

## **Course description "Machines and devices for processing of mineral raw materials"**

In the course of "Machinery and equipment for processing of mineral raw materials" the classification of crushing processes and types of main industrial crushers are considered. In chemical technology the crushing of materials is of great importance because it opens the ore, divides target substance from waste and increases the surface of contact phases.

Classification is one of the important processes at ore enrichment. Types of enrichment depending on the medium that is used to divide the minerals are:

- 1) wet gravity enrichment (in water);
- 2) gravity enrichment in heavy media in which separation of minerals occurs in the medium of high specific gravity;
- 3) air or pneumatic gravity enrichment (in air).

In the course the special attention is paid to the designs, principles of action, areas of application, and methods of calculation of chemical machines and devices designed for crushing of minerals.

As a result of the development of the course a student must:

- know the basic design of machines for preparation and processing of mineral raw materials and the basis of their calculation;
- be able to use previous knowledge in the material and thermal calculations of machines and devices for processing of mineral raw materials;
- analyze the technological and equipment design of processes of mineral processing;
- be able to use previous knowledge in the material and the thermal calculation of machines and devices for processing of mineral raw materials;
- possess the experience of working and use in the training the scientific and technical information, of Internet-resources, search resources, etc. in the field of mineral processing.