

# ***EUROPEAN SECURITY AND DEFENCE COLLEGE***



## **Course on the Non-Proliferation of Weapons of Mass Destruction and their Delivery Systems**

**(Activity Number 16)**

**- Curriculum -**

***February 2012***

## Background

At the GAERC of December 2008, 8th, the Council adopted “New lines for action by the European Union in combating the proliferation of weapons of mass destruction and their delivery systems”. Among other initiatives to be implemented, the decision identified the need for the establishment of training for European public staff in charge of non-proliferation affairs.

In response to the CONOP and CODUN meetings on 5 and 6 November 2009, where the EU Council secretariat called for a proposal to launch a pilot course on “Non-proliferation of weapons of mass destruction and their delivery systems”, Germany, United Kingdom and France expressed their interest in co-organizing a pilot course within the framework of the European Security and Defence College (ESDC).

The pilot course was conducted from 12-15 October 2010 in Brussels. Evaluations demonstrated that the course was welcomed, and in general, a success. At the CONOP meeting of 16 February 2011, the Member States decided to support establishing a training course on non-proliferation of weapons of mass destruction and their delivery systems within the regular working programme of the ESDC. Based on this recommendation the Steering Committee of the ESDC approved on 15 March 2011 to establish the course.

## Aim

1. To enhance the relevant academic and technical knowledge of EU personnel dealing with non-proliferation issues, to promote the dissemination of a common European administrative non-proliferation culture and to foster a common understanding of non-proliferation issues;
2. To provide EU Institutions and Member States with knowledgeable personnel in the field of non-proliferation, capable of contributing to the planning of EU missions and operations at strategic and operative level;
3. To establish a network of non-proliferation experts.

## General description and Organisation

4. **Starting situation.** The course is intended for civil servants (civilian and military) from EU Member States and EU Institutions who are currently employed in positions involved in non-proliferation issues or are designated to do so in the future. This might include, but is not limited to, participants from different Ministries, such as Foreign Affairs, Defence, Economy, Interior, Research and Finance as well as national agencies in charge of aspects important to the fight against the proliferation of weapons of mass destruction such as nuclear energy, customs and export control agencies. Consideration should be given to the invitation of participants from other international organization such as the UN, the OSCE and the OPCW.

Participants are expected to have a basic knowledge of non-proliferation issues and to have successfully completed the required IDL-modules (Internet-based Distance Learning). To allow for an in-depth discussion of the subject matter, participants will be required to hold an appropriate security clearance.

## 5. **Cognitive Objectives.**

At the end of the IDL module, course members are expected to be able:

- ✓ to summarise the risks and threats posed by the proliferation of WMD and their means of delivery;
- ✓ to describe the main multilateral instruments of the non proliferation regime;
- ✓ to explain the link between risks and multilateral instruments;
- ✓ to describe the basic principles guiding EU policies in the field of non-proliferation and disarmament;
- ✓ to summarize the international and European export control regimes and their inter-linkages in order to build an understanding framework for the residential course and a common basis for debate and analysis.

At the end of the course (IDL and residential phase) participants should be able:

- ✓ to demonstrate a sound knowledge concerning non-proliferation issues of WMD and their means of delivery, as well as of relevant international regimes and instruments;
- ✓ to identify and differentiate international regimes, agreements and instruments covering nuclear, radiological, chemical, biological and missile proliferation issues, and to discuss their relevance to the EU as a whole and to their work in particular;
- ✓ to analyse the role and instruments of the EU with respect to non-proliferation;
- ✓ to assess and discuss the effectiveness of different measures to combat proliferation of WMD and their delivery systems, and to devise the most effective response depending on threat status;
- ✓ to analyse the programmes and technology of proliferating countries;
- ✓ to discuss fundamental cross-cutting issues, such as export controls, transfers of dual-use goods and intangible technology, and the various aspects of intelligence.

## 6. **Affective objectives.**

At the end of the course the participants should:

- ✓ recognize the importance of a common European non-proliferation culture spanning through all EU Member States and all governmental areas with the aim of effectively prohibiting illegal proliferation to state and non-state actors;
- ✓ be able to apply lessons learned from relevant case studies to their day-to-day work on non-proliferation issues and to work out contributions for the further development of non-proliferation policies as well as for their implementation instruments and mechanisms;
- ✓ benefit from a network of European experts.

7. **Duration.** In preparation for the course, participants are required to study the mandatory IDL-modules including the required reading therein. For details see paragraph 9 and Annex 2. The IDL phase is an integral part of the course and will require up to 10-12 hours of study time. The following residential part of the course will last not more than one week.

8. **Methodology.** The residential part of the course comprises of lectures, discussion periods, workshops and working group sessions. A visit to an industrial facility relevant to the production of dual-use goods as well as a cultural visit to promote networking among participants constitutes an integral part of the programme. Lecturers have to be made aware of the knowledge existing and/or acquired through the IDL-phase in order to avoid unnecessary repetitive presentation of basic information. The lectures themselves shall not exceed 30-40 minutes to allow for clarifying questions and lively discussion. In panels, the statements by panellists shall not exceed 15-20 minutes. The workshops are intended to provide specialised and deeper knowledge of individual interest areas. They could also be visited by participants in turn. The course will call on speakers from European institutions, the academic sector and the

private sector from several Member States. The diversity of speakers should enable a comprehensive approach to non-proliferation issues.

## Overall structure

### 9. Internet-based Distance Learning (IDL).Autonomous Knowledge Unit (AKU):

**Mandatory:** AKU 2 (European Security Strategy and its Implementation)

AKU 8 (Non-proliferation of Weapons of Mass Destruction and their Delivery Systems)

**Optional:** AKU 3 (Role of the EU institutions in the filed of CFSP/CSDP)

10. **Module Program.** An indicative programme is provided in Annex 1; the course programme might be adapted according to emerging needs and to national education systems.

### 11. Contents for teaching.

- ✓ The course will focus as a priority on non-proliferation of WMD and their delivery systems, the strategic issues for the EU and its Member States and on concrete means of prevention, detection, surveillance and control.
- ✓ In addition to analysing the programmes and technologies of proliferating countries, the course will address fundamental cross-cutting issues, such as export controls, transfers of dual-use goods and intangible technology, the various aspects of intelligence, etc.
- ✓ The course may include, if possible, visits on relevant sites.

### 12. Materials

See Annex 2

### 13. List of Annexes

- 1 Indicative programme<sup>1</sup>
- 2 Materials

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<sup>1</sup> the actual course programme might be adapted according to emerging needs and to national education systems

**ESDC Training Course on the Non-Proliferation of Weapons of Mass Destruction and their Delivery Systems**

Indicative programme<sup>2</sup>

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
	Opening and framework	Technical Aspects of WMD and their Means of Delivery	Regimes, Mechanisms, and Instruments	Case Studies Practical aspects	Challenges and way ahead
<b>Morning</b>	Arrival of course participants	<p><i>Presentation and discussion</i> <b>Technical and technological aspects of biological and chemical weapons and their means of delivery</b></p> <p><i>Presentation and discussion</i> <b>Technical and technological aspects of nuclear and radiological weapons with a view to proliferation challenges</b></p>	<p><i>Presentation and discussion</i> <b>Political aspects of chemical, Biological, radiological, and nuclear weapons, and their means of delivery</b> (NPT, IAEO, Safeguard Regime, OPCW)</p> <p><i>Panel discussion</i> <b>Regimes relevant to non-proliferation of WMD</b></p> <ul style="list-style-type: none"> <li>○ NPT, UNSCR1540, FMCT, CTBT, HCoC, BTWC, CWC</li> <li>○ Issues, review conferences</li> <li>○ Sanction regimes</li> </ul>	<p><i>Workshop - Case studies</i></p> <ul style="list-style-type: none"> <li>○ Iraq programmes</li> <li>○ Iranian nuclear and missile programmes</li> <li>○ PSI</li> <li>○ WMD terrorist threat</li> </ul> <p><i>Information exchange and discussion of the workshop results</i></p>	<p><i>Panel discussion</i> <b>Challenges for the EU – The way ahead</b></p> <ul style="list-style-type: none"> <li>○ EU WMD Strategy and the New Lines of Action</li> <li>○ Common guidelines for implementing WMD norms</li> <li>○ G8-Global Partnership</li> <li>○ Code of conduct on outer-space activities</li> </ul> <p><i>Course wrap-up</i></p> <ul style="list-style-type: none"> <li>○ Course evaluation</li> <li>○ Handing out of certificates</li> </ul>
<b>Afternoon</b>	<p><b>Opening</b> Welcome by organizers</p> <p><b>Keynote speech</b> “WMD as a global threat from an EU perspective”<sup>3</sup></p> <p><i>Panel discussion:</i> <b>WMD: threat and proliferation</b></p> <ul style="list-style-type: none"> <li>○ WMD threat by state- and non-state actors – actors, motivation, strategies and programmes</li> <li>○ Proliferation of WMD: threat assessment and strategic issues</li> </ul>	<p><i>Presentation and discussion</i> <b>Technical and technological aspects of WMD means of delivery – proliferation challenges of missile technology</b></p> <p><i>Panel discussion</i> <b>Means to counter the WMD threat</b></p> <ul style="list-style-type: none"> <li>○ Technological aspects</li> <li>○ Procedural aspects</li> </ul> <p><i>Presentation</i> <b>Technical possibilities of satellite imagery</b></p>	<p><i>Panel discussion</i> <b>Control mechanisms and instruments</b></p> <ul style="list-style-type: none"> <li>○ MTCR, NSG, PSI, Zangger Committee, Australia Group</li> </ul> <p><i>Presentation and discussion</i> <b>Transfer controls on dual-use goods and technologies</b></p> <ul style="list-style-type: none"> <li>○ Transshipment/interceptions, PSI</li> <li>○ Export control aspects</li> </ul>	<p><i>Visit to relevant sites</i></p> <p>or</p> <p><i>Table-top exercise</i></p>	Departure
	<b>Welcome reception</b>			<b>Optional: course dinner</b>	

<sup>2</sup> Consideration should be given to inviting alumni of previous courses to relevant parts of the course

<sup>3</sup> based on the European Security Strategy and the European Strategy against the proliferation of weapons of mass destruction and their delivery systems

**ESDC Training Course on the Non-proliferation of Weapons of  
Mass Destruction and their Delivery Systems**

**Materials**

<b>Mandatory</b>	
Internet-based Distance Learning	<ul style="list-style-type: none"> <li>▪ AKU 2 and AKU 8</li> </ul>
Reading	<ul style="list-style-type: none"> <li>▪ The European Strategy against the proliferation of WMD <a href="http://register.consilium.europa.eu/pdf/en/03/st15/st15708.en03.pdf">http://register.consilium.europa.eu/pdf/en/03/st15/st15708.en03.pdf</a></li> <li>▪ EU New Lines of Action (European Council, December 2008) <a href="http://register.consilium.europa.eu/pdf/en/10/st17/st17078.en10.pdf">http://register.consilium.europa.eu/pdf/en/10/st17/st17078.en10.pdf</a></li> <li>▪ Note on the implementation of the WMD Clause <a href="http://www.consilium.europa.eu/uedocs/cmsUpload/st05503.en09.pdf">www.consilium.europa.eu/uedocs/cmsUpload/st05503.en09.pdf</a></li> <li>▪ European Council Regulation No. 428/2009 <a href="http://trade.ec.europa.eu/doclib/html/143390.htm">http://trade.ec.europa.eu/doclib/html/143390.htm</a></li> <li>▪ UN Security Council Resolution 1540 (2004) <a href="http://www.un.org/Docs/sc/unsc_resolutions04.html">www.un.org/Docs/sc/unsc_resolutions04.html</a></li> </ul>
<b>Recommended</b>	
Internet-based Distance Learning	<ul style="list-style-type: none"> <li>▪ AKU 3</li> </ul>
Reading	<ul style="list-style-type: none"> <li>▪ Nuclear Non-Proliferation Treaty <a href="http://www.iaea.org/Publications/Documents/Infocircs/Others/infocirc140.pdf">www.iaea.org/Publications/Documents/Infocircs/Others/infocirc140.pdf</a></li> <li>▪ Chemical Weapons Convention (CWC) <a href="http://www.cwc.gov/cwc_treaty_full.html">http://www.cwc.gov/cwc_treaty_full.html</a></li> <li>▪ Missile Technology Control Regime (MTCR) <a href="http://www.mtcr.info/english/guidetext.htm">http://www.mtcr.info/english/guidetext.htm</a></li> <li>▪ The Biological and Toxin Weapons Convention (BTWC) <a href="http://www.opbw.org/convention/documents/btwctext.pdf">http://www.opbw.org/convention/documents/btwctext.pdf</a></li> <li>▪ UN Security Council Resolution No. 1284 (1999) on Iraq <a href="http://www.unhcr.org/refworld/docid/3b00f26ac.html">http://www.unhcr.org/refworld/docid/3b00f26ac.html</a></li> <li>▪ UN Security Council Resolution No. 1441 (2002) on Iraq <a href="http://www.unhcr.org/refworld/docid/3dda0f634.html">http://www.unhcr.org/refworld/docid/3dda0f634.html</a></li> <li>▪ UN Security Council Resolution No. 1737 (2006) on Iran <a href="http://www.unhcr.org/refworld/type,resolution,unsc,irn,45c30c6f0,0.html">http://www.unhcr.org/refworld/type,resolution,unsc,irn,45c30c6f0,0.html</a></li> <li>▪ UN Security Council Resolution No. 1835 (2008) on Iran <a href="http://www.unhcr.org/refworld/type,resolution,unsc,irn,48e47a442,0.html">http://www.unhcr.org/refworld/type,resolution,unsc,irn,48e47a442,0.html</a></li> </ul>

## Background

Reading	<ul style="list-style-type: none"> <li>▪ Albright, David, Hinderstein, Corey: Unraveling the A. Q. Khan and Future Proliferation Networks in: The Washington Quarterly I (2005), p.111-128. <a href="http://www.twq.com/05spring/docs/05spring_albright.pdf">www.twq.com/05spring/docs/05spring_albright.pdf</a></li> <li>▪ Danish Institute for international Studies (DIIS): Missile Proliferation New Challenges and New Threats; Presentation held at the DIIS Conference on Missile Proliferation, Copenhagen, 2007. <a href="http://kms1.isn.ethz.ch/serviceengine/Files/ISN/44649/ipublicationdocument_singledocument/b5aa07cb-7f1c-4132-babd-43dcaae478da/en/jst_mja_isf_missile_proliferation.pdf">http://kms1.isn.ethz.ch/serviceengine/Files/ISN/44649/ipublicationdocument_singledocument/b5aa07cb-7f1c-4132-babd-43dcaae478da/en/jst_mja_isf_missile_proliferation.pdf</a></li> <li>▪ Dunn, Lewis A.: The NPT - Assessing the Past, Building the Future; in: Nonproliferation Review, Vol. 16, No. 2, July 2009. <a href="http://cns.mii.edu/activities/090716_briefing_assessing_npt/">http://cns.mii.edu/activities/090716_briefing_assessing_npt/</a></li> <li>▪ International Crisis Group (ICG) : North Korea's Chemical and Biological Weapons Programs ; ICG Asia Report No.167, 2009. <a href="http://www.crisisgroup.org/en/regions/asia/north-east-asia/north-korea/167-north-koreas-chemical-and-biological-weapons-programs.aspx">www.crisisgroup.org/en/regions/asia/north-east-asia/north-korea/167-north-koreas-chemical-and-biological-weapons-programs.aspx</a></li> <li>▪ Krause, Joachim: Nuclear Proliferation and International Order – The Reform of the Non-Proliferation Regime; paper presented at the conference “Global Security in the 21st Century: Perspectives from China and Europe”, Beijing, 2007. <a href="http://en.iwep.org.cn/download/xiazai2.asp?file_id=334">http://en.iwep.org.cn/download/xiazai2.asp?file_id=334</a></li> <li>▪ Scientists Working Group on Biological and Chemical Weapons : Biological threats: A matter of balance. <a href="http://thebulletin.org/web-edition/op-eds/biological-threats-matter-of-balance">http://thebulletin.org/web-edition/op-eds/biological-threats-matter-of-balance</a></li> <li>▪ Thränert, Oliver: Proliferation and Non-State Actors; Presentation at the 7th International Security Forum Zurich, 2006. <a href="http://www.swp-berlin.org/de/wissenschaftler-detail/profile/oliver-thraenert.html">www.swp-berlin.org/de/wissenschaftler-detail/profile/oliver-thraenert.html</a></li> <li>▪ Ibid.: The new appeal of nuclear energy and the dangers of proliferation; CSS Analysis in Security Policy, 2009. <a href="http://www.isn.ethz.ch/isn/Digital-library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&amp;lng=en&amp;id=103059">www.isn.ethz.ch/isn/Digital-library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&amp;lng=en&amp;id=103059</a></li> <li>▪ Trachsler, Daniel: Economic Sanctions: Silver Bullet or Harmless Dud?; CSS Analysis in Security Policy, 2010. <a href="http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&amp;lng=en&amp;id=124446">www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&amp;lng=en&amp;id=124446</a></li> <li>▪ United States National Strategy to Combat Weapons of Mass Destruction <a href="http://www.state.gov/documents/organization/16092.pdf">www.state.gov/documents/organization/16092.pdf</a></li> </ul>
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