

FUNDAMENTALS OF ECOLOGICAL AND ENERGY SUSTAINABILITY OF PRODUCTION

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-54 01 02 – Methods and devices of quality control and diagnostics of the state of objects

	Form of higher education
	Full-time (daytime)
Course	4
Semester	7
Lectures, hours	34
Laboratory classes, hours	16
Credit, semester	7
Classroom hours in the academic discipline	50
Independent work, hours	58
Total hours in the academic discipline / credit units	108 / 3

1. Summary of the discipline. Ecological and energy representation of sustainable development. Reducing the impact on the environment when using modern cleaner technologies. Modern principles of nature management to solve environmental and resource-saving problems, solving problems of efficient use of fuel and energy resources based on world experience and state policy of the Republic of Belarus in the field of energy saving.

2. Learning outcomes :

know: features of the interaction

of production and the natural environment; environmental problems arising from production; methods of environmental management in order to organize sustainable production; the main directions of state policy in the field of energy saving; methods of production, transport and consumption of heat and electrical energy; environmental and economic problems of energy and the main ways to solve them; **be able to** : justify the choice of methods to reduce the impact on the environment; use regulatory and legal documents in the field of environmental protection; implement a systematic approach to the organization of energy efficiency, evaluate technological processes and devices in terms of their energy efficiency; use heat and electricity meters; use the main methods of energy saving and energy efficiency;

own: analysis of environmental quality criteria; methods for determining the state of the environment; methods for determining energy saving and energy efficiency of production.

3. Formed competencies: BOD-19 "Own the main methods of resource and energy saving, the ability to assess the environmental consequences of product sales and the implementation of production processes"

4. Requirements and forms of current and intermediate certification: credit (oral-written form). For admission to the test, the student should successfully complete two test works, one per module of the academic semester, as well as perform and defend all laboratory work.