

РОЛЬ І МІСЦЕ ДИСЦИПЛІН «ОХОРОНА ПРАЦІ», «ОСНОВИ ОХОРОНИ ПРАЦІ», «ОХОРОНА ПРАЦІ В ГАЛУЗІ» В СИСТЕМІ ПІДГОТОВКИ ФАХІВЦІВ ПРИРОДНИЧОГО, ІНЖЕНЕРНО-ПЕДАГОГІЧНОГО ТА ТЕХНОЛОГІЧНОГО НАПРЯМКІВ

INDUSTRIAL ENVIRONMENT AND ITS IMPACT ON MAN AND EFFICIENCY

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A man devotes a significant part of his life to work, which is the main activity, for being connected to socially useful products – material and ideal.

Labour as the process commonly covering three components: the labour itself as viable activity, labour object, labour instruments.

The content of labour comes from industrial technique, technology, organization and environment. That is according to the level of society productive forces development.

It is worth knowing that the industrial environment is an environment where a person carries out his labour activity. It includes a set of enterprises, organizations, institutions, means of transport, communications, etc. The industrial environment is primarily characterized by the parameters that are specific to each production and determined by its purpose.

Industrial environment conditions provide certain labour tension of a worker.

Differences in the tension of certain physiological systems are caused by various factors and their combinations. There are such factors as labour intensity, process factors and working conditions.

Labour intensity factors are determined by the peculiarities of labour process and production environment conditions.

Labour process factors determine the load on muscular and nervous systems, the ratio between dynamic and static loads, rhythm and tempo, the amount of information that is received and processed, working posture and variability of work labour change.

Working conditions factors include a certain set of sanitary-hygienic, psychological and aesthetic elements of the working environment that affect the worker during the day.

There are the following main factors of the production environment, affecting human efficiency in the production process:

- physical effort;
- emotional stress;
- working posture;
- temperature, humidity, thermal radiation in the working area, air pollution, production noise, vibration, rotation, shock, illumination in the working area.

An industrial hazard is an industrial factor, the effect of which, under certain conditions, can lead to injuries or other sudden worker's health deterioration.

An industrial injury is a human body damage caused by the influence of environmental factors. Depending on the type of traumatic factor, one can distinguish mechanical, thermal, chemical, electric, mental and combined injuries. Injuries can also be industrial and home ones.

Vocational illness is a pathological condition of a person caused by work and is associated with excessive organism tension or unfavourable industrial health hazard influence.

All these factors affect the health and efficiency of a person. Therefore, a comprehensive assessment of production environment factors and work nature is required.

Labour protection can be ensured only with the all-round consideration of human capabilities in the labour process. Ergonomics plays an essential role in the correct resolution of these tasks. Ergonomics studies the problems of optimal distribution and coordination of functions between men and machine, determines the best requirements for means and conditions of activity.

The interaction of man and technology in the production system (the system of man-machine-production environment) should be considered during the design and creation of safe working conditions, the solution of optimization problems. This is the subject of ergonomics. In the period of widespread use of new technology in all sectors of the national economy, the problem of optimizing the relationship between man, machine and production environment has become one of the main ones.

In specific studies, labour protection as a science is based on such general scientific approaches: comprehensiveness, consistency and personal humanism, scientific research and practice of labour activity organization unity, taking into account the human factor.

An integrated approach to labour protection involves considering organizational, economic, social, psychological, technical, legal and other aspects of management as a whole.

So, we can conclude that systematic approach reflects the interrelation between individual aspects of labour protection and is expressed in the development of the ultimate goal, determining the ways to achieve it, and establishing an appropriate management mechanism that provides comprehensive planning, organization and promotion of work on labour protection safety.