

BASIS OF ENVIRONMENTAL AND ENERGY SUSTAINABILITY OF PRODUCTION

(course title)

COURSE SYLLABUS ABSTRACT

Specialty 1 - 37 01 06 Technical operation of vehicles (by directions)

	STUDY MODE		
	full-time	part-time	Part-time (shortened program)
Year	2	3	2
Semester	4	5	4
Lectures, hours	34	8	8
Laboratory classes, hours	16	4	4
Pass/fail, semester	4	5	4
Classroom hours per academic discipline	50	12	12
Contact hours	58	86	86
Total course duration in hours / credit units	108 / 3		

1. Course outline

The discipline "Fundamentals of environmental and energy sustainability of production" is aimed at the formation of environmental and energy ideas of sustainable development among future professionals, the assimilation of theoretical knowledge and practical skills to reduce the impact on the environment when using modern cleaner technologies.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- patterns of functioning of natural ecosystems and the biosphere;
- features of interaction between production and the environment;
- environmental problems resulting from production (environmental pollution and depletion of natural resources);

- methods of environmental management in order to reduce the anthropogenic impact and organize sustainable production;

- the main directions of the state policy in the field of energy saving;

methods of production, transport and consumption of thermal and electrical energy, as well as the main ways to improve their efficiency;

- environmental and economic problems of energy and the main ways to solve them;

be able to:

- assess the level and consequences of environmental pollution and depletion of natural resources;
- predict the consequences of anthropogenic load on the environment;
- justify the choice of methods to reduce environmental impact;
- use 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 metering, control and regulation of thermal and electrical energy;
- introduce modern information technologies into practice, form and use databases of energy-efficient

technological processes, units and devices;

- use and promote 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. Competencies

BOD-10 - Ensure, within its competence, environmental and energy safety of production processes, healthy and safe working conditions, protection of production personnel and the public from possible consequences of accidents and disasters.

4. Requirements and forms of midcourse evaluation and summative assessment

- protection of laboratory works.