




## MASTER'S DEGREE IN COMPUTER SCIENCE - SOFTWARE ARCHITECH TRACK

### 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/>

### CONTACT

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### OBJECTIVES

#### > Presentation



"Would you like to acquire basic IT skills while specialising in one of the following areas : software architecture or data engineering ?

After completing one of these two Computer Science courses, you will have a thorough understanding of the organisation of digital flows and the implementation of tools for exploiting the intangible heritage of a company or local authority. You will be able to deal with data management and analysis issues, design information systems and exploit and develop digital content. As a future IT executive, you will also learn about the various decision-making methods that can be used to improve the way an organisation operates.

The software architect course is available in La Rochelle (full-time education or degree apprenticeships) and the data architect course is available in Niort (degree apprenticeships only)."

In addition to this course, a master's programme in engineering is available :

<https://www.univ-larochelle.fr/formation/nos-formations/cursus-master-ingenierie-cmi>

Frédéric BERTRAND



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

##### > Advanced Databases ●

- Advanced Databases

##### > Information Systems ●

- Information Systems

##### > Software Engineering ●

- Software Engineering

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

- Experimental Approaches

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

- Concurrent and Distributed Systems
- Information Architecture

##### > Module complémentaire - Hors-Maquette ■

- LR - Formation complémentaire en Numérique Responsable
- LR-Intervention Sopra-Stéria

##### > Unités transversales Architecte Logiciel ●

- Initiation to Research
- Modern Foreign Language 1: English
- Project
- Simulation Exercise (Work-Study Programme)
- Tutoring & Academic Support

#### > Semester 2

##### > Secure Networks and Storage ●

- Secure Network and Storage

##### > Service-Oriented Architecture ●

- Service-Oriented Architecture

- › **Minor: Content Acquisition and Processing** ■
  - Content and Processing Quality
- › **Minor: Urbanisation of Distributed Systems** ■
  - Decentralised Computing and Safety
- › **Complementary Module** ■
  - Rescue Project Jean Monnet: Resilience, Climate Change and European Union
- › **Cross Curricular Units** ●
  - Bibliographic Search
  - Modern Foreign Language 1: English
  - Project
  - Work Experience Assignment (Work-Study Programme)
  - Work Placement (8 weeks)
- › **Module complémentaire - Hors-Maquette** ■
  - LR - Formation complémentaire en Numérique Responsable
- › **Semester 3**
  - › **Big Data Implementation** ●
    - Big Data Implementation
  - › **Semantic Web** ●
    - Semantic Web
  - › **Web Service and Mobility** ●
    - Web Services and Mobility
  - › **Minor: Content Acquisition and Processing** ■
    - Information Retrieval and Document Understanding
    - Project
  - › **Minor: Urbanisation of Distributed Systems** ■
    - Process Mining
  - › **Cross Curricular Units** ●
    - Mise en situation professionnelle (Alternants)
    - Modern Foreign Language 1: English
    - Project / Simulation Exercise
    - Scientific Project
- › **Semester 4**
  - › **Project** ●
    - Project
  - › **Complementary Module** ■
    - Rescue Project Jean Monnet: Resilience, Climate Change and European Union
  - › **Module complémentaire - Hors-Maquette** ■
    - Formation complémentaire\_encadrement workshop Al4industry
  - › **Professionalisation** ●

- Work Experience Assignment (Work-Study Programme)
- Work Placement (20 weeks)

### > 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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