2.5 ECTS [TECHNICAL]
 - Evaluation of Interactive System (Eval of IS) - 2.5 ECTS [TECHNICAL]
- HCI electives: Choose **2 elective courses** for **5 ECTS** among those of the HCI track:

- Serious games (Ser Game) - 2.5 ECTS [TECHNICAL]
- Groupware & Collaborative Interaction (Group. Colla. Work) - 2.5 ECTS [TECHNICAL]
- Creative Design (Creative Des) - 2.5 ECTS [TECHNICAL]
- Virtual Human (Virt. Hum) - 2.5 ECTS [TECHNICAL]
- Mixed reality & Tangible Interaction - 2.5 ECTS [TECHNICAL]
- Development of web applications for mobile devices - 2.5 ECTS [TECHNICAL]
- Choose **1 more TECHNICAL elective course** (2.5 ECTS) either among:
 - Those offered in the other tracks of the Computer Science master program of Paris-Saclay University [TECHNICAL].
 - Recommended :
 - [IoT track] For French speakers: Sécurité et objets connectés (mardi matin)
 - [AI track] Hands on machine learning on stickit learn (Thursday morning)
 - Those offered by Telecom [TECHNICAL]

15 ECTS

Semester 2 T3

- Mandatory courses
 - Design project 1 - 2.5 ECTS [TECHNICAL]
- HCI Electives: Choose **4 electives for 10 ECTS** among courses from the HCI track:
 - Advanced Immersive Interaction (Adv Immersive Int) - 2.5 ECTS [TECHNICAL]
 - Experimental Design & Analysis (Exp Design Ana) - 2,5 ECTS [TECHNICAL]
 - Situated Interaction (Situated Int) - 2,5 ECTS [TECHNICAL]
 - Advanced Design of Interactive Systems - 2,5 ECTS [TECHNICAL]
 - CAD Design for 3D Printing - 2,5 ECTS [TECHNICAL]
 - Interactive Information Visualization (Int Info Viz) - 2.5 ECTS [TECHNICAL]
 - Interactive Machine Learning (Int ML) - 2.5 ECTS [TECHNICAL]
- Choose **1 more TECHNICAL elective course** (2.5 ECTS) either among:
 - Those offered in the other tracks of the Computer Science master program of Paris-Saclay University [TECHNICAL]
 - Recommended:
 - [IoT track] For French speakers: Virtualisation et cloud (mardi matin)

- [QDCS track] Maybe only in French: Programmation avancée C++ (mardi après-midi)
- [DS track] Distributed Systems for Massive Data Management (Wednesday afternoon)
- Those offered by Telecom [TECHNICAL]

15 ECTS

Semester 2 T4

- Mandatory courses
 - Winter School - 2 x 2.5 ECTS [SOFT][SOFT]
 - TER* (Research and study project) - 2 x 2.5 ECTS [TECHNICAL] [SOFT]
 - The Art of Fabricating Tangible Surfaces - 2,5 ECTS [SOFT]
 - Design project 2 - 2.5 ECTS [TECHNICAL]
 - Computer Sciences and sustainable development - 2.5 ECTS[SOFT]

TER*: You'll work on it during your Design project Group. Teacher will explain it to you during that class

17,5 ECTS

60 ECTS for the whole year:
 12,5 ECTS [SOFT]
 47,4 ECTS [TECHNICAL]

M2 - HCI (Interaction) track

Semester 3 T5

- Mandatory courses
 - Career seminar year 2 - 2,5 ECTS [SOFT]
 - Augmented Reality Experience Design & Previsualization - 2.5 ECTS [TECHNICAL]

- **Choose 1 TECHNICAL elective course** (2.5 ECTS) either among:
 - Those offered in the other tracks of the Computer Science master program of Paris-Saclay University [\[TECHNICAL\]](#)
 - Recommended:
 - [IoT track] Internet of things (check whether it is taught in English, Tuesday afternoon)
 - Those offered by Telecom [\[TECHNICAL\]](#)
- **Choose 1 elective SOFT skills* course** (2.5 ECTS) either among:
 - Those offered in the other tracks of the Computer Science master program of Paris-Saclay University (See [SOFT SKILLS] below) [\[SOFT\]](#)
 - Those offered by Telecom [\[SOFT\]](#)

*soft skills relate to courses that are not specific to computer sciences, such as language or communication courses.

10 ECTS

Semester 3 T6

- HCI electives: **Choose 2 elective courses** for **5 ECTS** among those of the HCI track:
 - Serious games (Ser Game) - 2.5 ECTS [\[TECHNICAL\]](#)
 - Groupware & Collaborative Interaction (Group. Colla. Work) - 2.5 ECTS [\[TECHNICAL\]](#)
 - Creative Design (Creative Des) - 2.5 ECTS [\[TECHNICAL\]](#)
 - Virtual Human (Virt. Hum) - 2.5 ECTS [\[TECHNICAL\]](#)
 - Mixed reality & Tangible Interaction - 2.5 ECTS [\[TECHNICAL\]](#)
 - Development of web applications for mobile devices - 2.5 ECTS [\[TECHNICAL\]](#)

You should not choose those that you already followed in M1.

- **Choose 1 TECHNICAL elective course** (2.5 ECTS) either among:
 - Those offered in the other tracks of the Computer Science master program of Paris-Saclay University [\[TECHNICAL\]](#)
 - Recommended:
 - [IoT track] For French speakers: Réseaux sans fil (mardi matin)
 - [IoT track] For French speakers: Sécurité et objets connectés (mardi matin)
 - [AI track] Hands on machine learning on stickit learn (Thursday morning)
 - Those offered by Telecom [\[TECHNICAL\]](#)
- **Choose 1 elective SOFT skills* course** (2.5 ECTS) either among:

- Those offered in the other tracks of the Computer Science master program of Paris-Saclay University (See [SOFT SKILLS] below) [\[SOFT\]](#)
- Those offered by Telecom [\[SOFT\]](#)

10 ECTS

Semester 4 T7

- Mandatory courses
 - Design project 3 - 2.5 ECTS [\[TECHNICAL\]](#)
- HCI Electives: **Choose 3 electives** for **7.5 ECTS** among courses from the HCI track:
 - Advanced Immersive Interaction (Adv Immersive Int) - 2.5 ECTS [\[TECHNICAL\]](#)
 - Experimental Design & Analysis (Exp Design Ana) - 2,5 ECTS [\[TECHNICAL\]](#)
 - Situated Interaction (Situated Int) - 2,5 ECTS [\[TECHNICAL\]](#)
 - Advanced Design of Interactive Systems - 2,5 ECTS [\[TECHNICAL\]](#)
 - CAD Design for 3D Printing - 2,5 ECTS [\[TECHNICAL\]](#)
 - Interactive Information Visualization (Int Info Viz) - 2.5 ECTS [\[TECHNICAL\]](#)
 - Interactive Machine Learning (Int ML) - 2.5 ECTS [\[TECHNICAL\]](#)

You should not choose those that you already followed in M1.

10 ECTS

Semester 4 T8

- Mandatory courses
 - Master thesis - 30 ECTS

60 ECTS for the whole year:

7,5 ECTS [\[SOFT\]](#)

22,5 ECTS [\[TECHNICAL\]](#)

30 ECTS master thesis

Check the google Calendar, tab “ALL/Tous” and look for [\[SOFT\]](#). They are more up-to-date.

Accepted as SOFT SKILLS:

- the one proposed by the CS Department (on the google Calendar)
- the ones about Ecology, environment but in French:
<https://epce.esse.u-psud.fr/descriptif-des-ue/>
- Sports
- Maturation (entrepreneurship project - in French)
- European University of Global Health (EUGLOH) :
<https://www.eugloh.eu/study-and-mobility/events>
- Ateliers culturels:
<https://www.universite-paris-saclay.fr/vie-de-campus/art-culture-science-et-societe/art-s-et-culture/ateliers-culturels-en-ue>
- Unité d'enseignement Transverses in ENS: <https://ens-paris-saclay.fr/node/5748/>