



BELARUSIAN
STATE
UNIVERSITY

Mission and Vision Statements of Belarusian Party in RADIUM project

TATSIANA SAVITSKAYA, IRYNA KIMLENKA, DOMIZIANO MOSTACCI

CHERNE-2019,
June, 2nd -5th, 2019, Portopalo di Capo Pasero, Italy



BELARUSIAN
STATE
UNIVERSITY

Background

At the place of the first Belarusian NPP construction a ceremony of an including of the capsule with the message to the future generations with the assistance of President of Belarus Alexander Lukashenko has taken place 09.08.2012.





BELARUSIAN
STATE
UNIVERSITY

Starting point for NPP site visit





BELARUSIAN
STATE
UNIVERSITY

May, 2015



www.bsu.by



BELARUSIAN
STATE
UNIVERSITY

May, 2018



www.bsu.by

National Program for Training Specialists for Nuclear Energy of the Republic of Belarus for 2008-2020

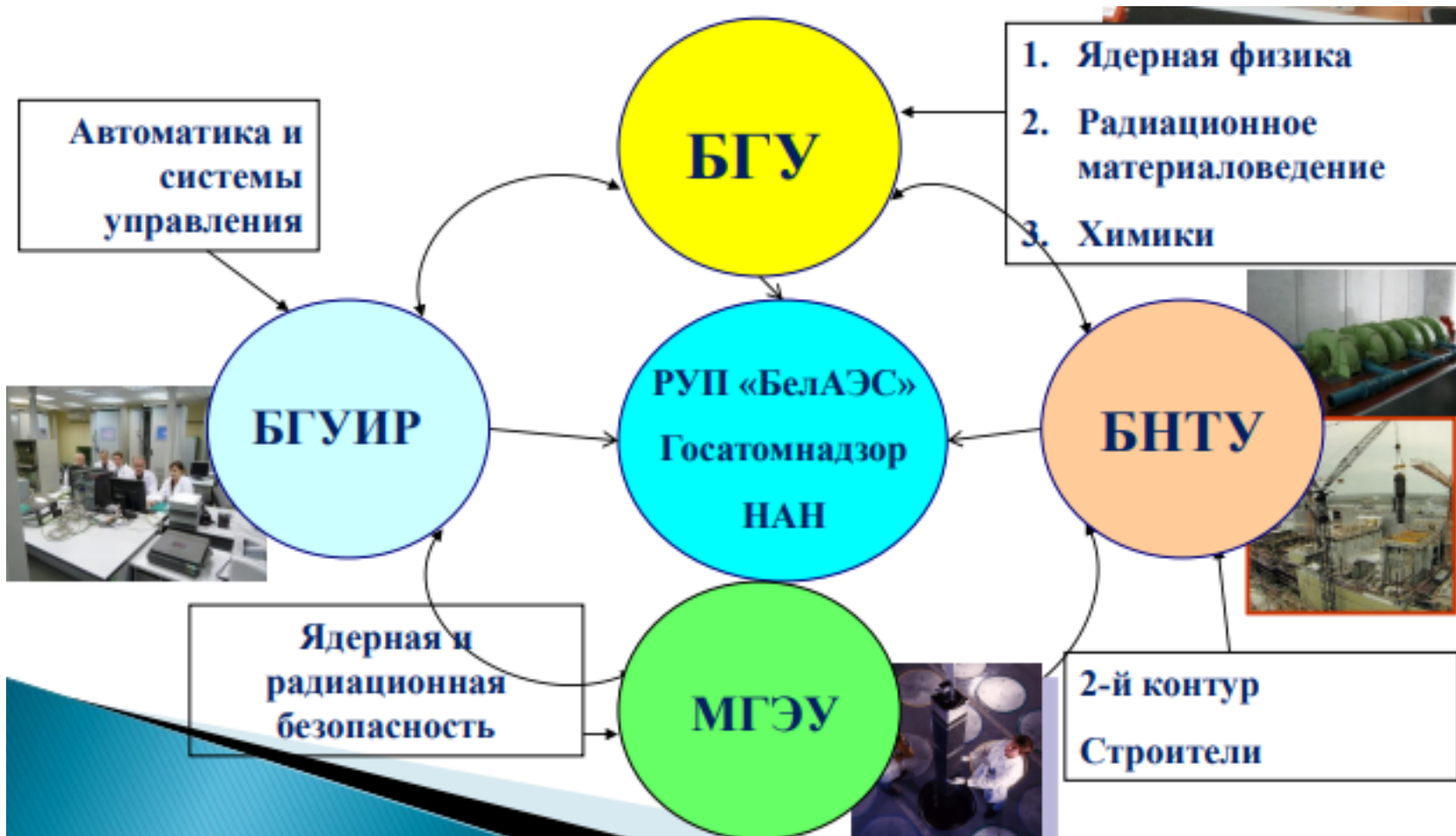


- **BELARUSIAN STATE UNIVERSITY (BSU)**
- **BELARUSIAN STATE UNIVERSITY INFORMATICS AND RADIOELECTRONICS (BSUIR)**
- **BELARUSIAN NATIONAL TECHNICAL UNIVERSITY (BNTU)**

- Maintaining academic process
- Purchasing equipment
- Invitation of lecturers and instructors from abroad
- Students practice at NPPs and leading institutions abroad
- Education and Training of MS and PhD students abroad
- Fellowships and professional training courses for the staff abroad



Belarusian Universities for NPP



- **Faculty of Physics**

- Department of Nuclear Physics
- Department of Solid State Physics (Radiation material science)
- Department of biophysics



- **Faculty of Chemistry**

- Department of radiation chemistry and Chemical technology

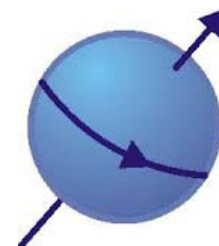


- **International Sakharov Environmental Institute of BSU**

- Chair of Nuclear and Radiation Safety
- Chair of Environmental Medicine and Radiobiology



- Institute of Nuclear Problems
- Institute of Applied Physical Problems
- Institute for Physical and Chemical Problems



1st level of higher education:

- Nuclear Physics and Technologies – 5,5 years (**Faculty of Physics**)
- High Energy Chemistry – 5 years (**Faculty of Chemistry**)
- Nuclear and Radiation Safety – 5 years (**ISEI BSU**)
- Medical Physics – 5 years (**ISEI BSU**)



MS program (1 year):

- Physics (**Faculty of Physics**)
- Chemistry (**Faculty of Chemistry**)
- Medical Physics (**ISEI BSU**)





- **Post-Graduate Educational Course on Radiation Protection and Safety of Radiation Sources** – national re-training course (5,5 months) is conducted by ISEI BSU under IAEA umbrella in co-operation with all relevant national stakeholders
- **17** years of experience
- **165** graduates from **19** countries





BELARUSIAN
STATE
UNIVERSITY

BSUIR

FACULTY OF INFORMATION TECHNOLOGIES AND CONTROL

1st level of higher education:
Specialty “Industrial Electronics”

Specialization “Electronic Systems of Monitoring
and Control at Nuclear Power Plants”

NO MASTER DEGREE IN NUCLEAR AREA





3rd year

- Digital Electronics
- Microprocessor Technique
- Automatic Control Theory
- Converting Technique
- Elements and Devices for Instrumentation and Control System for Nuclear Power Unit
- Techniques and Devices for Registration of Ionising Radiations
- Nuclear Physics and Nuclear Power Reactors

4th year

- Dosimetry and Protection Against Radiations
- Instrumentation and Control System for NPP
- Design of Physical Installations Control System
- Design of Radioelectronics Devices
- Control Systems of Databases
- Control and Safe Operation of Nuclear Power Reactors
- Instrumentation and Control System for NPP
- Management of Nuclear Knowledge
- Heat and Nuclear Power Plants



BELARUSIAN
STATE
UNIVERSITY

BNTU

POWER ENGINEERING FACULTY

1st level of higher education:

Specialty “**Steam Turbine Installation of Nuclear Power Plants**”

NO MASTER DEGREE IN NUCLEAR AREA



Education and Training of MS and PhD students:

- **Moscow State University**
- **Saint-Petersburg State University**
- **National Research Nuclear Institute “MePhi”**



**Key Action 2. Capacity building
in the field of higher education**

National priorities

**Engineering
Environment**



**Title: EU best practices-based education in Radiation
Protection and Nuclear Safety Culture for the
Belarusian Academia / RADIUM**

MINSK

- Belarusian State University (BSU)
- Belarusian State University of Informatics and Radioelectronics (BSUIR)

GOMEL

- Francisk Skorina Gomel State University (GSU)

GRODNO

- Yanka Kupala State University of Grodno (YKSUG)

VITEBSK REGION

- Polotsk State University (PSU)

BREST REGION

- Polesky State University (PolesSU)

| | | | |
|---|-------------------------|---------------------------------------|---|
| ATOMTECH | Nuclear industry | Host trainee | Advice in development of curriculum. Offer traineeships. Advise in equipment acquisition |
| Ministry of Education of Belarus | Public body | Accreditation of Master course | Collaborate on accreditation |
| ConstFlash Brand "AR.TEAM" | IT company | IT support | Development of educational multimedia programs, virtual reality |

Scientific and Production Unitary Enterprise **ATOMTECH** is a leading research and production center of the Republic of Belarus and one of the world leaders in the development and production of equipment for nuclear measurements and radiation monitoring.

Director of ATOMTECH Valery Kozhemyakin represents ATOMTECH activity to students



Module “Nuclear Physics and Chemistry” - 7 subjects: Nuclear Physics (6), Nuclear and Radiochemistry (6), Water issues at NPPs (3), Nuclear reactors and Nuclear Materials (3), Radiometry and Dozimetry (6), Nuclear Fuel Cycle and Radioactive Waste Management (3), Green technologies in nuclear industry (3).

Module “Radiation Safety” – 5 subjects: Biological Effects of Ionizing Radiation (3), Environmental Monitoring (3), Non-power nuclear applications (3), Radiation protection and the Safety of Radiation Sources (6), Nuclear Medicine for Human Health (6).

Module “Nuclear Safety Culture” - 5 subjects: Nuclear energy: towards sustainable development (3), Performance measures and learning from accidents (3), Nuclear Knowledge Management (3), Nuclear Hazards and Risk Assessment Analysis (6), Safety Culture (6).

Belarusian State University of Informatics and Radioelectronics was **founded in 1964** and today is a large national research and educational center possessing great workforce, scientific and training capacities, up-to-date laboratory equipment and extensive infrastructure.

Students – 3327;
BS programs-17;
MS programs -12





Module “Nuclear Safety Culture”

Management of Nuclear Knowledge (2)

Module “Nuclear Physics and Chemistry”

Radiation Control and Health Physics (5),
Elements and Equipment of Information Control
Systems of Physical Installations (8)



Grodno State University named after Yanka Kupala **was founded in 1940**. It is the largest regional higher education institution in the Republic of Belarus, university complex integrating all levels of education.

Students – 11000;
BS programs-42;
MS programs -21.





Module “Nuclear Safety Culture”

Performance measures and learning from accidents (3)

Module “Nuclear Physics and Chemistry”

Nuclear Physics (6), Nuclear reactors and Nuclear Materials (3), Radiometry and Dozimetry (6)

Module “Radiation Safety”

Biological Effects of Ionizing Radiation (3)

Gomel State University named after F. Skarina **was founded in 1930** and today occupies the fifth position among Belarusian ones.

Students – 9512;
BS programs-42;
MS programs -21.



Module “Nuclear Safety Culture”

Safety Culture (6)

Module “Nuclear Physics and Chemistry”

Nuclear Physics (6), Radiometry and Dosimetry (6)

Module “Radiation Safety”

Biological Effects of Ionizing Radiation (3),

Environmental Monitoring (3),

Radiation protection and the Safety of Radiation Sources (6)

POLESSU: GENERAL INFORMATION

Polessky State University is up-to-date University of innovative type **founded in 2006** and located in the heart of the Polesye region in the Republic of Belarus. PolesSU is a classical-type university and consists of 5 faculties including 13 training, scientific and industrial research laboratories.

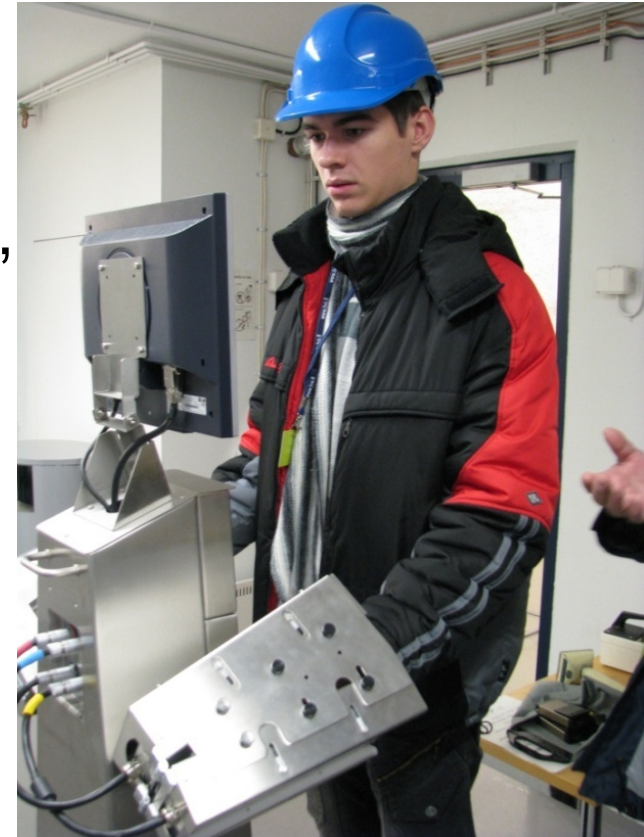
Students – 3327;
BS programs -17;
MS programs -12





Module “Radiation Safety”

Biological Effects of Ionizing Radiation (3),
Environmental Monitoring (3),
Non-power nuclear applications (3),
Radiation protection and the Safety of
Radiation Sources (6),
Nuclear Medicine for Human Health (6)



Polotsk State University **was founded in 1993**, one of the top 10 universities in Belarus in research, innovations and internationalization.

Students – more than 10000;
BS programs- 47;
MS programs – 22 (classic),
4 – practically-oriented
2 – with double diploma.





Module “Nuclear Physics and Chemistry”

Nuclear Physics (6), Radiometry and Dosimetry (6), Green technologies in nuclear industry (3).

Module “Radiation Safety”

Non-power nuclear applications (3),
Radiation protection and the Safety of Radiation Sources (6)

Module “Nuclear Safety Culture”

Nuclear energy: towards sustainable development (3),
Performance measures and learning from accidents (3),
Nuclear Knowledge Management (3),
Nuclear Hazards and Risk Assessment Analysis (6),
Safety Culture (6)



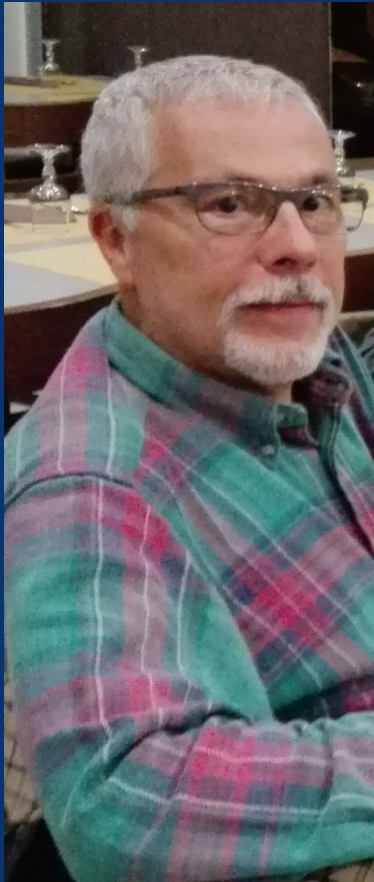
BELARUSIAN
STATE
UNIVERSITY

THANK YOU FOR YOUR ATTENTION





BELARUSIAN
STATE
UNIVERSITY



**Domiziano,
the floor is yours!**