



## International CBRNe Master Courses University of Rome **Tor Vergata**

The evolution of and increase in Safety and Security threats at an international level place remarkable focus on the improvement of the emergency systems to deal with crisis, including those connected to ordinary and the non-conventional events (Chemical, Biological, Radiological, Nuclear, and explosives).

Given the global interest in these issues, the Department of Industrial Engineering and the School of Medicine and Surgery of the Tor Vergata University organise the following Master Courses:

**LEVEL 1**

Master Course  
in **Protection  
against CBRNe  
events** (120 ECTS)

**LEVEL 2**

Master Course  
in **Protection  
against CBRNe  
events** (60 ECTS)

INTERNATIONAL CBRNe MASTER COURSES  
[www.mastercbrn.com](http://www.mastercbrn.com)

**The aforesaid Master Courses are organised by the University of Rome Tor Vergata, in cooperation with the following Italian Public Entities that have signed formal Agreements with the University:**

Italian Prime Minister's Office

Italian Ministry of Defence

Italian Ministry of The Interior

ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development)

National Institute for Geophysics and Vulcanology

National Health Institute

Italian Parliamentary Committee for Technological Innovation

University consortia: Crati scrl, Maris scarl, Scire scarl

**Cooperation Agreements have also been signed with the following International Entities:**

Hotzone Solutions Group (The Netherlands)

OPCW (Organization for the Prohibition of Chemical Weapons)

NATO Centre Of Excellence (Czech Republic)

Oberammergau NATO SCHOOL (Germany)

VVU (Czech Republic)

Seibersdorf Laboratories GmbH (Austria)

Chornobyl Centre (Ukraine)



The Tor Vergata University Master Courses offer unique modules, such as Live Agent Modules with real CBRN materials and newly developed simulants; it also boast cooperation with outstanding companies operating in the safety and security sector.



## LEVEL 1

# Master Course in **Protection against CBRNe events** (120 ECTS)

## For First Responders

### DURATION

2 years (January/February 2014 – December 2015)

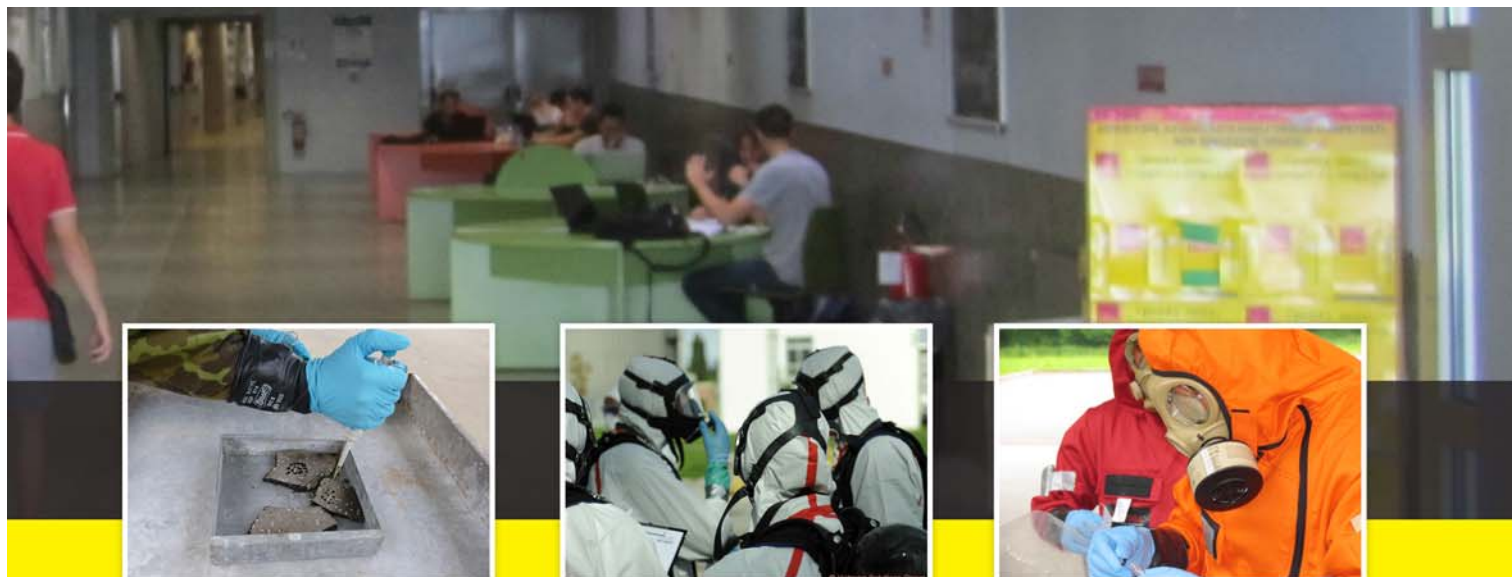
### ECTS 120 ECTS

At the end of Master Course, participants will obtain a **1st-Level Master Degree in "Protection Against CBRNe Events" (120 ECTS).**

This Master Course – which will be held in English by International subject-matter experts and lecturers – aims at standardising First Responder education and training by providing state-of-the-art education in the following areas:

- CBRNe threats and risks
- Analysis of CBRNe agents
- Effects of CBRNe agents
- Diffusion and dispersion of CBRNe
- Software and codes for CBRNe emergencies
- Detection of CBRNe agents: equipment and techniques
- CBRNe protection
- CBRNe decontamination
- International emergency systems in case of CBRNe events
- Sanitary rescue and psychological approach to emergencies in case of CBRNe events
- Critical infrastructure
- Investigation and mitigation
- Communication and information in case of CBRNe events
- **Practical activities and Live-Agent Training** at up to four specialized European Facilities: NBC School of Rieti (Italy), VVU (Czech Republic), Chornobyl Centre (Ukraine), Seibersdorf Laboratories (Austria)





Contamination of Asphalt

Training with radioactive substances

Preparation for liquid CW Agent sample

## TUITION FEE

The Master Course Tuition Fee amounts to **€ 15 146,00** (including taxes and parchment), divided into 4 instalments, to be paid as follows:

<b>€ 3 896,00</b>	upon enrolment – to be paid by January 10th 2014
<b>€ 3 750,00</b>	to be paid by June 23th 2014.
<b>€ 3 750,00</b>	to be paid by January 12th 2015
<b>€ 3 750,00</b>	to be paid by June 22th 2015

## ADMISSION CRITERIA AND ATTENDANCE

In order to participate in the Master Course and obtain the final degree (which has legal value according to the Italian law), candidates must have a **180-ECTS point Bachelor's Degree or equivalent**. "Equivalence" of degrees such as Military, Police, Fire-fighters Academy degrees etc., will be assessed on a case-by-case basis by the University's competent bodies and the Master Course's Steering Committee.

Students are required to attend at least **80 %** of classes and practical activities. Students shall only graduate if they meet the following requirements:

- Have attended at least 80% of all classes and practical activities
- Have passed the tests for each module
- Have passed the final examination

At the end of the Master Course, students who have attended at least 80% of all classes and practical activities, passed the tests and the final examination will be awarded the **1<sup>st</sup>-Level Master Degree in "Protection against CBRNe events"** (120 ECTS).

The best Master Thesis will be selected for publication in scientific journals.

## STRUCTURE

The Master Course consists of Modules and Internships, for a total duration of two academic years.

Each module will last one week (Monday to Friday). One module per month shall be held, so to allow employed students to reconcile work and attendance.

Internships shall take place at one of the sponsoring companies or at the cooperating organisations and institutions. Students who already have a job may decide to spend the internship period by working on a specific Project (related to the Master's subject matters) at their company/organisation.



For the Curriculum, please refer to:  
[www.mastercbrn.com](http://www.mastercbrn.com)

The 1st-level Master Course in "Protection against CBRNe Events" will start in **January/ February 2014, latest**





## LEVEL 2

# Master Course in **Protection against CBRNe events** (60 ECTS)

## Executive Course for Decision Maker's Advisors

### DURATION

1 year (January 2014 – December 2014)

### ECTS 60 ECTS

At the end of Master Course, participants will obtain a **2nd-Level Master Degree in "Protection Against CBRNe Events" (60 ECTS)**.

This Master Course aims at training professional **CBRNe Advisors of Decision Makers**, with specific skills in the following areas:

- CBRNe threats and risks
- Analysis of CBRNe agents
- Effects of CBRNe agents
- Diffusion and dispersion of CBRNe agents
- Software, codes, tools, and DSS for CBRNe emergencies
- Detection of CBRNe agents: instruments and techniques
- CBRNe protection
- CBRNe decontamination
- International emergency systems in case of CBRNe events
- Sanitary rescue and psychological approach to emergencies in case of CBRNe events
- Critical infrastructure
- Investigation and mitigation
- Communication and information in case of CBRNe events
- High-Level Experiences in two specialized European Facilities

### TUITION FEE

The Master Course Tuition Fee amounts to **€ 7 146,00** (including taxes and parchment), divided into 2 instalments, to be paid as follows:

- |                   |                                                 |
|-------------------|-------------------------------------------------|
| <b>€ 3 646,00</b> | to be paid upon enrolment, by January 10th 2014 |
| <b>€ 3 500,00</b> | to be paid by June 27th 2014                    |

### ADMISSION CRITERIA AND ATTENDANCE

This Master Course targets people with a 3+2-year Bachelor's Degree and Master Degree (for a total of 300 ECTS) in technical-scientific disciplines, or any title considered as equivalent for admission purposes by the relevant Board (Consiglio di Dipartimento). It also targets people with a 3+2 University education in other disciplines, to be authorised by the Master's Steering Committee "Equivalence" of degrees will be assessed on a case-by-case basis by the University's competent bodies and the Master Course's Steering Committee.

Students are required to attend at least 90% of classes and practical activities. Students shall only graduate if they meet the following requirements:

- Have attended at least **90 %** of all classes and practical activities
- Have passed the tests for each module
- Have passed the final examination



Safety Check of protective suit and gas mask

Decontamination of CW Agent

Pripyat, Chernobyl

At the end of the Master Course, students who have attended at least 90% of all classes and practical activities, passed the tests and the final examination will be awarded the **2<sup>nd</sup>-Level Master Degree in "Protection against CBRNe events"** (60 ECTS).

The best Master Thesis will be selected for publication in scientific journals.

## STRUCTURE

The Master Course consists of Modules and Internships, for a total duration of one academic year. However, depending on each individual's plan, it could last up to three years.

Each module will last one week (Monday to Friday). One module per month shall be held, so to allow employed students to reconcile work and attendance.

Internships shall take place at one of the sponsoring companies or at the cooperating organisations and institutions. Students who already have a job may decide to spend the internship period by working on a specific Project (related to the Master's subject matters) at their company/organisation.



For the draft Curriculum, please refer to:  
[www.mastercbrn.com](http://www.mastercbrn.com)

The 2nd-Level Master Course in "Protection against CBRNe Events" will start in **January/February 2014**.

Both Master Courses have been granted the **NATO SELECTED** status by the NATO HQ SACT (Supreme Allied Commander Transformation - Norfolk, Virginia, USA). Moreover, the Tor Vergata University has signed a Cooperation Agreement with the **OPCW** (Organisation for the Prohibition of Chemical Weapons), which will support the Master Courses. As it is stated in the OPCW Press Release, **"it is the first such agreement the OPCW has signed with a university in this field."**

For further information please contact:

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