



СИЛАБУС ДИСЦИПЛІНИ «Radiation Hygiene»

Ступінь вищої освіти - Master
Спеціальність – 101 «Ecology»
Освітня програма « Ecology and Environmental Protection»
Рік навчання - 2-nd, семестр 1-st
Форма навчання - full-time education
Кількість кредитів ЄКТС - 4
Мова викладання - English

– Лектор курсу
Контактна інформація
лектора (e-mail)
Сторінка курсу в eLearn

Ph.D., senior lecturer Volodymyr Illienko
illienkovv@gmail.com

<https://elearn.nubip.edu.ua/course/view.php?id=4580>

COURSE DESCRIPTION

The purpose of teaching the discipline "Radiation Hygiene" is the formation of knowledge about the peculiarities of the environment formation with a complex of unfavorable factors for the population (environmental, sanitary, hygienic, economic, economic and social) arising as a result of radiation accidents.

The task is to provide opportunities for using the acquired knowledge and skills for the development of recommendations, decision-making, long-term planning of countermeasures in the event of radiation accidents and territory radioactive contamination by radioactive isotopes, as well as for master's thesis.

The student should know the peculiarities of protecting a person from sources of external and internal irradiation while living on contaminated radionuclide territories (obtaining agricultural products that meet the requirements of PL-2006, reducing the equivalent dose of internal irradiation, the feasibility of countermeasures), possible solutions to socio-economic problems and rehabilitation of the territories affected by radionuclide contamination.

STRUCTURE OF COARSE

Topic	Hours (lectures/ practical works)	Results of study	Task	Evaluation
Module 1. Biological regulation of ionizing radiation and the basis of radiation hygiene				
Topic 1. Basic principles of biological regulation of ionizing radiation	2/4	The limitless concept of the ionizing radiation action on the human body. The concept of acceptable risk. The principle of not exceeding, optimizing and justifying. Categories of exposed persons and their regulation. Permissible levels and temporarily permissible levels of radionuclide content in food.	Delivery of practical work №1.	10 point

Topic 2. Basic sanitary rules of radiation protection	2/4	Population in the conditions of radiation accidents. Radiation and hygiene regulations. Radiotoxicity groups of radioactive isotopes. Principles of protection against closed and open sources of ionizing radiation. Rationing of radionuclide content in agricultural products.	Delivery of practical work №2.	10
Topic 3. The basic documents of radiation safety standards regulation	2/2	Activities of the International Commission on Radiation Protection (ICRP) and the National Commission for Radiation Protection of Ukraine (NCRP). "The principle of optimizing ALARA". Norms of radiation safety of Ukraine. Law of Ukraine "On the Use of Nuclear Energy and Radiation Safety"	Delivery of practical work №3.	10
Total module 1				30
Module 2. Population in the close and remote period after a radiation accident				
Topic 4. Combined action of hygiene and social factors caused by the consequences of the accident	2/4	Significance of social and psychogenic factors against the background of the radiation factor. The quality of information provision, management decisions and mechanisms for their implementation in the implantation of anti-radiation measures. Features of social and physical well-being, mental state of different groups of the population.	Delivery of practical work №4.	10
Topic 5. System approach to public health research at radiation accidents	2/6	Level and dynamics of population morbidity in radionuclide contaminated territories. Features of the subjective perception of the situation and the level of socio-psychological stress. Hygienic and social approaches to preventive measures for the preservation of public health. Population in the	Delivery of practical work №5.	20

		event of Chernobyl disaster and Fukushima -1 nuclear power plant accident.		
Total module 2				30
Additional points				10
Total for the semester				70
Exam				30
Total for the course				100

EVALUATION POLICY

<i>Deadline and recompilation policy:</i>	Works that are submitted in violation of the deadlines for more than a week without good reason are evaluated at a lower score (maximum - 20% of the maximum). Rearrangement of modules takes place with the permission of the lecturer if there are good reasons (for example, hospital or family problems).
<i>Academic Integrity Policy:</i>	Writing while writing modular test papers and the final exam is prohibited. The use of mobile devices during these periods is also prohibited.
<i>Visiting policy:</i>	Attendance is mandatory. For objective reasons (for example, illness, international internship) training can take place individually (in online form in consultation with the dean of the faculty). In case of violations and abuses (non-attendance more than 50% of the time - non-admission to the exam)

STUDENT EVALUATION SCALE

Rating of the applicant of higher education, points	The assessment is national for the results of examinations	
	exams	offsets
90-100	perfectly	credited
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	not credited