


MSC IN INFORMATION TECHNOLOGY "ICONE" PROGRAMME DATA

IDENTITY CARD

- > Domain : Sciences, Technologies and Health
- > Full time course
- > [Continuing Education](#)
- > Degree apprenticeships
- > [Master of Engineering](#)
- > [Accessible to people with disabilities](#)
- > [120 ECTS credits](#)
- > 4 semesters
- >  La Rochelle

REGISTRATION

<https://www.univ-larochelle.fr/formation/admission-inscription-et-scolarite/candidatures-et-inscriptions/candidater-universite-la-rochelle/>

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OBJECTIVES

> Presentation



Do you wish to acquire general computer skills while specializing in one of the fields offered by the Software or Data Architect course ?

At the end of these two courses of the IT MSc, you will be able to perfectly understand the organization of digital flows as well as the implementation of tools for exploiting the intangible heritage of a company or a community. In fact, you will be able to deal with data management and analysis issues, design information systems and also exploit and enhance digital content. As a future IT executive, you will also learn about the different support methodologies that can improve the functioning of an organization.



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

> Parcours général

> Semester 1

> Bases de données avancées ●

● Bases de données avancées

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
French - English

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

5 ECTS credits

Course code
260-1-31

> Ingénierie logicielle ●

● Ingénierie logicielle

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

> Mineure - Acquisition et traitement des contenus ■

● Approches expérimentales

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

> Mineure - Urbanisation des systèmes distribués ■

● Architecture de l'information

Language used for teaching
French

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

3 ECTS credits

Course code
260-1-72

● Programmation concurrente et distribuée

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

> Module complémentaire - Hors-Maquette ■

■ LR - Formation complémentaire en Numérique Responsable

Language used for teaching
French

Teaching time
15h (15h lectures)

Course code
HM-001

■ LR-Intervention Sopra-Stéria

Language used for teaching
French

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

Course code
HM-022

■ NIORT - Formation complémentaire en Numérique Responsable

Language used for teaching
French

Teaching time
15h (15h lectures)

Course code
HM-003

■ NIORT-Intervention Sopra-Stéria

Language used for teaching
French

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

Course code
HM-023

> Unités transversales ●

- Découverte de la recherche

Language used for teaching	French
Teaching time	43h 30min (13h 30min lectures - 3h tutorials - 12h practical work - 15h work in accompaniment)
ECTS credits	3
Course code	260-1-02

- LV1 Anglais

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

- Mise en situation professionnelle (Alternants)

Language used for teaching	French
ECTS credits	3
Course code	260-1-05

- Projet (Initial)

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

- Remédiation / personnalisation

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

> Semester 2

> Acquisition et traitements des contenus - fondements ●

- Acquisition et codage des contenus - fondements

Language used for teaching	French
Teaching time	18h (6h lectures - 3h tutorials - 9h practical work)
ECTS credits	2
Course code	260-2-41

- Traitement des contenus - fondements

Language used for teaching	French
Teaching time	18h (6h lectures - 3h tutorials - 9h practical work)
2 ECTS credits	
Course code	260-2-42

> Data mining 1 ●

- Decision information systems

Language used for teaching	French - English
Teaching time	21h (4h 30min lectures - 7h 30min tutorials - 9h practical work)
2 ECTS credits	
Course code	260-2-51

- Numerical methods

Language used for teaching	English - French
Teaching time	18h (6h lectures - 6h tutorials - 6h practical work)
2 ECTS credits	
Course code	260-2-52

- Structural methods

Language used for teaching	French - English
Teaching time	21h (6h lectures - 6h tutorials - 9h practical work)
2 ECTS credits	
Course code	260-2-53

> Mineure - Acquisition et traitement des contenus ■

- Qualité des contenus et des traitements

Language used for teaching	French
Teaching time	36h (12h lectures - 6h tutorials - 18h practical work)
6 ECTS credits	
Course code	260-2-81

> Mineure - Urbanisation des systèmes distribués ■

- Calculs et sécurité décentralisés

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

> Module complémentaire ■

■ Projet Rescue Jean Monnet

Language used for teaching
French

Teaching time
40h (40h lectures)

7 ECTS credits

Course code
000-0-01

> Module complémentaire - Hors-Maquette ■

■ LR - Formation complémentaire en Numérique Responsable

Language used for teaching
French

Teaching time
15h (15h lectures)

Course code
HM-002

■ NIORT - Formation complémentaire en Numérique Responsable

Language used for teaching
French

Teaching time
15h (15h lectures)

Course code
HM-004

> Unités transversales ●

● Etude bibliographique

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

● LV1 Anglais

Language used for teaching
English - French

Teaching time
24h (24h tutorials)

2 ECTS credits

Course code
260-2-01

■ Missions en entreprise (APPRENTISSAGE)

Language used for teaching
French

10 ECTS credits

Course code
260-2-04

■ Projet (initial)

Language used for teaching	French
Teaching time	16h 30min (3h lectures - 1h 30min tutorials - 12h practical work)
ECTS credits	2
Course code	260-2-05

■ Stage (8 semaines) (INITIAL)

Language used for teaching	French
ECTS credits	8
Course code	260-2-03-STAG

> Semester 3

> Acquisition et traitements des contenus - avancé ●

● Acquisition et codage des contenus - avancé

Language used for teaching	French
Teaching time	18h (6h lectures - 3h tutorials - 9h practical work)
ECTS credits	2
Course code	260-3-41

● Traitement des contenus - avancé

Language used for teaching	French
Teaching time	18h (6h lectures - 3h tutorials - 9h practical work)
ECTS credits	2
Course code	260-3-42

> Data mining 2 ●

● Neural networks

Language used for teaching	English - French
Teaching time	19h 30min (6h lectures - 6h tutorials - 7h 30min practical work)
ECTS credits	2
Course code	260-3-53

● Numerical methods

Language used for teaching	English - French
Teaching time	21h (6h lectures - 6h tutorials - 9h practical work)
ECTS credits	2
Course code	260-3-51

- Structural methods

Language used for teaching	English - French
Teaching time	19h 30min (4h 30min lectures - 6h tutorials - 9h practical work)
ECTS credits	2
Course code	260-3-52

- > **Mise en oeuvre des systèmes big data** •

- Mise en oeuvre des systèmes big data

Language used for teaching	French
Teaching time	48h (15h lectures - 33h practical work)
ECTS credits	5
Course code	260-3-11

- > **Mineure - Acquisition et traitement des contenus** ■

- Information retrieval and document understanding

Language used for teaching	French - English
Teaching time	27h (12h lectures - 15h practical work)
ECTS credits	4
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)
ECTS credits	2
Course code	260-3-82

- > **Mineure - Urbanisation des systèmes distribués** ■

- Fouille de processus

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

- > **Unités transversales** •

- LV1 Anglais

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

- **Projet / mise en situation professionnelle**

Language used for teaching	French
Teaching time	30h (6h lectures - 24h work in accompaniment)
3 ECTS credits	
Course code	260-3-03

- **Projet scientifique**

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

> Semester 4

> **Projet** ●

- **Projet**

Language used for teaching	French - English
Teaching time	60h (12h lectures - 48h work in accompaniment)
6 ECTS credits	
Course code	260-4-11

> **Professionalisation** ●

- **Missions en entreprise (APPRENTISSAGE)**

Language used for teaching	French
24 ECTS credits	
Course code	260-4-02

- **Stage (20 semaines) (INITIAL)**

Language used for teaching	French
24 ECTS credits	
Course code	260-4-01-STAG

> **Parcours double-diplomation (IFI-1)**

> **Semester 3**

> **Semestre d'échange - Université Hanoï** ●

- **Semestre d'échange - Université Hanoï**

Language used for teaching	French
30 ECTS credits	
Course code	260-3-00-IFI1

> **Semester 4**

> **Semestre d'échange - Université Hanoï** ●

- Semestre d'échange - Université Hanoï

Language used for teaching
French

30 ECTS credits

Course code
260-4-00-IFI1

> **Parcours double-diplomation (IFI-2)**

> **Semester 3**

> **Semestre d'échange - Université Hanoï** ●

- Semestre d'échange - Université Hanoï

Language used for teaching
French

30 ECTS credits

Course code
260-3-00-IFI2

> **Semester 4**

> **Semestre d'échange - Université Hanoï** ●

- Semestre d'échange - Université Hanoï

Language used for teaching
French

30 ECTS credits

Course code
260-4-00-IFI2

> **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**

- Project manager and dematerialization consultant
- Information system application manager
- Software development engineer
- IT system engineer

Information subject to change

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