

Master in cybersecurity

Focus Erasmus Mundus joint master in Cybersecurity (CYBERUS)

The programme is organised around **five specific and complementary key disciplines**: (1) Cryptography, (2) Systems and Networks, (3) Legal, ethical, and human aspects, (3) Security management, and (5) Secure software engineering.

The **first year** of the Master is dedicated to a **common set of courses**. Several seminars and elective courses ensure the **curriculum is dynamic and remains up to date**. For instance, 10 credits can be chosen as **elective courses**, selected from courses already taught in the participating academic institutions.

In the second year, half of the programme's credits are for courses in one of **two focuses**: 'system design and analysis', which is dedicated to the design and thorough analysis of secure systems, and 'corporate strategies', which is dedicated to more concrete applications. Both focuses are built on the **students' personal involvement and self-learning, through several projects**. A significant part of the skills involved is acquired during the **mandatory long-term work placement in a professional environment** (typically 12 weeks).

Students take part in **projects and challenges** that further add to the expertise and practical know-how required in the IT industry. They apply the concepts covered in lectures, and learn new material by solving proposed challenges.

At the end of the programme, students prepare a **Master's dissertation** under the supervision of a professor who is an active researcher in the field.

Bloc 1 | M-SECUM | MA-SECU

The first year is to be followed at Université de Bretagne Sud (UBS).

HULB-0000

[Cours externe à l'Université](#)













🕒 60 credits 📅 academic year

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Bloc 2 | M-SECUM | MA-SECU















Cours obligatoires

- ELEC-H423 **Mobile and wireless networks** | Jean-Michel DRICOT (Coordinator)
 5 credits [lecture: 36h, practical work: 24h]  first term  English
- ELEC-H550 **Embedded System Security** | Jan Tobias Mühlberg (Coordinator)
 5 credits [lecture: 24h, practical work: 36h]  second term  English
- INFO-F537 **Cryptanalysis** | Gilles VAN ASSCHE (Coordinator)
 5 credits [lecture: 36h]  first term  English
- INFO-Y119 **Forensics and reverse engineering** | Thibault Debatty (Coordinator)
 5 credits [lecture: 24h, practical work: 24h]  first term  English
- LANG-Y9021 **Français langue étrangère - Niveau A2 (F9)** | Eric Galiano (Coordinator)
 5 credits [lecture: 15h]  first term  French
- MEMO-F543 **Master thesis and internship in cybersecurity** | Olivier MARKOWITCH (Coordinator) and Jean-Michel DRICOT
 30 credits [work placement: 120h, mfe/tfe: 240h]  second term  English

Cours à options

Ou tout autre cours de MASTER avec l'accord du titulaire et du président de jury

One course chosen from the following

- GEST-S482 **The digital firm** | Nicolas VAN ZEEBROECK (Coordinator) and Vincent LION
 (optional) 5 credits [lecture: 36h, tutorial classes: 24h]  first term  English
- GEST-S706 **Entrepreneurship** | Olivier WITMEUR (Coordinator) and Ant BOZKAYA
 (optional) 5 credits [lecture: 24h]  second term  English
- INFO-F409 **Learning dynamics** | Tom LENAERTS (Coordinator)
 (optional) 5 credits [lecture: 24h, project: 60h]  first term  English
- INFO-H415 **Advanced databases** | Esteban ZIMANYI (Coordinator)
 (optional) 5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]  first term  English
- INFO-H420 **Management of Data Science and Business Workflows** | Dimitrios SACHARIDIS (Coordinator)
 (optional) 5 credits [lecture: 24h, tutorial classes: 36h]  first term  English
- INFO-Y082 **Distributed and mobile programming paradigms**
 (optional) 6 credits [lecture: 26h, tutorial classes: 26h, project: 30h]  first term  English
- INFO-Y115 **Secure software design and web security** | Romain ABSIL (Coordinator)
 (optional) 5 credits [lecture: 30h, practical work: 20h]  first term  English

One course chosen from the following

- TEMP-0000 **Cours extérieurs au programme**
 (optional) 5 credits  academic year  French

TEMP-0000
(optional)

Cours extérieurs au programme

🕒 10 credits 📅 academic year 🗨️ French

TEMP-0000
(optional)

Cours extérieurs au programme

🕒 15 credits 📅 academic year 🗨️ French

