# MASTER'S DEGREE IN CIVIL ENGINEERING - BUILDING ENGINEERING TRACK - NEW TECHNIQUES FOR CONSTRUCTION AND RENOVATION "TNCR"

## IDENTITY CARD

- Domain : Sciences, Technologies and Health
- Full time course
- Continuing Education
- Master of Engineering
- 120 ECTS credits
- 4 semesters
- La Rochelle

- 1 month to access the 1st job
- 94 % of graduates are employed

according to a study conducted 18 months after graduation

## 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 become an executive in the building and civil engineering sector ?
Thanks to the Master's degree in Civil Engineering and its two Building Engineering specialisations, you will be able to design, organise and supervise all stages of a building-related project, from construction and renovation (TNCR specialisation) to the management and integration of energy efficiency and renewable energy techniques (GI3ER specialisation).
You will also receive training in management, communication and interpersonal skills, as your future job will require you to maintain close contact with customers and partners."
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

Marie DUQUESNE

Marie Duquesne

## ADMISSION

### Your profile

You have a Bac+3, Bac+4 or equivalent : (minimum of 180 ECTS) you must have knowledge of civil engineering.

### How to apply ?

In the1st year of the Master's degree, the selection of candidates is made on the basis of their applications documents.
How to apply to the 1st year of the Master's
How to apply to the 2nd year of the Master's

## PROGRAMME

● Mandatory ■ Course option

### General Track

#### Semester 1

##### Dimensioning Framework ●

- Steel Framing
- Timber Framing

##### Dimensioning Reinforced Concrete Structures ●

- Calculating Foundations
- Reinforced Concrete Structures

##### Structural Design Tools ●

- Strength of Materials
- Structural Dynamics

##### Minor TNCR (CONSTRUCTION AND RENOVATION): Actions on Structures and Design ■

- Bracing System Design
- Seismic Design of Building Structures

##### Research Minor: Advanced Transport Phenomena ■

- Advanced Transport Phenomena 1

##### Unités transversales TNCR ●

- Communication, Management and Project Management
- Digital Tools for Engineers
- English for TNCR (CONSTRUCTION AND RENOVATION)

#### Semester 2

##### Construction Process and Site Management (Technical Project 2) ●

- Construction Procedures and Site Management

##### Professionalisation and Role Playing (Technical Project 1) ●

- Structural and Equipment Sizing

##### Research and Development (Research Project) ●

- Research and Sustainable Development Processes in Construction

### Minor TNCR (CONSTRUCTION AND RENOVATION)

- Introduction to BIM Construction Project Management (GI3ER/TNCR)
- Numerical Methods for Civil Engineers

### Research Minor: Advanced Transport Phenomena

- Advanced Transport Phenomena 2

### Complementary Module

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

### STAGE TNCR

- Stage (8 semaines) TNCR

### Work Placement TNCR

- Business Management and Law
- Fire Safety
- LV1 Anglais TNCR

## Semester 3

### Construction Project Management

- Advanced Calculation of Reinforced Concrete Structures
- Design of Composite Structures
- Design of Prestressed Concrete Structures

### Durability of Structures and Risks

- Maintenance and Rehabilitation of Structures
- Risk Management in Construction
- Structural Reliability

### Earthquake-Resistant Designs and Maintenance Engineering

- Engineering of Existing Structures
- Seismic Design
- Structures: Design and Calculations

### Minor TNCR: Building Pathology and Rehabilitation

- Durability of Reinforced Concrete Structures
- Modelling Transport Phenomena in Porous Media
- New Materials and Processes

### Research Minor: Advanced Transport Phenomena

- Advanced Transport Phenomena 3

### Unités transversales TNCR

- Ecological Transition and Environmental Assessment of Buildings
- English for TNCR (CONSTRUCTION AND RENOVATION)
- Projects and Operations Economy (BIM)

## Semester 4

### Complementary Module

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

### Stage TNCR

- Stage (22 semaines) (TNCR)

## AFTERWARDS

Information subject to change

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