Module title:	Response to public health related disasters	ECTS	2
Polish translation:	Ochrona zdrowia publicznego w stanach zagrożeń		
Course:	**Veterinary Medicine**		

Module language: English		Stage: JM-FVM	
Form of studies: ■ intramural ☐ extramural	Type of module: ☐ basic ■ directional ■ mandatory ☐ elective	Semester: 6	☐ winter semester ☐ summer semester
Academic year:	**Intake 2022 /2023**	Catalogue number:	**FVM-V-JMSS-065-D53_22**

Module coordinator:	**Dr Michał Tracz**
Teachers responsible for the module:	**Academic teachers of the Institute of Veterinary Medicine; Department of Food hygiene and Public Health Protection; PhD students in accordance to the internal legal acts; visiting professors; other specialists in the field of study**
Objectives of the module:	The veterinary profession is linked to public health protection. As part of public safety, public health is exposed to many risks. The consequence of these risks can be loss of health and life among humans and animals, as well as loss of property and damage to the environment. Multidisciplinary teams are required to prepare, prevent, respond and recover. During the course, students will gain knowledge about different types of threats to public health of a natural and intentional nature, about methods of responding in the presence of threats, preparing for the occurrence of threats, preventing threats and recovery after the occurrence of threats. In addition, the course participants will become familiar with the basic administrative structure involved in the implementation of public safety tasks. Lectures: • Biological threats 6h • Chemical threats and hazard notification and communication systems 3h • Radiation threats 6h Exercise: • Introduction to disasters and natural disasters, preparation, prevention, counteraction and reconstruction 5h • Epidemiological investigation in a food-borne outbreak 4h • Epidemiological investigation of the use of biological weapons, criteria for epidemiological analysis during a biological attack simulation. 2h • Radiological protection - doses, rules for measuring doses, methods of protection against ionising radiation 4h
Teaching forms, number of hours:	a) Lectures; hours 15. b) Laboratory classes; hours 15;
Teaching methods:	- The lectures are conducted using audio-visual means and remote communication (original multimedia presentations, video/audio, Moodle/Teams/eduportal.pl platforms). - Exercises include students' own work with source texts, electronic systems, individual work and in groups chosen and/or determined by the teacher, concerning the analysis and interpretation of source texts, problem solving, discussion, case study using audio-visual means and remote communication (Moodle/Teams/eduportal.pl platform).. - Consultation for students 1h/week. Detailed schedule will be defined by the coordinator of the course at the beginning of semester. Detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester.
Formal prerequisites and initial requirements:	Clinical and laboratory diagnostics, parasitology and invasiology, pathophysiology, Veterinary pharmacology 1 Pathomorphology 1

Learning effects		Course outcomes:	Learning outcomes relative to the course outcomes	Impact on the course outcomes*
Knowledge:	1	He/she knows the principles of protection of human and animal health from intentional and natural threats to public health	A.W.11, B.W.8 A.W.13, B.W.9, C.W.2	1 2
	2	He/she is familiar with the effects of ABC type contamination of the feed, animal and food, environment.	A.W.11 A.W.13, A.W.21	3 2
		He/she knows the role and rules of conduct of veterinary administration in crisis situations.	B.W.8, C.W.2 B.W.9,	2 1
Skills:	1	knows how to plan and prepare to respond to a public health emergency.	A.U.1, A.U.2, A.U.10, A.U.13, C.U.4 B.U.20	1 3 2

<table>
<tr><td></td><td></td><td></td><td>A.U.12, A.U.19,
A.U.23</td><td></td></tr>
<tr><td></td><td>2</td><td>knows how to properly responds in crisis situations</td><td>A.U.1, A.U.13,
A.U.12, C.U.4</td><td>1
2</td></tr>
<tr><td></td><td></td><td>knows how to conducts an epidemiological investigation</td><td>A.U.10,
B.U.8, B.U.20
A.U.15, B.U.19,</td><td>1
2
3</td></tr>
<tr><td></td><td></td><td>knows how to assess the exposure to ionising radiation</td><td>A.U.1,
A.U.2, B.U.18</td><td>2
3</td></tr>
<tr><td></td><td></td><td>knows how to distinguishes between types of threats to public health</td><td>A.U.1, B.U.22
B.U.23, B.U.25
A.U.10, B.U.8,</td><td>3
2
1</td></tr>
<tr><td rowspan="7">Competences:</td><td>1</td><td>He/she is prepared to cooperate with other public health professionals</td><td>KS.1, KS.3, KS.9</td><td>2</td></tr>
<tr><td></td><td>He/she is ready to search for current sources of knowledge and continuing education</td><td>KS.4
KS.8</td><td>3
2</td></tr>
<tr><td></td><td>He/she is ready to critically assess your knowledge of public health threats</td><td>KS.1
KS.4, KS.8
KS.9</td><td>2
3
1</td></tr>
<tr><td>2</td><td>He/she is prepared to work in a team</td><td>KS.1, KS.3, KS.9</td><td>2</td></tr>
<tr><td></td><td>He/she is ready to demonstrate responsibility for decisions made towards people, animals and the environment</td><td>KS.1
KS.4
KS.9</td><td>3
2
1</td></tr>
<tr><td></td><td>He/she is ready to present an attitude in accordance with ethical principles and the rule of law</td><td>KS.1</td><td>2</td></tr>
<tr><td colspan="2">Objectives of the module required to obtain learning effects:</td><td colspan="3">The veterinary profession is linked to public health protection. As part of public safety, public health is exposed to many risks. The consequence of these risks can be loss of health and life among humans and animals, as well as loss of property and damage to the environment. Multidisciplinary teams are required to prepare, prevent, respond and recover. During the course, students will gain knowledge about different types of threats to public health of a natural and intentional nature, about methods of responding in the presence of threats, preparing for the occurrence of threats, preventing threats and recovery after the occurrence of threats. In addition, the course participants will become familiar with the basic administrative structure involved in the implementation of public safety tasks.</td></tr>
<tr><td colspan="2">Assessment methods:</td><td colspan="3">Learning outcomes of laboratory classes are verified based on the teacher's assessment of student work cards. The evaluation is made considering the following criteria: transparency of the form of the work card, accuracy of answers, selection of source materials, and clarity and accuracy of arguments.

Examination
- Prerequisites:
• The examination is taken by persons who received 60% of the points available for the exercises.
- Written/test form with possible use of Moodle platform and/or Teams/eduportal.pl
- A set of questions of diverse nature will be used for the examination.
- The examination includes the content presented in lectures and exercises.
- The second term of the exam is in the same form

Final and partial scale
<table>
<tr><td>%</td><td>evaluation</td><td>grade</td></tr>
<tr><td>92-100</td><td>very good</td><td>5.0</td></tr>
<tr><td>84-91</td><td>good +</td><td>4.5</td></tr>
<tr><td>76-83</td><td>good</td><td>4.0</td></tr>
<tr><td>68-75</td><td>sufficient+</td><td>3.5</td></tr>
<tr><td>60-67</td><td>sufficient</td><td>3.0</td></tr>
<tr><td>0-59</td><td>insufficient</td><td>2.0</td></tr>
</table>
No extra assessment methods are anticipated.
In case of unforeseen, unusual circumstances, mandatory remote teaching and remote assessment methods might be adopted.</td></tr>
<tr><td colspan="2">Detail description of assessment methods;

Formal documentation of learning outcome:</td><td colspan="3">Entry in the eHMS and Moodle, MS Teams/eduportal.pl; Records collected in the course portfolio i.e. individual records of student results, presence lists, written assessments of the students.</td></tr>
<tr><td colspan="2">Elements impelling final grade:</td><td colspan="3">Final evaluation
The student is awarded points for each activity. There is a specific weighting factor (wf).
Exercises - wf = 0.4
Examination - wf = 0,6
The result is obtained after taking into account the determined weighting factor (wf);</td></tr>
<tr><td colspan="2">Teaching base:</td><td colspan="3">IVM, Department of Food Hygiene and Public Health Protection, Moodle and/or Teams/</td></tr>
<tr><td colspan="5">Mandatory and supportive materials:
1. Obligatory and supportive materials23):</td></tr>
</table>

2. Management of Terrorist Events Involving Radioactive Material: (Report No. 138) https://app.knovel.com/web/toc.v/cid:kpMTEIRMRA/viewerType:toc//root_slug:management-terrorist/url_slug:management-terrorist
3. Handbook of Toxicology of Chemical Warfare Agents (2nd Edition) https://app.knovel.com/web/toc.v/cid:kpHTCWAE0C/viewerType:toc//root_slug:handbook-toxicology-chemical/url_slug:handbook-toxicology-chemical
4. Key Elements of Preparing Emergency Responders for Nuclear and Radiological Terrorism: (Commentary No. 19) https://app.knovel.com/web/toc.v/cid:kpKEPERNR3/viewerType:toc//root_slug:key-elements-preparing/url_slug:key-elements-preparing
5. Incident Safety and Health Management Handbook (ISHMH) https://app.knovel.com/web/toc.v/cid:kpISHMHIS2/viewerType:toc//root_slug:incident-safety-health/url_slug:incident-safety-health
6. Management of Persons Contaminated with Radionuclides: Scientific and Technical Bases (Report No. 161), Volume 2 https://app.knovel.com/web/toc.v/cid:kpMPCRSTB2/viewerType:toc//root_slug:management-persons-contaminated/url_slug:management-persons-contaminated
7. Population Monitoring and Radionuclide Decorporation Following a Radiological or Nuclear Incident: (Report No. 166) https://app.knovel.com/web/toc.v/cid:kpPMRDFRN8/viewerType:toc//root_slug:population-monitoring/url_slug:population-monitoring
8. Biological Safety - Principles and Practices (5th Edition) https://app.knovel.com/web/toc.v/cid:kpBSPPE011/viewerType:toc//root_slug:biological-safety-principles/url_slug:biological-safety-principles
9. Bioterrorism - A Guide for Facility Managers https://app.knovel.com/web/toc.v/cid:kpBAGFM004/viewerType:toc//root_slug:bioterrorism-guide-facility/url_slug:bioterrorism-guide-facility
10. Food Safety Management - A Practical Guide for the Food Industry https://app.knovel.com/web/toc.v/cid:kpFSMAPGF1/viewerType:toc//root_slug:food-safety-management/url_slug:food-safety-management
11. CDC: Radiation emergences. Casualty Management After Detonation of a Nuclear Weapon in an Urban Area, 2005
12. Database of Radiological Incidents and Related Events compiled by Wm. Robert Johnston, last modified 19 December 2009 http://www.johnstonsarchive.net/nuclear/radevents/index.html
13. Alexander, David. (2016). How to Write an Emergency Plan. Dunedin Academic Press. Retrieved from https://app.knovel.com/hotlink/toc/id:kpCFRTTV75/how-write-an-emergency/how-write-an-emergency

All materials mentioned above accessible from SGGW Ip on https://app.knovel.com/web/browse.v?jsp=browse&host=www.knovel.com

14. The Biological Effects of Ionizing Radiation: www.nukeworker.com/...Radiation.../RP-1_The_Biological_Effects_of_Ionizing_Radiation.pdf

Relevant scientific publications, including those of the module coordinator.

ANNOTATIONS

* 3 – complete and detailed, 2 – moderate, 1 – basic.

Quantitative summary of the module:

Estimated number of work hours per student (contact and self-study) essential to achieve presumed learning outcomes of the module - base for quantifying ECTS:	**50 h**
Total ECTS points, accumulated by students during contact learning:	**1. ECTS**