

The Role of the National Nuclear and Radiological Security Support Center from Moldova in Non-Proliferation Education

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INTRODUCTION AND MAIN RESULTS

For over a decade, the National Nuclear Security Support Centre (NNSSC) of the Technical University of Moldova (TUM) has played a key role in the Republic of Moldova in promoting nuclear security, non-proliferation, and the concepts of nuclear disarmament.

The main results are:

- ❑ Developed and introduced into the Master's curriculum two pioneering courses on above mention subjects;
- ❑ Modules are updated every two years, ensuring the program remains aligned with current global trends;
- ❑ By raising awareness among young scholars—future decision-makers, technical experts, and leaders—the NNSSC contributes to shaping a responsible generation committed to nuclear security and disarmament.

DISCLAIMER

The views expressed in this article are those of the authors and do not necessarily reflect the views of the Technical University of Moldova or its affiliates.



Mission and Impact

For over a decade, the National Nuclear Security Support Centre (NNSSC) of the Technical University of Moldova has played a key role in promoting nuclear security, non-proliferation, and the vision of complete nuclear disarmament within the Republic of Moldova.

The NNSSC was founded in 2014 through an agreement between Technical University of Moldova and the Nuclear Regulatory Authority of the Republic of Moldova, with consistent and active support from the Swedish Radiation Safety Authority (SSM).

Since its establishment, the NNSSC has functioned as a platform for education, training, and awareness, fostering a culture of responsibility in nuclear research and applications.

A central mission of the NNSSC is to integrate nuclear security, non-proliferation and disarmament topics into higher education.

The NNSSC believes that education is crucial for achieving the CTBT's objectives and for advancing nuclear disarmament worldwide. By raising awareness among young scholars—future decision-makers, technical experts, and leaders—the Centre contributes to shaping a responsible generation committed to nuclear security and peace.

Educational Contributions & Curriculum Development

Over the years, the Centre's staff have:

- Published three manuals and one guide (in Romanian, also translated into English), addressing themes such as the role of researchers in nuclear disarmament and non-proliferation.
- Delivered numerous presentations at international conferences, bringing visibility to Moldova's academic contributions in the field.
- Developed and introduced into the Master's curriculum two pioneering courses:
 1. Nuclear Security and Cyber Risk
 2. Research, Engineering and Culture of Non-Proliferation

The updated Master's program reflects international priorities on nuclear security, non-proliferation and disarmament, particularly the role of the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Students are introduced also to:

- The CTBT's central role in ending nuclear tests and preventing the development or modernization of nuclear weapons.
- The importance of global cooperation in nuclear arms control, confidence-building measures, and the international verification system.
- The health and environmental consequences of nuclear testing.

Modules are reviewed and updated every two years, ensuring the program remains aligned with global trends. The latest revisions include:

- Nuclear non-proliferation and disarmament strategies
- Cyber risk management in nuclear-related critical infrastructures
- The ethics of research in sensitive scientific fields

