**ANNOTATION**

of educational program

**03.03.02 Physics**

**Training profile: Medical Physics**

**Program Name**: 03.03.02 Physics, educational program Medical Physics.

**Objectives**: training for high-tech medical centers in the field of radiation diagnosis, radiotherapy and radioisotope diagnosis.

**Terms of training** in full-time education are 4 years (bachelor).

**Graduate Department**: Department of General and Medical Physics.

**The area of professional activity**: research, development and technology aimed at obtaining and evaluation of medical diagnostic imaging, design, experimental research and the introduction of instruments and methods of nuclear medicine, automated image processing systems, image recognition.

Graduates are required to work in the Federal High-Tech Medical Radiology Center of Dimitrovgrad and many leading medical centers of the country. Training in this educational program is planned for the program “Training for Centers of Nuclear Medicine at 2011-2016”.

**Objects of professional activity**: sophisticated high-tech computerized medical systems used in modern clinical and diagnostic practice for effective diagnosis and treatment of various human diseases, including cancer. Graduates of this area will be focused on carrying out the individual steps of preparation of complex high-tech medical systems and devices for operation, programming and calculation algorithms of diagnostic and therapeutic procedures.

**Features of the curriculum**: humanitarian unit of disciplines (philosophy, history, foreign language), science module (mathematical analysis, differential equations, integral equations and the calculus of variations, general physics), general professional module (life safety, computational physics), professional module (the basics of continuum mechanics, thermodynamics, medical electronics, biology basics, tomographic methods in medicine, etc.). A large amount of instructional time allotted to the research work and practice that will help develop work skills on the modern equipment and the equipment, skills, practical application of physics methods to solve practical problems in the field of radiation diagnosis and therapy, radionuclide diagnostics in medicine.

**The list of enterprises for practical training and employment of graduates**: the research work of students is held in the 6th- 7th semesters; the Teaching Practice is conducted in the 7th semester; the Production Practice is conducted in the 8th semester; Pre-diploma Practice - in the 8thsemester.

The list of enterprises for practical training includes the Federal High-Tech Medical Radiology Center of Dimitrovgrad,Federal State Health Institution "Clinical Hospital №172 of the Federal Medical and Biomedical Agency"of Russia and the country's leading medical centers.