

Programme jointly offered by Ghent University, Université Catholique de Louvain, University of Liège, Université libre de Bruxelles, Vrije Universiteit Brussel, KU Leuven

Master of Science in Nuclear Engineering

Language of instruction: English

Programme version 2

## 1 General Courses 31 credits

| Nr | Course                                                                                                                                   | CRDT | Ref | MT1 | Session | Study |
|----|------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|---------|-------|
| 1  | E038540 Nuclear Energy: Introduction<br><i>William D'haeseleer -- KU Leuven</i>                                                          | 3    |     | 1   | A:1     | 90    |
| 2  | E038701 Introduction to Nuclear Physics and Measurements<br><i>Nicolas Pauly -- Université libre de Bruxelles</i>                        | 3    |     | 1   | A:1     | 90    |
| 3  | E038501 Radiation Protection<br><i>Klaus Bacher -- Department of Human Structure and Repair</i>                                          | 3    |     | 1   | A:1     | 90    |
| 4  | E038581 Nuclear Reactor Theory<br><i>William D'haeseleer -- KU Leuven</i>                                                                | 6    |     | 1   | A:2     | 168   |
| 5  | E038681 Nuclear Fuel Cycle                                                                                                               | 3    |     | 1   | A:1     | 90    |
| 6  | E038641 Nuclear Materials<br><i>Marc Scibetta -- University of Liège</i>                                                                 | 3    |     | 1   | A:1     | 90    |
| 7  | E038621 Nuclear Thermal Hydraulics<br><i>Yann Bartosiewicz -- Université Catholique de Louvain</i>                                       | 5    |     | 1   | A:2     | 150   |
| 8  | E038601 Safety of Nuclear Power Plants<br><i>Matthias Vanderhaegen -- Department of Electromechanical, Systems and Metal Engineering</i> | 5    |     | 1   | A:2     | 150   |

## 2 Elective Courses 9 credits

Subscribe to 9 credit units from the following list. Subject to approval by the faculty.

| Nr | Course                                                                                                                                      | CRDT | Ref | MT1 | Session | Study |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|---------|-------|
| 1  | E038800 Advanced Nuclear Reactor Physics and Technology<br><i>Hamid Ait Abderrahim -- Université Catholique de Louvain</i>                  | 3    |     | 1   | A:2     | 90    |
| 2  | E038810 Advanced Nuclear Materials<br><i>Marc Scibetta -- University of Liège</i>                                                           | 3    |     | 1   | A:J     | 90    |
| 3  | E038820 Advanced Radiation Protection/Radiation Ecology<br><i>Klaus Bacher -- Department of Human Structure and Repair</i>                  | 3    |     | 1   | A:2     | 90    |
| 4  | E038830 Advanced Courses on the Nuclear Fuel Cycle                                                                                          | 3    |     | 1   | A:2     | 81    |
| 5  | E038840 Nuclear and Radiological Risk Governance<br><i>Greet Maenhout -- Department of Electromechanical, Systems and Metal Engineering</i> | 3    |     | 1   | A:J     | 81    |
| 6  | E038850 Advanced Course Elective Topic<br><i>Peter Baeten -- Vrije Universiteit Brussel</i>                                                 | 3    |     | 1   | A:J     | 88    |

## 3 Master's Dissertation 20 credits

| Nr | Course                        | CRDT | Ref | MT1 | Session | Study |
|----|-------------------------------|------|-----|-----|---------|-------|
| 1  | E091241 Master's Dissertation | 20   |     | 1   | A:J     | 600   |

## Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the course name, using the following ISO codes:

|               |             |             |               |                |                      |             |
|---------------|-------------|-------------|---------------|----------------|----------------------|-------------|
| bg: Bulgarian | de: German  | es: Spanish | ja: Japanese  | pl: Polish     | sh: Croatian/Serbian | zh: Chinese |
| cs: Czech     | el: Greek   | fr: French  | nl: Dutch     | pt: Portuguese | sl: Slovene          |             |
| da: Danish    | en: English | it: Italian | no: Norwegian | ru: Russian    | sv: Swedish          |             |

## Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned.

When a semester is shown in brackets, the course is not offered this year in the specific offering.

The offering frequency and first year of offering are indicated by the following codes:

|                 |                                 |                                 |                                 |
|-----------------|---------------------------------|---------------------------------|---------------------------------|
| a: bi-annually  | c: annually, from 2026-2027     | f: annually, from 2027-2028     | i: annually, from 2028-2029     |
| b: tri-annually | d: bi-annually, from 2026-2027  | g: bi-annually, from 2027-2028  | j: bi-annually, from 2028-2029  |
|                 | e: tri-annually, from 2026-2027 | h: tri-annually, from 2027-2028 | k: tri-annually, from 2028-2029 |