REVIEW

for an educational and professional program
"Energy efficiency microelectronics and electronic protection"
second (master's) level of higher education
by specialty 176 – Micro- and nanosystem engineering
of the field of knowledge 17 – Electronics, automation and electronic communications

In modern science and industry education it is important for students to understand the physical foundations and principles in the development and application of new materials, and micro- and nanoelectronic systems for electronics, solar energy, and electronic protection of modern radio-electronic systems.

The high relevance of this educational program is due to the fact that it has at its core a novel physcs-based approach to providing students with knowledge in the field of solar energy and electronic protection.

An important feature is a clearly expressed opportunity for the students to focus on acquiring knowledge in the field of solar energy with an emphasis on the development of the latest energy conversion and storage solutions or on acquiring skills in the development of modern elements of electronic protection of devices against electromagnetic radiation of natural or artificial origin.

It should also be noted that despite the chosen focus, students will be receiving broad knowledge, primarily in modern materials science. This is very important because it ensures the training of highly qualified specialists who will be able to apply themselves both in industry and academia for instance through subsequent PhD-level training.

The principal investigator has extensive experience in the implementation of international scientific and educational projects in the field of renewable energy and in the development of means of electronic protection of radio-electronic equipment. This background will be instrumental for the highest-quality practical training which will include direct involvement into modern scientific projects, using state of the art equipment and the possibility of international cooperation within the framework of academic mobility.

I was pleased to see that great emphasis is placed on the theoretical component. Among the disciplines there are those that provide an understanding of the principles of operation of modern microelectronic devices and new physical principles on the basis of which nanoelectronic devices are developed. This is an important mix.

The educational program also has a clear social and humanitarian orientation, since the implementation of the principles of distributed generation is currently extremely relevant for Ukraine and the world, and the ensuring of electronic protection of numerous systems and devices is important both from a purely technical and social point of view.

The above is evidence of the high relevance of the considered educational program and the need for students who master it.

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