



# **eNOTICE-2**

## **EU Network of Training Centres for preparedness to CBRN Events**

### **D1.2 Review of existing CBRN teaching courses and new training modules**

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## Executive Summary

This document is the second report for eNOTICE-2 Work Package 1 (M3-M14) on **Review of the CBRN teaching courses**. This report falls under Task 1.2: *New CBRN risks basic course design (M3 – M14)*

D1.2 aims to select, compare and review four courses, chosen by each partner, dealing with the management of CBRN risks by First Responders (FR), with the specific goal of assessing and, if possible, harmonising the content in terms of needs, usefulness and requirements expressed by FR and Training Centres (TC).

The main objectives of this document are to **outline the topics identified by eNOTICE-2 stakeholders** and provide **recommendations for improved training and research** to enhance, standardise, and harmonise CBRN preparedness and response mechanisms across Europe.

To achieve the objectives of Task 1.2, this report will be organized in the following manner:

**Chapter 1** provides a summary of the eNOTICE-2 project's scope and objectives. It also offers an outline of the objectives of Task 1.2, the methodology utilised for this task, and its relation to future tasks and deliverables of eNOTICE-2. In doing so, it sets the framework by which this document aims to achieve the task objectives.

**Chapter 2** elaborates on the methodological process used for the development and identification of the selected and integrated courses. It also outlines the results of the research conducted, including insight and future possibilities for improving the network from eNOTICE-2 project partners, CBRN TC and end-users on preparedness and response.

**Chapter 3** provides a summary of the work conducted for this task and offers recommendations for its application to the related tasks which will succeed T1.2 as part of the eNOTICE-2 project.

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## Nomenclature

|                   |                                              |
|-------------------|----------------------------------------------|
| <b>AI</b>         | Artificial Intelligence                      |
| <b>CBRN</b>       | Chemical, Biological, Radiological, Nuclear  |
| <b>CPE</b>        | Collective Protective Equipment              |
| <b>DIM</b>        | Detection, Identification, and Monitoring    |
| <b>DRM</b>        | Disaster Risk Management                     |
| <b>eNOTICE</b>    | European Network of CBRN Training Centres    |
| <b>EHEA</b>       | European Higher Education Area               |
| <b>FDDO</b>       | Fire Department of (the City of) Dortmund    |
| <b>FLO</b>        | Front Line Officer                           |
| <b>FR</b>         | First Responder                              |
| <b>GFET</b>       | Graphene Field Effects Sensors               |
| <b>JCBRND COE</b> | Joint CBRN Defence Centre of Excellence      |
| <b>METU</b>       | Middle East Technical University             |
| <b>PPE</b>        | Personal Protective Equipment                |
| <b>RPE</b>        | Respiratory Protective Equipment             |
| <b>SICC</b>       | Scientific International Conference on CBRNe |
| <b>SDS</b>        | Safety Data Sheet                            |
| <b>SOP</b>        | Standard Operating Procedure                 |
| <b>TC</b>         | Training Centre                              |
| <b>UCLouvain</b>  | Université catholique de Louvain             |
| <b>UCPM</b>       | Union Civil Protection Mechanism             |
| <b>UNITOV</b>     | University of Rome Tor Vergata               |
| <b>VESTA</b>      | Campus Vesta APB                             |
| <b>WMP</b>        | West Midlands Police                         |

## **1 Introduction**

### **1.1 eNOTICE-2 scope and objectives**

Over the past years, the threat of CBRN intentional attacks, technological accidents or natural hazards has led governments and international organisations to adopt far-reaching regulations and programmes to defend populations against the associated risks, while complementing national measures that address existing gaps and promote exchanges of information and best practices. To improve preparedness for CBRN events of deliberate, accidental or natural origin, the eNOTICE Network of Practitioners project was initiated in 2017 (finished in August 2023) which built an EU network of CBRN civilian and military training centres, testing and demonstration sites, and its goals are fully in line with the UCPM general objectives. The network comprising 53 training centres from 22 countries (17 EU Member States and 5 countries outside the EU) prioritizes multidisciplinary and multiagency training to enhance interoperability, cross-border training with a focus on standardized approach to comply with procedures and standards of neighbours, legal, administrative and organizational aspects; as well as training based on various scenarios including combined C, B, R threats of accidental or deliberate nature, hybrid threats and emerging threats, with testing and validating innovative technologies at different stages of development.

eNOTICE-2 Project consists of the members of the created network of CBRN TC, and is supported by associated civil protection actors from the corresponding Member States and UCPM countries. eNOTICE-2 focuses on improvement of the overall preparedness and capability for responding quickly to major cross-border crises involving C, B or RN agents or a mixture thereof. eNOTICE-2 is building on lessons learned from eNOTICE-1 as well as on gaps identified during the 17 field exercises, table tops, simulations and serious gaming Joint Activities that were held with participation of CBRN practitioners – first responders, crisis managers, civil protection, training professionals, CBRN technology developers, policy makers, and volunteers from civilian population. eNOTICE-2 continues to bring together all the multidisciplinary stakeholders during four simulation exercises (SimEx) during the project to ensure cooperation, coordination, compatibility and complementarity between all the actors. The intense knowledge sharing, comparison of operational procedures, identification of good and best practices across the actors in participating countries will strengthen knowledge partnerships between civil protection, DRM actors, ensure cross-fertilization with the R&D sector, selecting most promising results for uptake from the scientific community, most

innovative DRM tools from technology developers, and enrich the contents of the training courses.

Despite the abundance of material resources, expertise, and procedures, one of the major identified gaps occurs in CBRN decontamination, which has been consistently identified by eNOTICE-1 first responders (FR), and which is one of the UCPM rescEU CBRN priorities. eNOTICE confirms that there are currently no shared EU-MS guidelines or procedures. Furthermore, there are significant gaps in the way to conduct a decontamination that is safe for both the FR and the victims, especially when the decontamination activity involves a large number of FR and victims and lasts for several hours. And the emergence of new CBRN threats (such as Novichok, and steadily emerging biological threats as including toxin agents that necessitate regular updates to practices, procedures, guidelines, and policies) makes these gaps even deeper and more critical.

To fill this gap, the eNOTICE-2 project includes several new dimensions that will have several expected effects at institutional and individual levels. eNOTICE-2 considers CBRN decontamination in its broadest sense, including conventional and new emerging threats while considering together common healthy and vulnerable people, and focusing on a major well-known gap that is the decontamination of prosthetic and orthotics, which have been discussed in D5.1<sup>1</sup> and D5.2<sup>2</sup>, that are used by disabled people (wheelchair, hearing aids, breathing device, exoskeletal prostheses – such as hand, arm, foot, leg, finger and toe prostheses). As a result, eNOTICE-2 substantially broadens the spectrum of organisations contributing to DRM and strengthens UCPM while remaining in line with the civil protection mandate to support EU Member States' DRM activities.

Direct engagement of the end-user community, the advisory group of disabled patients guiding the project findings and providing recommendations will contribute to raising awareness of citizens and authorities on the CBRN risks, while carefully taking their needs and concerns into consideration, and provide possibilities to reduce their vulnerability.

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<sup>1</sup> D5.1: "Existing methodologies for assistive devices decontamination"

<sup>2</sup> D5.2: "Experimental studies for decontamination of devices"

## 1.2 eNOTICE-2 Project: report's scope, objectives and methodology

### 1.2.1 Scope of this deliverable

The goal of D1.2 is to elaborate on the work which was conducted as part of Task 1.2 to **identify and review a new course dealing with the management of CBRN risks, assessing and if possible, harmonising** the content for needs, usefulness and FR and TC requirements.

Since the addressees of the work are TCs (civilian/military, public/private) from different countries, correctly represented by the participants in the task (UNITOV, FDDO, JCBRND COE, VESTA), the work focuses on harmonising the contents of different courses dealing with the management of CBRN risks, rather than propose an identical course in different contexts, in order to provide a comprehensive framework that institutions and agencies can implement in various ways. Regardless of the radius of action and the level of responsibility (national, regional, local), it aims to create a common understanding of quality assurance while allowing for contextual adaptations.

### 1.2.2 Link to other tasks

The work of this report is related to several tasks and their correlated deliverables which have been and will be produced throughout the eNOTICE-2 project:

#### *Task 1.1: Identification of topics to improve preparedness (M1-M6)*

The results from this task have directly influenced the work and output of Task 1.2: *New CBRN risks basic course design*. The hot topics and priorities defined in Task 1.1 contributed to update of existing training courses and **strategic design of a new CBRN course module**, by focusing specifically on the training needs and priorities identified in Task 1.1.

#### *Task 2.1: CBRN-centred digital library populating (M7-M16)*

This task is also related to **Task 2.1: CBRN-centred digital library populating** (SO-3 of eNOTICE-2) which will aim at the creation of a **digital library** designed to provide a **standardised outlet of information related to CBRN training and response**.

The library can be a very valuable support since, depending on the hot topics to be focused on, the library reference works can also be provided to make the collaboration between the partners more effective and concrete on a practical level, sharing documents even to improve courses and teaching methods.

### 1.2.3 Methodological approach

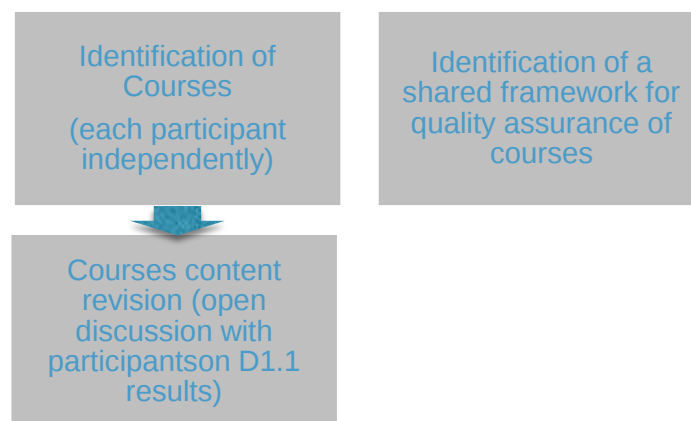
To achieve the objectives of Task 1.2, a draft methodological note to approach the “harmonization” of courses on Task 1.2 was proposed by UNITOV and discussed with the WP’s partners to support and address the task activities.

This collaborative discussion aimed to ensure that all partners were aligned on the objectives and methodologies.

To support this phase of the work and later throughout the process, calls were made with individual partners to achieve the set work objectives.

To develop this activity, after the preliminary action of identifying the reference course by each task participant (Figure 1), UNITOV proposes to work on two activities:

- **Revising the contents of courses**, identifying, basing on the results of *Task 1.1 - Identification of topics to improve preparedness*, whether there are hot topics to be included in existing selected courses;
- **Promoting a shared quality assurance of courses**, providing a framework which can be implemented in many ways by different institutions and agencies, by creating a common and harmonised understanding of *quality assurance*.



**Diagram of Task 1.2 actions**

#### Identification of Courses

Each participant carried out this action by selecting a course ‘on CBRN risk management’ from those courses offered by their institution.

#### Course contents review

The participants refer to the specific courses selected from existing courses offered by their institution. The objective of the action is to identify whether there are hot topics that should be included in the selected existing course and how this integration could take place.

To carry out this review, the final list of CBRN research, development, teaching and training priority topics identified for Task 1.1 and presented in *Table 3 - Final list of CBRN priorities of D1.1 “Evaluation of topics to be prioritised to increase CBRN preparedness”* was provided to the partners.

Within the *Final list of CBRN priorities* (see Table 3) topics were grouped into two general categories: (1) procedures and (2) technologies.

The latter were then further divided into the following sub-topics:

- Improving training and technological awareness – raising threats awareness
- Detection, Identification and Monitoring (DIM)
- Decontamination
- Personal Protective Equipment (PPE)
- Curative and preventive treatments - psychological welfare
- Emergency response guidelines - Standard operating procedures (SOPs) - Safety Data Sheets (SDS) and operating procedures and documentation
- Complementary technologies

#### Shared framework for course quality assurance

Starting from the initial premise that the intention of this activity is to harmonise and not homogenise courses from different training centres, which have developed them for different purposes in different contexts. eNOTICE-2 assumes that a successful way to approach this work is to think in *quality assurance* terms, developing a shared framework for course evaluations.

The aim is to provide a framework that institutions and agencies can implement in various ways – independent of the level of action (national, regional, local), creating a common understanding of *quality assurance*. For example, some of the aspects that can be evaluated are: student learning and teaching assessment, admission, recognition and certification, teaching staff, student support, information management, public information, and so on.

Key references for the definition of the shared framework are the Bologna Process & Standards and Guidelines for Quality Assurance (ESG<sup>3</sup>) in the European Higher Education Area (EHEA<sup>4</sup>). These guidelines offer a flexible yet structured approach to ensure quality in education across various institutions and agencies, including both academic and non-academic activities.

The framework should be based on a few key principles:

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<sup>3</sup> The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) 2015 were finally adopted by the Ministers responsible for higher education in the European Higher Education Area in May 2015 (<https://ehea.info/cid105593/esg.html>)

<sup>4</sup> European Higher Education Area (<https://ehea.info/index.php>)

1. **Reference to ESG:** The ESG guidelines serve as a primary reference to guide the development of the framework. The guidelines cover various areas, including student learning, teaching assessments, admission processes, recognition, certification, and student support.
2. **Multi-level Approach:** The framework is designed to accommodate differences in educational backgrounds, including first-line, second-line, and third-line responders. This ensures flexibility while maintaining the core objectives of *quality assurance*. We aim to create a system that supports diverse learners without introducing entirely new structures for training centres.
3. **Course Timing Considerations:** Evaluation methods will also take into account internal timeframes and constraints, such as academic calendars and summer vacations.

## 2 TASK 1.2 RESULTS

### 2.1 Identification of courses and hot topics integration proposals

Each Partner carried out this action by selecting a course ‘on CBRN risk management’ from those offered by their institution's courses.

At this stage, the project proceeded by specifying that the course to be identified should last approximately one week, no indication was provided regarding any preference for the type of course, whether more practical or more theoretical. An additional criterion useful for course selection by the task partners was the possibility of integrating one or more of the hot topics identified in Task 1.1.

The following courses selected for review:

- Joint CBRN Defence Centre of Excellence Vyškov (JCBRND COE): “**CBRN Consequence Management**”
- University of Rome Tor Vergata (UNITOV) – **Master in Protection Against Cbrne Events Module 6: “Risk analysis, CBRNe simulation: software, tools & methods**
- Campus Vesta (in cooperation with University of Antwerp, University of Leuven, University of Ghent, Royal Military Academy, Professional Association Network Nursing): **PGDM (Post Graduate Disaster Management) – Module 7 (Campus VESTA)**
- Fire Department of Dortmund (FDDO): “**CBRN training in Dortmund**”.

For each selected course, it was required to add a brief description of the course and its target audience.

Based on the final list of “CBRN research, development, teaching and training priority topics” identified for Task 1.1, each partner was asked to identify whether there were hot topics that could be included in the selected existing course and how this integration could take place.

The results of this work are shown in Table 1.

**Table 1 List of Courses and Hot Topics integration.**

| Partner involved                                                   | Course/Course aim                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Period                 | Target Audience                      | Hot topic integration/integration proposal                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Joint CBRN Defence Centre of Excellence Vyškov (JCBRND COE)</b> | <p><b>CBRN Consequence Management Course</b></p> <p><b>Course aim:</b> This course aims to introduce the students to CBRN consequence management (CM) and the NATO CM concept, organization, systems, and procedures. This includes an explanation of the current CBRN Crisis/Consequence Management (CM) civilian-military (CIMIC) cooperation and partnership initiatives between NATO and partner nations. To achieve this, the course includes lessons learned from recent CM efforts, highlighting the importance of established Rules of Engagement (RoE). Furthermore, the course highlights the importance of information sharing with the public and media activities during all phases of a CM response effort.</p>                                         | 24-29 November 2024    | Civilian, Military of all levels     | <p><u>Hot topic integrated:</u><br/>“Existing and emerging methods of decontamination of assistive devices”</p> <p>The hot topic was included through the insertion of the lesson on: “Emerging Electronic-friendly Decontamination for sensitive Devices: Principles and Technologies of Microbial Decontamination”</p> |
| <b>University of Rome Tor Vergata (UNITOV)</b>                     | <p><b>Master in Protection Against CBRNe Events, Module 6 – “Risk analysis, CBRNe simulation: software, tools &amp; methods”</b></p> <p><b>Course aim:</b> This module focuses on risk analysis and CBRNe (Chemical, Biological, Radiological, Nuclear, and Explosive) simulations as essential tools for advisors supporting decision-makers. It provides key insights into conducting risk assessments, predicting CBRNe hazards, and managing disaster response.</p> <p>Key Teaching Points:</p> <ul style="list-style-type: none"> <li>• Fundamentals of CBRN hazard prediction</li> <li>• Meteorology and dispersion models</li> <li>• Risk evaluation and analysis</li> <li>• Software tools such as HotSpot, ALOHA-MARPLOT, STEM, and CBRN-Analysis</li> </ul> | 15 – 19 September 2025 | Master degree for Civilian, Military | <p><u>Hot topic proposed for integration:</u><br/>“Emerging technologies – AI, robotics, nanotechnology”_. The proposals submitted are currently under review by the course coordinators.</p>                                                                                                                            |

|                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CAMPUS VESTA</b> (in collaboration with University of Antwerp, University of Leuven, University of Ghent, Royal Military Academy Professional Association Network Nursing)</p> | <p><b>Post Graduate Disaster Management (PGDM) – Module 7 – Technological Disasters</b></p> <p><b>Course aim:</b> Module 7 covers various aspects of technological disasters, focusing on CBRN (Chemical, Biological, Radiological, and Nuclear) incidents and their impact on emergency response services. It includes:</p> <p><u>Introduction:</u> General CBRN awareness for first responders (firefighters, medical services, police) and communication strategies during incidents.</p> <p><u>Chemical Disasters:</u> Case study of the 2013 train disaster in Wetteren (Belgium), addressing plume calculation, source control, police perimeter security, and medical response.</p> <p><u>Biological Disasters:</u> Bioterrorism, decontamination procedures, and infectious disease surveillance.</p> <p><u>Nuclear/Radiological Disasters &amp; Explosives:</u> Emergency response strategies, nuclear site exercises, and handling of homemade and chemical explosives, including military intervention.</p> <p><u>Transport Accidents:</u> Real case studies of transport accidents (rail, road, waterway, air), integrating CBRNe risk assessment.</p> | <p>4 February 2025 - 28 May 2025</p> | <ul style="list-style-type: none"> <li>-Fire and police commanders</li> <li>-Doctors and nurses</li> <li>-Safety officers of companies</li> <li>-Emergency planning officials</li> <li>-Policy makers</li> <li>-Volunteers and employees with a coordinating role within crisis management</li> </ul> | <p><u>Hot topic proposed for integration:</u></p> <p>Based on a review of topics of “Module 7” of the Post Graduate Course Disaster Management and the full list of Hot Topics from D1.1, Campus Vesta made an extensive list of suggestion for the inclusion of subjects in the next academic year (2026 – 2027). The proposals submitted are currently under review by the course coordinators. Among the attachments, the list of hot topics proposed for integration.</p> |
| <p><b>Fire Department of Dortmund (FDDO)</b></p>                                                                                                                                     | <p><b>CBRN training in Dortmund</b></p> <p><b>Course aim:</b> the course covers various aspects of CBRN (Chemical, Biological, Radiological, Nuclear) response. Key training components include:</p> <p><u>Basics of Radiation Protection</u> – Fundamental principles of radiation safety.</p> <p><u>Handling of Protective Clothing</u> – Training on the proper use of CBRN protective gear.</p> <p><u>Hazardous Substances &amp; Labeling</u> – Identifying and handling dangerous materials.</p> <p><u>Decontamination Stages &amp; Procedures</u> – Techniques for decontamination and radiation protection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>8 days training</p>               | <p>Fire Department – Basic Level;</p> <p>Non experts</p>                                                                                                                                                                                                                                              | <p><u>Hot topic proposed for an option of integration:</u></p> <p>"Preparedness and Response: PPE" and "Preparedness and Response Decontamination".</p>                                                                                                                                                                                                                                                                                                                       |

|  |                                                                                                                                                                                                                                                                                                                                                              |  |  |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|  | <u>Sealing &amp; Localization</u> – Methods for containing hazardous substances.<br><u>Pumping &amp; Dismantling</u> – Techniques for removing hazardous materials.<br><u>Self-Protection &amp; First Tasks</u> – Personal safety measures and initial response actions.<br><u>Platoon Exercise</u> – Practical training for coordinated emergency response. |  |  |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|

All task partners responded positively to the possibility of including ‘hot’ topics in their existing courses. This result is certainly a recognition of the quality of the work done in the selection of hot topics, but it also testifies to the extent to which training providers feel the need to constantly update their courses, in order to make them always adhere to the demands of their audience.

On the other hand, the process leading to the effective integration of new topics within courses is more or less complicated and therefore more or less time-consuming, depending on the course organiser. In the simplest cases, course revisions must be approved by one or more course managers. For more complex scenarios, such as NATO courses, approvals may also involve higher authorities, making the process significantly more challenging. Nevertheless, the need to constantly develop and improve courses remains a priority.

## 2.2 Quality Assessment

As mentioned in the section on the methodological approach the aim of this activity was to provide the basis for a framework that TC, institutions and agencies can implement in various ways, creating a common understanding of quality assurance.

Concretely, this meant developing quality assessment tools that were flexible enough to be customisable / scalable and thus useful for all potential users on different levels of action and knowledge.

Referring to TCs, the addressees of the work are TCs: civil/military, public/private; from different countries on different (administrative) levels. Furthermore, it should be borne in mind that on the same topic, a TC may realise more or less in-depth courses, more oriented towards first responders or decision-makers.

This makes it possible to understand how wide the range of training/educational activities is for which these *quality assurance tools* must potentially be adaptable.

The tools that have been chosen to be developed and proposed are:

- **The Course Card:** designed to provide a standardized and easily recognizable set of basic information about the courses.
- **The Evaluation Form:** intended to allow attendees to express their opinion on the course by assessing various aspects, including content, instructors, teaching materials, and more.

In the following paragraphs, these tools will be presented in detail.

## 2.2.1 Course Card

The collection of the brief course descriptions was preparatory to the subsequent integration phase of the hot topics, but it was also very useful for the work dedicated to defining quality assurance tools.

The collected descriptions as can be seen from Table 2 have similar but not identical contents and structures. This suggested the idea of proposing a course card, drawing on the work of each of the partners and proposing a harmonised and easily recognisable set of basic information.

**Table 2 Course Description Structures.**

| Partner involved                                      | Course                                                                                                           | Course Description structure                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Joint CBRN Defence Centre of Excellence Vyškov</b> | CBRN Consequence Management Course                                                                               | <ul style="list-style-type: none"> <li>- TITLE</li> <li>- ORGANISING ENTITY</li> <li>- DATE</li> <li>- PLACE</li> <li>- COURSE AIM</li> <li>- EU RELATED PARTICIPATION</li> <li>- ATTENDEES</li> <li>- COURSE SETTING</li> <li>- COURSE AGENDA</li> <li>- EVALUATION FORM</li> <li>- DAY-BY-DAY BREAKDOWN</li> </ul>          |
| <b>University of Rome Tor Vergata</b>                 | Master in Protection Against CBRNe Events, MODULE 6 - Risk analysis, CBRNe simulation: software, tools & methods | <ul style="list-style-type: none"> <li>- TITLE</li> <li>- ORGANISING ENTITY</li> <li>- DATE</li> <li>- PLACE</li> <li>- COURSE AIM</li> <li>- ATTENDEES</li> <li>- COURSE MODALITIES: in presence /online live/ online, asynchronous</li> <li>- SKILLS ACQUIRED AT THE END OF THE MODULE</li> <li>- TEACHING POINT</li> </ul> |
| <b>CAMPUS VESTA</b>                                   | PGDM (Post Graduate Disaster Management) – Module 7                                                              | <ul style="list-style-type: none"> <li>- TITLE</li> <li>- ORGANISING ENTITIES</li> <li>- ATTENDEES</li> <li>- COURSE AIM</li> <li>- COURSE STRUCTURE</li> <li>- MODULE-BY-MODULE BREAKDOWN</li> </ul>                                                                                                                         |

|                                    |                                                                      |                                                                                                                                                                                                                                                                            |
|------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Department of Dortmund</b> | “Training 2 - training cbrn deployment CBRN-E training curricula – “ | <ul style="list-style-type: none"> <li>- TITLE</li> <li>- ORGANISING ENTITY</li> <li>- LANGUAGE</li> <li>- TARGET AUDIENCE</li> <li>- Experts/Non-experts</li> <li>- WORKFORM</li> <li>- LENGTH</li> <li>- OBJECTIVES</li> <li>- CONTEXT</li> <li>- DESCRIPTION</li> </ul> |
|------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The proposed teaching card provides a structured overview of the course, detailing its objectives, organization, and evaluation methods. It begins by identifying the course manager responsible for overseeing the activity, ensuring clarity on the administrative and academic coordination. The official course name is then presented, followed by key information regarding the target audience, duration, and location. Additionally, the general aim of the training is outlined, offering insight into the primary goals and learning expectations.

A fundamental component of the document is the section dedicated to course modules and lecturers, which specifies the different topics covered and the instructors responsible for delivering each module. This ensures transparency in the structure of the training and helps participants understand the scope of the program.

The teaching card also highlights the learning objectives and expected outcomes, covering various dimensions of student development. It addresses knowledge acquisition, the ability to apply theoretical concepts in practical settings, and the development of critical thinking and judgment. Furthermore, communication skills are emphasized as an essential part of the learning process.

Prerequisites for the course are specified to ensure that participants have the necessary background knowledge before enrolling. The teaching program is then outlined, providing an overview of the topics covered throughout the course, including any practical activities designed to reinforce theoretical concepts through hands-on experience.

Evaluation methods are described in the final section, where it is specified whether a final test is required to assess learning outcomes. To support students in their learning process, the course also includes references to adopted texts and training materials. Lastly, the document provides a description of the teaching methods employed, detailing whether the course is delivered through lectures, practical sessions, or other instructional approaches.

This structured yet comprehensive format ensures that participants have a clear understanding of the course content, expectations, and evaluation criteria, facilitating an effective and engaging learning experience.

## Course card

### **COURSE NAME:**

.....

### **COURSE MANAGER RESPONSIBLE FOR COURSE ACTIVITY:**

Name:.....

Surname:.....

### **COURSE INFORMATION:**

Target audience:.....

Duration:.....

Place:.....

General aim of the training:.....

### **COURSE MODULES AND LECTURERS:**

Module name:

Lecturer n.1:....

Lecturer n.2:....

.....

### **LEARNING OBJECTIVES AND EXPECTED LEARNING OUTCOMES/INDICATORS**

LEARNING OUTCOMES: ....

KNOWLEDGE AND UNDERSTANDING: ....

APPLYING KNOWLEDGE AND UNDERSTANDING: .....

MAKING JUDGEMENTS:

COMMUNICATION SKILLS:...

### **PREREQUISITES:**

.....

### **TEACHING PROGRAMME:**

.....

**PRACTICAL ACTIVITIES:**

.....

**DESCRIPTION OF THE METHODS AND CRITERIA FOR VERIFYING LEARNING:**

Final test: if present

**ADOPTED TEXTS:**

.....

**DESCRIPTION OF TRAINING/TEACHING METHODS:****2.2.2 Evaluation form**

The evaluation form has been designed to assess various aspects of the CBRNe courses, gathering feedback from participants on both the organizational structure and the quality of instruction. It begins with a section for personal details, allowing participants to provide their name (optional) and indicate their education level, selecting among secondary school, bachelor's, or master's degree. Additionally, it captures the institutional affiliation, distinguishing between attendees from academic institutions, international or EU projects, first responder services, government bodies, industry, or the military.

The core of the evaluation is structured around a Likert scale<sup>5</sup>, where participants rate different aspects of the course using a four-point scale, eliminating the neutral option to encourage decisive feedback. The questions focus on the efficiency of communication with both organizers and administrators, the clarity and organization of the course, and whether the content was relevant to participants' needs. Additional aspects include the comprehensiveness of the material, the alignment of learning objectives with the advertised content, and whether participants would recommend the course to others. Participants also provide an overall numerical rating for the course on a scale from 1 to 10.

A dedicated section invites attendees to reflect on their expectations for each course module, prompting brief descriptions of what they anticipated from each specific component. This is followed by a section where they assess whether the course met their expectations, again using a Likert scale to rate each module.

The lecturer evaluation section allows participants to review instructors' performance for each session, following the agenda of the course. It assesses whether the lecturer demonstrated subject expertise, spoke clearly, provided engaging and relevant explanations, encouraged

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<sup>5</sup> "A review of Key Likert Scale Development Advances: 1995-2019", 2021 (doi: 10.3389/fpsyg.2021.637547)

interaction and discussion, and effectively managed the Q&A sessions. Participants also evaluate the lecturer's ability to integrate real-life examples, making the content more applicable.

Finally, a free-text section is provided for attendees to suggest areas for improvement, allowing them to highlight missing components or aspects of the course that could be enhanced. This open-ended feedback ensures that course organizers receive qualitative insights alongside quantitative ratings, helping refine future iterations of the course.

Below is the form in its generic version, while two evaluation forms adapted to the needs and content of two selected courses by the task partners are available in the attachments. These include the Post Graduate Disaster Management (PGDM) – Module 7, selected by Campus VESTA, and the Consequence Management Course, selected and already held in November 2024 in Vyškov, at the JCBRND CoE.

## Evaluation form

1. First Name + Name (not compulsory)

|  |  |
|--|--|
|  |  |
|--|--|

2. Education Level (Please Tick box)

|                   |                          |
|-------------------|--------------------------|
| Secondary School  | <input type="checkbox"/> |
| High School – BSc | <input type="checkbox"/> |
| University - MSc  | <input type="checkbox"/> |

3. Attendant for (Please Tick Box)

|                            |                          |
|----------------------------|--------------------------|
| Institution                | <input type="checkbox"/> |
| International / EU project | <input type="checkbox"/> |

4. First Responder Service or Other (Please Tick Box)

|                                |                                     |
|--------------------------------|-------------------------------------|
| <b>First Responder Service</b> |                                     |
| Fire Brigade                   | <input type="checkbox"/>            |
| Police                         | <input type="checkbox"/>            |
| Medical                        | <input type="checkbox"/>            |
| Civil Protection               | <input type="checkbox"/>            |
| Military                       | <input type="checkbox"/>            |
|                                | <input type="checkbox"/>            |
| <b>OTHER</b>                   |                                     |
| Academic                       | <input type="checkbox"/>            |
| Industry                       | <input type="checkbox"/>            |
| Government body                | <input checked="" type="checkbox"/> |

5. CBRNe xxxxxx Course - General – Tick box – Choose the appropriate number according to the following scale (based on the Likert scale)

5 = Excellent or Strongly Agree

4 = Very Good or Agree

3 = Deleted in order to avoid too many “Neutral” ratings

2 = Disagree

1 = Needs Improvement or Strongly Disagree

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                       |  |  |  |  |
|-----------------------------------------------------------------------|--|--|--|--|
| The communication with the organisers of the course went well         |  |  |  |  |
| The communication with the administration went well                   |  |  |  |  |
| The courses were well organised and planned                           |  |  |  |  |
| The content of the course was useful and relevant to my needs         |  |  |  |  |
| The coverage of the course was comprehensive                          |  |  |  |  |
| The learning objectives were consistent with the course as advertised |  |  |  |  |
| I would recommend this course to others to attend                     |  |  |  |  |

6. I give an overall assessment of the CBRNe xxxxxx Course as .../ 10

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|   |   |   |   |   |   |   |   |   |    |

7. CBRNe xxxxxx Course – Expectations (briefly describe your expectations with regard to the subjects specified below)

7.1 CBRNe xxxxxx Course – Module 1 « xxxxxx »

|  |
|--|
|  |
|--|

7.2 CBRNe xxxxxx Course – Module 2 « xxxxxx »

|  |
|--|
|  |
|--|

## 7.3 CBRNe xxxxxx Course – Module 3 « xxxxxx »

## 7.4 CBRNe xxxxxx Course – Module 4 « xxxxxx »

## 7.5 CBRNe xxxxxx Course – Module 5 « xxxxxx »

## 8 CBRNe xxxxxx Course – Tick box in answer to the question “The course met my expectations”

CBRNe xxxxxx Course

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                               |  |  |  |  |
|-----------------------------------------------|--|--|--|--|
| Course Opening                                |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| 7.1 CBRNe xxxxxx Course – Module 1 « xxxxxx » |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| 1. ....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| 7.2 CBRNe xxxxxx Course – Module 2 « xxxxxx » |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| 2. ....                                       |  |  |  |  |

|                                               |  |  |  |  |
|-----------------------------------------------|--|--|--|--|
| - .....                                       |  |  |  |  |
| 7.3 CBRNe xxxxxx Course – Module 3 « xxxxxx » |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| 7.4 CBRNe xxxxxx Course – Module 4 « xxxxxx » |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |
| 7.5 CBRNe xxxxxx Course – Module 5 « xxxxxx » |  |  |  |  |
| - .....                                       |  |  |  |  |
| - .....                                       |  |  |  |  |

8 Lecturer's evaluation (per session – following the agenda of the course) – Add as many tables as there are lectures.

#### Course Opening

xxxx

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

xxxx

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

### 9 Room for improvement

Please indicate/ specify where you see room for improvement in the course components (6.1 -6.9) and/ or whether a component is missing. It is obvious that you can write your comments beyond the dimensions of the box below.

## 3 Conclusions

Task 1.2 of the eNOTICE-2 project has highlighted key areas for improvement and harmonization across different TC. The comparative analysis of selected courses has allowed for the identification of strengths and gap in current trainings, as well as the integration of emerging topics to enhance preparedness and response capabilities.

Key findings include:

- **Integration of Emerging Topics:** The inclusion of cutting-edge topics (e.g. artificial intelligence, robotics and new decontamination techniques) reinforces the relevance of CBRN training. Indeed, the integration of these topics ensures that first responders and training centres remain equipped to deal with evolving threats. The constant recognition of ‘hot’ topics can be an important support tool for the work of CBRN TC.
- **Quality Assurance and Evaluation:** The development of standardized course evaluation tools, including course cards and feedback forms, provides a structured method to assess the effectiveness of training programs. These tools can help ensuring continuous improvement and alignment with best practices.
- **Collaboration and Knowledge Sharing:** Strengthening partnerships between training institutions, first responders, and research entities has proven essential in fostering knowledge exchange and improving CBRN preparedness. The creation of a digital repository for training materials and research findings will further facilitate cross-sector learning.

## 4 Attachments

### 4.1 Evaluation form for PGDM (Post Graduate Disaster Management) – Module 7 (Campus VESTA)

1. First Name + Name (not compulsory)

|  |  |
|--|--|
|  |  |
|--|--|

2. Education Level (Tick box)

|                   |                          |
|-------------------|--------------------------|
| Secondary School  | <input type="checkbox"/> |
| High School – BSc | <input type="checkbox"/> |
| University - MSc  | <input type="checkbox"/> |

3. First Responder Service or Other (Please Tick Box)

| First Responder Service |                          |
|-------------------------|--------------------------|
| Fire Brigade            | <input type="checkbox"/> |
| Police                  | <input type="checkbox"/> |
| Medical                 | <input type="checkbox"/> |
| Civil Protection        | <input type="checkbox"/> |
| Military                | <input type="checkbox"/> |
|                         | <input type="checkbox"/> |
| OTHER                   |                          |
| Academic                | <input type="checkbox"/> |
| Industry                | <input type="checkbox"/> |
| Government body         | <input type="checkbox"/> |

4. CBRNe – Expectations (briefly describe your expectations w.r.t. the subjects specified below)

#### 4.1 Introduction CBRNe

|  |
|--|
|  |
|--|

#### 4.2 Support in case of SEVESO accidents

#### 4.3 Biological incidents

#### 4.4 Nuclear incidents

## 4.5 Transport accidents

|  |
|--|
|  |
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## 4.6 Practical exercises

|  |
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|  |
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## 5. CBRNe – Tick box in answer to the question “The course met my expectations”

CBRNe

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                |  |  |  |  |
|----------------------------------------------------------------|--|--|--|--|
| 4.1 Introduction CBRNe                                         |  |  |  |  |
| - CBRN awareness                                               |  |  |  |  |
| - Communication in the case of CBRN accidents                  |  |  |  |  |
| 4.2 Support in case of SEVESO (chemical) accidents             |  |  |  |  |
| - Source control                                               |  |  |  |  |
| - Safety & security w.r.t. transportation of chemical products |  |  |  |  |
| - Measures in the case of railway accidents                    |  |  |  |  |
| - Pollution of the sewage network                              |  |  |  |  |
| 4.3 Biological incidents                                       |  |  |  |  |
| - Introduction bioterror                                       |  |  |  |  |
| - Powder letter effects                                        |  |  |  |  |
| - Biological terror (historical context, biological weapons)   |  |  |  |  |
| - Infectious diseases                                          |  |  |  |  |
| - Decontamination                                              |  |  |  |  |
| - Police aspects                                               |  |  |  |  |
| 4.4 Nuclear incidents                                          |  |  |  |  |
| - Introduction nuclear and radiological disasters              |  |  |  |  |
| - Fukushima case                                               |  |  |  |  |

|                                                           |  |  |  |  |
|-----------------------------------------------------------|--|--|--|--|
| - Fire Brigade and Civil Protection                       |  |  |  |  |
| - Police aspects in the case of nuclear disasters         |  |  |  |  |
| - Military interventions in the case of explosive threats |  |  |  |  |
| - Explosives: chemistry and technology                    |  |  |  |  |
| - Medical policy in the case of explosions                |  |  |  |  |
| <b>4.5 Transport accidents</b>                            |  |  |  |  |
| - Introduction                                            |  |  |  |  |
| - Railway accidents                                       |  |  |  |  |
| - Traffic accidents                                       |  |  |  |  |
| - Waterway & maritime accidents                           |  |  |  |  |
| - Air transport accidents                                 |  |  |  |  |
| <b>4.6 Practical exercises</b>                            |  |  |  |  |
| - Mol                                                     |  |  |  |  |
| - Dessel                                                  |  |  |  |  |
| - Doel                                                    |  |  |  |  |

## 6. Evaluation per session

**Introduction CBRNe**

Session: CBRN awareness

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
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|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Communications in the case of CBRN accidents

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

**Support in case of SEVESO (chemical) accidents**

Session: Source control

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

D1.2 Review of existing CBRN teaching courses and new training modules (PU)

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Safety and security w.r.t. transportation of chemical products

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Measures in the case of railway accidents

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Pollution of the sewage network

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

**Biological incidents**

Session: Introduction bioterror

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Powder letter effects

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Biological terror (historical context, biological weapons)

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
|---|---|---|---|

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |

|                                                                                                    |  |  |  |  |
|----------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer encouraged questions and interaction with the course participants to facilitate learning. |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                  |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                    |  |  |  |  |
| Overall I would rate the lecturer:                                                                 |  |  |  |  |

Session: Infectious diseases

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
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|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Decontamination

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Police aspects

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |

|                                                                                                    |  |  |  |  |
|----------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer encouraged questions and interaction with the course participants to facilitate learning. |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                  |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                    |  |  |  |  |
| Overall I would rate the lecturer:                                                                 |  |  |  |  |

**Nuclear incidents**

Session: Introduction nuclear and radiological disasters

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Fukushima case

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Fire Brigade and Civil Protection

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Police aspects in the case of nuclear disasters

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Military interventions in the case of explosive threats

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Explosives: chemistry and technology

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Medical policy in the case of explosions

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

**Transport incidents**

Session: Introduction

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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Railway accidents

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Traffic accidents

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|-----------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject              |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest |  |  |  |  |

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Waterway and maritime accidents

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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Session: Air transport accidents

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|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

#### 7. Room for improvement

Please indicate/ specify where you see room for improvement in the course components (6.1 -6.9) and/ or whether a component is missing in Module 7

|  |
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8. Module 7 - General – Tick box – Choose the appropriate number according to the following scale (based on the Likert scale)

5 = Excellent or Strongly Agree

4 = Very Good or Agree

3 = Deleted in order to avoid too many “Neutral” ratings

2 = Disagree

1 = Needs Improvement or Strongly Disagree

|   |   |   |   |
|---|---|---|---|
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|                                                                       |  |  |  |  |
|-----------------------------------------------------------------------|--|--|--|--|
| The communication with the coordinators of Module 7 went well         |  |  |  |  |
| The Communication with the administration of Campus Vesta went well   |  |  |  |  |
| The courses were well organised and planned                           |  |  |  |  |
| Module 7 fits entirely in the PGDM curriculum                         |  |  |  |  |
| The module content was useful and relevant to my needs                |  |  |  |  |
| The module coverage was comprehensive                                 |  |  |  |  |
| The learning objectives were consistent with the module as advertised |  |  |  |  |
| I would recommend this module to others to attend                     |  |  |  |  |

9. Please briefly describe the added value of Module 7 within the PGDM Course

|  |
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## 10. Missed topics

Please indicate/ specify what topics you expected to be dealt with in this module, but were missed.

## 11. I give an overall assessment of Module 7 of the PGDM as .../ 10

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
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## 4.2 Evaluation form for JCBRND CoE Consequence Management Course

Dear attendant of eNOTICE-2 or eNOVATION

We are taking the liberty to contact you with regard to the JCBRN Defence CoE Consequence Management Course of November 24<sup>th</sup>. to November 29<sup>th</sup>.

The reason for this is that:

- One of the objectives of the European project eNOTICE-22 (see: <https://civil-protection-knowledge-network.europa.eu/projects/eNOTICE-2-2#inpage-section-description>), is, amongst other
  - o improvement of the overall preparedness and capability for responding quickly to major cross-border crises involving C, B or RN agents or a mixture thereof;
  - o CBRN decontamination; methodology and development of synthetic operational data (safety/security data sheets – as “Additional Information on Scene);
  - o scenarios and VR/XR demo;
  - o harmonized procedures for decontamination;
  - o pan-EU pre-normative guideline for CBRN decontamination with special emphasis on decontamination of assistive devices for disabled people.

In Work Package 1 of the eNOTICE-2 project is stipulated as one of the tasks: *"To select and review four 'two-hours courses' (taught at UNITOV, VESTA, FDDO and JCBRND COE) dealing with the management of CBRN risks by FR (existing courses on the same topics will be compared; new courses will be built on), with the specific goal of assessing and, if possible, harmonising the content in terms of needs, usefulness and requirements expressed by FR and TCs. To identify the best format for knowledge acquisition, information delivery to trainees, best way to translate theoretical content into practical operational procedures (connection with SDS creation in WP3)"*

In the light thereof your opinion on this on the training/ curriculum of this CBRN Consequence Management Course is highly valuable to us. Hence we would really be grateful if you answered the questions below.

Try to describe as specifically as possible what you liked and which parts could be improved.

This survey can be completed anonymously; and will of course be treated with discretion.

Please also note that a similar survey will be held at the University of Tor Vergata (UNITOV) in Italy, the Fire Department of Dortmund (FDDO) and the NATO accredited Joint Chemical, Biological, Radiological and Nuclear Defence Centre of Excellence (JCBRND CoE) in Vyskov and Campus Vesta for their Postgraduate Course Disaster Management.

Thank you in advance for your cooperation.

1. First Name + Name (not compulsory)

|  |  |
|--|--|
|  |  |
|--|--|

## 2. Education Level (Please Tick box)

|                   |  |
|-------------------|--|
| Secondary School  |  |
| High School – BSc |  |
| University - MSc  |  |

## 3. Attendant for (Please Tick Box)

|            |  |
|------------|--|
| eNOTICE-22 |  |
| eNOVATION  |  |

## 4. First Responder Service or Other (Please Tick Box)

|                                |  |
|--------------------------------|--|
| <b>First Responder Service</b> |  |
| Fire Brigade                   |  |
| Police                         |  |
| Medical                        |  |
| Civil Protection               |  |
| Military                       |  |
|                                |  |
| <b>OTHER</b>                   |  |
| Academic                       |  |
| Industry                       |  |
| Government body                |  |

## 5. CBRN Consequence Management Course - General – Tick box – Choose the appropriate number according to the following scale (based on the Likert scale)

5 = Excellent or Strongly Agree

4 = Very Good or Agree

3 – Deleted in order to avoid too many “Neutral” ratings

2 = Disagree

1 = Needs Improvement or Strongly Disagree

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|                                                                       |  |  |  |  |
|-----------------------------------------------------------------------|--|--|--|--|
| The communication with the organisers of the course went well         |  |  |  |  |
| The Communication with the administration went well                   |  |  |  |  |
| The courses were well organised and planned                           |  |  |  |  |
| The content of the course was useful and relevant to my needs         |  |  |  |  |
| The coverage of the course was comprehensive                          |  |  |  |  |
| The learning objectives were consistent with the course as advertised |  |  |  |  |
| I would recommend this course to others to attend                     |  |  |  |  |

## 6. I give an overall assessment of the Consequence Management Course as .../ 10

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|   |   |   |   |   |   |   |   |   |    |

7. CBRN Consequence Management Course – Expectations (briefly describe your expectations with regard to the subjects specified below)

8.1 CHEM Consequence Management

8.2 RAD Consequence Management

8.3 BIO Consequence Management

8.4 Media Communication

8.5 Syndicate work – Practical exercises

9 CBRN Consequence Management Course – Tick box in answer to the question “The course met my expectations”

CBRN Consequence Management Course

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|                                                                                                                                 |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Course Opening                                                                                                                  |  |  |  |  |
| - Crisis and Consequence Management                                                                                             |  |  |  |  |
| - VTC Crisis and Consequence Management – the EADRCC Perspective                                                                |  |  |  |  |
| - Combined Joint CBRN Task Force in supporting CBRN Incident Consequence Management                                             |  |  |  |  |
| - CIVMIL cooperation between Canadian Army and other agencies                                                                   |  |  |  |  |
| 7.1 CHEM Consequence Management                                                                                                 |  |  |  |  |
| - CBRN Modelling and Simulation Useful Tools for Support of Consequence Management                                              |  |  |  |  |
| - Current Chemical Threats                                                                                                      |  |  |  |  |
| - Characteristics of a Chemical Threat                                                                                          |  |  |  |  |
| - Methods for Consequence Management following a Chemical Incident                                                              |  |  |  |  |
| - Concept of Operations for Consequence Management following a Chemical incident                                                |  |  |  |  |
| - Syndicate work                                                                                                                |  |  |  |  |
| 7.2 RAD Consequence Management                                                                                                  |  |  |  |  |
| - Current Radiological and Nuclear Threats                                                                                      |  |  |  |  |
| - Characteristics of Radiological and Nuclear Incident                                                                          |  |  |  |  |
| - Considerations for Consequence Management following a Radiological and Nuclear Incident                                       |  |  |  |  |
| - Concept of Operations for Consequence Management following a Radiological and Nuclear Incident                                |  |  |  |  |
| - Syndicate work                                                                                                                |  |  |  |  |
| 7.3 BIO Consequence Management                                                                                                  |  |  |  |  |
| - Current Biological Threats                                                                                                    |  |  |  |  |
| - Characteristics of a Biological Incident                                                                                      |  |  |  |  |
| - Considerations for Consequence Management following a Biological Incident                                                     |  |  |  |  |
| - Concept of Operations for Consequence Management following a Biological Incident                                              |  |  |  |  |
| - Emerging Electronic-friendly Decontamination for Sensitive Devices: Principles and Technologies for Microbial Decontamination |  |  |  |  |
| - Syndicate work                                                                                                                |  |  |  |  |
| 7.4 Media Communication                                                                                                         |  |  |  |  |
| - Media Communication in a frame of Consequence Management                                                                      |  |  |  |  |
| - Syndicate work                                                                                                                |  |  |  |  |

Concepts in  
CBRN  
Consequence  
Management

## 10 Lecturer's evaluation (per session – following the agenda of the course)

**Course Opening**

Crisis and Consequence Management

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Concepts in CBRN Consequence Management

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
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| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

VTC Crisis and Consequence Management – the EADRCC Perspective

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
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| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Combined Joint CBRN Task Force in supporting CBRN Incident  
Consequence Management

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|-----------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject              |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest |  |  |  |  |

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

CIVMIL cooperation between Canadian Army and other agencies

|   |   |   |   |
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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

**CHEM Consequence Management**

CBRN Modelling and Simulation Useful Tools for Support of Consequence Management

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| 5 | 4 | 2 | 1 |
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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest                            |  |  |  |  |
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

Current Chemical Threats

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
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|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |

|                                    |  |  |  |  |
|------------------------------------|--|--|--|--|
| Overall I would rate the lecturer: |  |  |  |  |
|------------------------------------|--|--|--|--|

## Characteristics of a Chemical Threat

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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

## Methods for Consequence Management following a Chemical Incident

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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
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| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

## Concept of Operations for Consequence Management following a Chemical incident

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| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
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| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

**RAD Consequence Management**

## Current Radiological and Nuclear Threats

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| 5 | 4 | 2 | 1 |
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|-----------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject              |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest |  |  |  |  |

## D1.2 Review of existing CBRN teaching courses and new training modules (PU)

|                                                                                                        |  |  |  |  |
|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer's course delivery in terms of explaining the concepts and giving real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course participants to facilitate learning.     |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

## Characteristics of Radiological and Nuclear Incident

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                         |  |  |  |  |
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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

## Considerations for Consequence Management following a Radiological and Nuclear Incident

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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

## Concept of Operations for Consequence Management following a Radiological and Nuclear Incident

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| 5 | 4 | 2 | 1 |
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|--------------------------------------------------------------------------------------------------------|--|--|--|--|
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| Lecturer was able to handle the Q&A session well.                                                      |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                     |  |  |  |  |

**BIO Consequence Management**

Current Biological Threats

|   |   |   |   |
|---|---|---|---|
| 5 | 4 | 2 | 1 |
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| Lecturer demonstrated a comprehensive knowledge of the subject                                                                                                                           |  |  |  |  |
| Lecturer spoke clearly and distinctly. Lecturer is able to hold my interest<br>Lecturer's course delivery in terms of explaining the concepts and giving<br>real life examples was good. |  |  |  |  |
| Lecturer encouraged questions and interaction with the course<br>participants to facilitate learning.                                                                                    |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                                                                                                        |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                                                                                                          |  |  |  |  |
| Overall I would rate the lecturer:                                                                                                                                                       |  |  |  |  |

Characteristics of a Biological Incident

|   |   |   |   |
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| 5 | 4 | 2 | 1 |
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| Lecturer demonstrated a comprehensive knowledge of the subject                                                                                                                           |  |  |  |  |
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| Lecturer encouraged questions and interaction with the course<br>participants to facilitate learning.                                                                                    |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                                                                                                        |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                                                                                                          |  |  |  |  |
| Overall I would rate the lecturer:                                                                                                                                                       |  |  |  |  |

Considerations for Consequence Management following a Biological Incident

|   |   |   |   |
|---|---|---|---|
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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Lecturer demonstrated a comprehensive knowledge of the subject                                                                                                                           |  |  |  |  |
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| Lecturer encouraged questions and interaction with the course<br>participants to facilitate learning.                                                                                    |  |  |  |  |
| Lecturer was able to handle the Q&A session well.                                                                                                                                        |  |  |  |  |
| Lecturer's sharing of real experience is useful to my learning.                                                                                                                          |  |  |  |  |
| Overall I would rate the lecturer:                                                                                                                                                       |  |  |  |  |

Concept of Operations for Consequence Management following a Biological Incident

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|-----------------------------------------------------------------------------|--|--|--|--|
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| Lecturer' s sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                      |  |  |  |  |

Emerging Electronic-friendly Decontamination for Sensitive Devices:  
Principles and Technologies for Microbial Decontamination

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|---------------------------------------------------------------------------------------------------------|--|--|--|--|
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| Lecturer' s sharing of real experience is useful to my learning.                                        |  |  |  |  |
| Overall I would rate the lecturer:                                                                      |  |  |  |  |

#### 11 Room for improvement

Please indicate/ specify where you see room for improvement in the course components (6.1 -6.9) and/ or whether a component is missing. It is obvious that you can write your comments beyond the dimensions of the box below.

### 4.3 Hot Topics integration proposal to the Post Graduate Disaster Management – Module 7 “Technological Disasters” (CAMPUS VESTA)

*CAMPUS VESTA: CBRNe Module 7 Integrated course.*

#### **CBRNe (Module 7 Post Graduate Course)**

#### **Hot Topic Items eNOTICE-2 – Based on the Final list of priorities of Delivery 1.1**

|                                                                |                                                                                                                                                                                                                   |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Introduction CBRNe</b>                                    |                                                                                                                                                                                                                   |
| - CBRN awareness                                               | Aspects of CBRN awareness for customs officers can be included                                                                                                                                                    |
|                                                                | For civilian sectors this will need to be evaluated carefully in order not to unnecessarily create unrest.                                                                                                        |
|                                                                | Making use of new technologies if and when available and depending on the cost of acquiring and using them is can be considered.                                                                                  |
| - Communication in the case of CBRN accidents                  | Efficient communication in the case of a mass contamination incident will be dealt with via the National Crisis Center. They have developed their SOP' s and successfully used them during the Covid-19 pandemic. |
| <b>2 Support in case of SEVESO (chemical) accidents</b>        |                                                                                                                                                                                                                   |
| - Source control                                               |                                                                                                                                                                                                                   |
| - Safety & security w.r.t. transportation of chemical products |                                                                                                                                                                                                                   |
| - Measures in the case of railway accidents                    |                                                                                                                                                                                                                   |
| - Pollution of the sewage network                              |                                                                                                                                                                                                                   |
| <b>3 Biological incidents and how to deal with them</b>        |                                                                                                                                                                                                                   |
| - Introduction bioterror                                       | Familiarising FRs in terms of understanding and assessment of biological hazards can be elaborated further.                                                                                                       |
| - Powder letter effects                                        |                                                                                                                                                                                                                   |
| - Biological terror (historical context, biological weapons)   |                                                                                                                                                                                                                   |
| - Infectious diseases                                          |                                                                                                                                                                                                                   |
| - Decontamination                                              | SOP's for mass decontamination and the consequences of mass decontamination (including                                                                                                                            |

|                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|                                                                                                                   | secondary contamination) are to be included in the curriculum. Not only for the “B” component, but just as well for the C and the R component.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| - Police aspects                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>4 Nuclear incidents and how to deal with them</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Introduction nuclear and radiological disasters                                                                 | Part of the Post Graduate Course is the “examination” exercise of the students. The inclusion of a scenario with more of the “B” component of CBRN is to be considered, thereby reflecting about the possible additional training provided by IAEA through workshops.                                                                                                                                                                                                                                                                                                                                                                                                              |
| - Fukushima case                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Fire Brigade and Civil Protection                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Police aspects in the case of nuclear disasters                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Military interventions in the case of explosive threats                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Explosives: chemistry and technology                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Medical policy in the case of explosions                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>5 Transport accidents and how to deal with them</b>                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Introduction                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Railway accidents                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Traffic accidents                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Waterway & maritime accidents                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Air transport accidents                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>6 Practical exercises</b>                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Mol                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Dessel                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - Doel                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Post Graduate Course Module 7 – across different types of accidents (chemical, biological, radiological, nuclear) | <p>CBRN Decision Support new training methods (Augmented and Extended Reality simulation can be taken into consideration.</p> <p>In terms of providing basic training (recognition of symptoms, correct use of PPE, keeping distance and other basic measures), elaboration on these subjects for FR as well as for the population can be taken into consideration.</p> <p>PPE for FRs (early responders): we have noted the need for PPE (amongst which a headset). This is not available for Police. The decision about this is not the Training Centre’ s.</p> <p>If and when PPE are available, training can be provided for. Not necessarily in the Post Graduate Course.</p> |

|  |                                                                                                                                                                                                                                                                                                                                                                                      |
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|  | <p>Biotoxine antidotes: this is dealt with on a national level. Given the sensitive nature of this, the students of the Post Graduate Course receive general information.</p> <p>Emergency Response Guidelines: inter agency guidelines and cooperation between the various command levels of the FRs is a being trained on a regular basis. Also by the Post Graduate Students.</p> |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|