





Jean Loup Guillaume

## ✓ ADMISSION

### > Your profile

You have a bac+3, Bac+4 or equivalent (Bachelor's degree) : Bachelor's level knowledge in declarative and object programming, data structures, web languages, networks and protocols, client-server architecture and databases.

### > How to apply ?

In the 1st year of the Master's degree, the selection of candidates is made on the basis of their application documents.

You wish to apply for a 1st year Master's degree [1st year of Master](#)

You wish to apply for a 2nd year Master's degree [2nd year of Master](#)

## 📄 PROGRAMME

● Mandatory ■ Course option

### > General Track

#### > Semester 1

### > Cours majeurs

#### > Advanced Databases ●

##### ● Advanced Databases

Language used for teaching  
French

Teaching time  
49h 30min (15h lectures - 15h tutorials - 15h practical work - 4h 30min work in accompaniment)

5 ECTS credits

Course code  
260-1-11

#### > Information Systems ●

##### ● Information Systems

Language used for teaching  
English - French

Teaching time  
57h (15h lectures - 33h practical work - 9h work in accompaniment)

5 ECTS credits

Course code  
260-1-31

#### > Software Engineering ●

##### ● Software Engineering

Language used for teaching  
French

Teaching time  
57h (15h lectures - 15h tutorials - 18h practical work - 9h work in accompaniment)

5 ECTS credits

Course code  
260-1-21

### > Cours mineures de spécialité

## > Minor: Content Acquisition and Processing ■

- Experimental Approaches

Language used for teaching  
French

Teaching time  
42h (9h lectures - 6h tutorials - 18h practical work - 9h work in accompaniment)

6 ECTS credits

Course code  
260-1-81

## > Minor: Urbanisation of Distributed Systems ■

- Concurrent and Distributed Systems

Language used for teaching  
French

Teaching time  
25h 30min (7h 30min lectures - 9h tutorials - 9h practical work)

3 ECTS credits

Course code  
260-1-71

- Information Architecture

Language used for teaching  
French

Teaching time  
24h (12h lectures - 12h practical work)

3 ECTS credits

Course code  
260-1-72

## > Cours transversaux

### > Module complémentaire - Hors-Maquette ■

- LR - Formation complémentaire en Numérique Responsable

Language used for teaching  
French

Teaching time  
15h (15h lectures)

Course code  
260-1-01-HM

- LR-Intervention Sopra-Stéria

Language used for teaching  
French

Teaching time  
18h (9h lectures - 9h tutorials)

Course code  
260-1-02-HM

### > Unités transversales Architecte Logiciel •

- Initiation to Research

Language used for teaching  
French

Teaching time  
43h 30min (13h 30min lectures - 3h tutorials - 12h practical work - 15h work in accompaniment)

3 ECTS credits

Course code  
260-1-02

- Modern Foreign Language 1: English

Language used for teaching
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English - French
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Teaching time
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24h (24h tutorials)
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2 ECTS credits
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Course code
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260-1-01
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- Project

Language used for teaching
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French - English
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Teaching time
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30h (6h lectures - 24h work in accompaniment)
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3 ECTS credits
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Course code
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260-1-03
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- Simulation Exercise (Work-Study Programme)

Language used for teaching
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French
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3 ECTS credits
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Course code
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260-1-05
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- Tutoring & Academic Support

Language used for teaching
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French
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Teaching time
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15h (3h lectures - 12h work in accompaniment)
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1 ECTS credit
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Course code
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260-1-04
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## > Semester 2

### > Cours majeurs

#### > Secure Networks and Storage ●

- Secure Network and Storage

Language used for teaching
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French
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Teaching time
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57h (15h lectures - 9h tutorials - 27h practical work - 6h work in accompaniment)
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5 ECTS credits
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Course code
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260-2-11
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#### > Service-Oriented Architecture ●

- Service-Oriented Architecture

Language used for teaching
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French
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Teaching time
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49h 30min (15h lectures - 15h tutorials - 15h practical work - 4h 30min work in accompaniment)
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5 ECTS credits
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Course code
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260-2-21
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### > Cours mineures de spécialité

### > **Minor: Content Acquisition and Processing** ■

- Content and Processing Quality

Language used for teaching  
French

Teaching time  
36h (12h lectures - 6h tutorials - 18h practical work)

6 ECTS credits

Course code  
260-2-81

### > **Minor: Urbanisation of Distributed Systems** ■

- Decentralised Computing and Safety

Language used for teaching  
French

Teaching time  
49h 30min (16h 30min lectures - 16h 30min practical work - 16h 30min work in accompaniment)

6 ECTS credits

Course code  
260-2-71

## > Cours transversaux

### > **Complementary Module** ■

- Rescue Project Jean Monnet: Resilience, Climate Change and European Union

Language used for teaching  
French

Teaching time  
40h (40h lectures)

7 ECTS credits

Course code  
000-0-01

### > **Cross Curricular Units** ●

- Bibliographic Search

Language used for teaching  
French

Teaching time  
30h (7h 30min lectures - 4h 30min tutorials - 3h practical work - 15h work in accompaniment)

2 ECTS credits

Course code  
260-2-02

- Modern Foreign Language 1: English

Language used for teaching  
French - English

Teaching time  
24h (24h tutorials)

2 ECTS credits

Course code  
260-2-01

## ■ Project

Language used for teaching

French

Teaching time

16h 30min (3h lectures - 1h 30min tutorials - 12h practical work)

2 ECTS credits

Course code

260-2-05

## ■ Work Experience Assignment (Work-Study Programme)

Language used for teaching

French

10 ECTS credits

Course code

260-2-04

## ■ Work Placement (8 weeks)

Language used for teaching

French

8 ECTS credits

Course code

260-2-03-STAG

> **Module complémentaire - Hors-Maquette** ■

## ■ LR - Formation complémentaire en Numérique Responsable

Language used for teaching

French

Teaching time

15h (15h lectures)

Course code

260-2-01-HM

> **Semester 3**> **Cours majeurs**> **Big Data Implementation** ●

## ● Big Data Implementation

Language used for teaching

French

Teaching time

48h (15h lectures - 33h practical work)

5 ECTS credits

Course code

260-3-11

> **Semantic Web** ●

## ● Semantic Web

Language used for teaching

French

Teaching time

48h (15h lectures - 15h tutorials - 18h practical work)

5 ECTS credits

Course code

260-3-21

> **Web Service and Mobility** ●

- Web Services and Mobility

Language used for teaching	French
Teaching time	49h 30min (15h lectures - 15h tutorials - 19h 30min practical work)
5 ECTS credits	
Course code	260-3-31

## > Cours mineures de spécialité

### > Minor: Content Acquisition and Processing ■

- Information Retrieval and Document Understanding

Language used for teaching	French - English
Teaching time	27h (12h lectures - 15h practical work)
4 ECTS credits	
Course code	260-3-81

- Project

Language used for teaching	English - French
Teaching time	19h 30min (1h 30min tutorials - 9h practical work - 9h work in accompaniment)
2 ECTS credits	
Course code	260-3-82

### > Minor: Urbanisation of Distributed Systems ■

- Process Mining

Language used for teaching	French
Teaching time	49h 30min (15h lectures - 15h tutorials - 19h 30min practical work)
6 ECTS credits	
Course code	260-3-71

## > Cours transversaux

### > Cross Curricular Units •

- Mise en situation professionnelle (Alternants)

Language used for teaching	French
3 ECTS credits	
Course code	260-3-04

- Modern Foreign Language 1: English

Language used for teaching	English - French
Teaching time	24h (24h tutorials)
2 ECTS credits	
Course code	260-3-01

## ■ Project / Simulation Exercise

Language used for teaching

French

Teaching time

30h (6h lectures - 24h work in accompaniment)

3 ECTS credits

Course code

260-3-03

## ● Scientific Project

Language used for teaching

French

Teaching time

57h (9h lectures - 9h tutorials - 9h practical work - 30h work in accompaniment)

4 ECTS credits

Course code

260-3-02

## &gt; Semester 4

## &gt; Cours majeurs

## &gt; Project ●

## ● Project

Language used for teaching

French - English

Teaching time

60h (12h lectures - 48h work in accompaniment)

6 ECTS credits

Course code

260-4-11

## &gt; Cours transversaux

## &gt; Complementary Module ■

## ■ Rescue Project Jean Monnet: Resilience, Climate Change and European Union

Language used for teaching

French

Teaching time

40h (40h lectures)

7 ECTS credits

Course code

000-0-01

## &gt; Module complémentaire - Hors-Maquette ■

## ■ Formation complémentaire\_encadrement workshop AI4industry

Language used for teaching

French

Teaching time

40h (40h practical work)

Course code

260-4-01-HM

## &gt; Professionalisation ●



### ■ Work Experience Assignment (Work-Study Programme)

Language used for teaching

French

24 ECTS credits

Course code

260-4-02

### ■ Work Placement (20 weeks)

Language used for teaching

French

24 ECTS credits

Course code

260-4-01-STAG

## > Interaction with professionals

Many professionals are involved in the MSc (about 15%) either directly in the courses or through seminars integrated into the courses.

## > International

The ICONE IT MSc has multiple links with Vietnam. In particular, the second year can be done entirely in Hanoi, either in a francophone training (IFI) or an anglophone training (USTH).

## AFTERWARDS

### > Further Education

[PhD](#)

### > Professions

- Information systems architect
- Information system application manager
- Software development engineer
- Business intelligence engineer
- IT system engineer

Information subject to change

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