MODULE SPECIFICATION

| | | | | |
|---|---|---|---|---|
| Module Title: **Human safety, natural and technogenic problems in the 21st century** | | | University module code: | |
| Level[i]: **Bachelor** | Credit Value[ii]: | ECTS Value[iii]: **1.5** (in Ukraine 1 ECTS equals to 36 hours of work load) | Length (in Semesters)[iv] **1** | Semester(s) in which to be offered: |
| New module[v]: | Title of Module being replaced *(if any):* | | | With effect from[vi]: |
| Originating School: **NTUU "KPI"** | Module Co-ordinator(s): **NTUU "KPI"** | | | |
| Programme(s) in which to be offered: | | | | |
| Pre-requisites *(between levels):* | | | Co-requisites *(within a level):* | |
| Indicative learning hours: | Percentage taught by School(s) other than originating School[vii] *:* | | | |

Aims of the Module: *to allow graduate to solve professional tasks in conditions of risk of internal and external hazards that may cause emergencies and their negative consequences and formation of students' responsibility for personal and collective security*.

Studying subject is expected in the course of self-study student lecture notes and recommended literature, independent solutions with practical tasks, group discussions via the Internet / Skype (50% of the evaluation are communication and interpersonal skills)

Intended Learning Outcomes

Knowledge and Understanding

On successful completion of this module, a student will be able to:

- Explain and use the *terms, definitions, theories and approaches* in the field of natural and man-made hazards to improve human vulnerability and provide human safety.
- Basic arrangements, directing to warning and minimization of adverse consequences of natural and man-made dangers.

Transferable/Key Skills and other attributes

As a result of studying the discipline bachelors must have the following basic common cultural and professional competence.

*General cultural competence* include:

- preservation of health in conditions of risk of internal and external hazards;
- safety culture and risk-oriented thinking in which human security and preservation of the environment are considered as the most important priorities of human activities;
- knowledge of contemporary issues of human safety and ability to define reliable professional activities in conditions of risk of hazards;
- ability to assess habitat criteria for personal and collective safety, to monitor hazardous situations and justify the main approaches and means of maintaining the personal and

Tempus

This project has been funded with support from the European Commission. This module specification reflects the views only of the authors and the Commission cannot be held responsible for any use which may be made of the information contained therein

collective health during professional activities;

- ability to make decisions on human safety within their responsibilities.

*Professional competence* include:

- basic knowledge of the dangerous and harmful factors of the man-made environment and the ability to identify the type of dangerous situation and assess the level of danger;
- ability to orient oneself in basic methods and systems to provide technological safety, to select necessary devices, systems and methods reasonably for protection of humans and the environment from these hazards;
- ability to justify and provide a range of works on the subject for the prevention of emergencies, localization and liquidation of their consequences.

*Organizational and managerial competence* include:

- knowledge of the main legal acts in the field of human security;
- knowledge of organizational and legal measures to ensure safety of life activities and the ability to justify/ensure full implementation of measures for collective and personal security;
- the ability to coordinate the efforts of the team under subordination in the prevention of emergencies and their consequences.

Module mark calculation:[viii]

Assessment components (in chronological order of submission/examination date)

| Type of assessment[ix] | Weighting% | Duration *(if exam)* | Word count *(if essay/dissertation):* | Component pass required[x] |
|---|---|---|---|---|
| **Assessment of the degree of interaction and participation of the students** (50% mark attributed to soft skills) | 30% | | n/a | Yes ☒ No ☐ |
| **Final assessment component** Module test + Differentiated Test | 70% | 1,5 edu hour | n/a | Yes ☒ No ☐ |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Learning and teaching strategies[xi]:

The core of the module material are lecture notes and assignments of teachers, located on Moodle. They include interactive tasks for formative assessment as a teacher, as well as by the student (self-assessment). Students are directed to additional resources available online, for example in legal databases, including ScienceDirect, Scopus, the e-library, etc.

Teaching and learning will occur through moderation of forum discussion for the preparation of papers. In addition, in order to foster cohort cohesion, counteract the isolation of distance learning, and provide opportunities to reflect, practise reasoning skills and obtain further formative feedback, students will be encouraged to participate in on-line discussions, peer reviews and group work. (compulsory participation in forum discussion).

The final ranking score is provided with final semester grade equal to the sum of the final semester module grade and differentiated grade fixed for each category of final semester modular rating assignments.

Tempus

This project has been funded with support from the European Commission. This module specification reflects the views only of the authors and the Commission cannot be held responsible for any use which may be made of the information contained therein

Moodle Virtual Learning Environment (VLE):
All students will be supported by extensive use of the Moodle virtual environment. The programmes utilise an e-based learning strategy to support delivery. The method adopts the following principles:
1. High quality integrated module content that combines a variety of types of information supporting the learning objectives of the module
2. Internet-based communication and submission of assessed work
3. On-line tutorial support during module delivery

Syllabus outline:

- Categorical-conceptual apparatus of the human safety, hazards' taxonomy.
- Natural hazards, their nature and exposure to humans, animals, plants, objects of economy.
- Technological hazards and their consequences.
- Socio-political risk. Social and psychological risk factors. Behavioral responses of the population in an emergency.
- Applying risk-based approach to construct probabilistic structural and logical models of disaster development.
- Fundamentals of legal support and organizational/functional structure to protect personnel in emergency.

Indicative texts and/or other learning materials/resources:

***Core text:***

1. Запорожець О.І., Заплатинський В.М., Халмурадов Б.Д., Применко В.І., Михайлюк В.О., Коніцула Т.Я. Підручник «Безпека життєдіяльності» К.-: «Центр учбової літератури», 2013.-448с.
2. Безпека життєдіяльності (забезпечення соціальної, техногенної та природної безпеки: Навч. посібник/ В.В. Бєгун, І.М. Науменко - К.: , 2004. – 328с.
3. Березуцький В.В., Васьковець Л.А., Вершиніна Н.П. та ін. Безпека життєдіяльності: Навчальний посібник / За ред.. проф. В.В. Березуцького. – Х.: Факт, 2005. – 348 с.
4. Желібо Є. П., Заверуха Н. М., Зацарний В. В. Безпека життєдіяльності. Навчальний посібник для студентів вищих навчальних закладів освіти України І-IV рівнів акредитації/ за ред. /Є. П. Желібо, і В.М. Пічі. – Львів: Піча Ю.В., К.: "Каравела", Львів: "Новий Світ., 2002. – 328 с.

***Recommended text:***

Zaporozhets O., Piatova A.Topics on Human safety, natural and technogenic problems in the 21st century. Text-book. 2014.
A. Ian Glendon, Sharon Clarke, Eugene McKenna Human Safety and Risk Management, Second Edition. CRC Press, 2006
Calculated Risks: The Toxicity and Human Health Risks of Chemicals in our Environment. Cambridge University Press, 2006
Threat and Hazard Identification and Risk Assessment Guide. Comprehensive Preparedness Guide (CPG) 201, Second Edition
At Risk: natural hazards, people's vulnerability and disasters. Second edition, 2003

***Journals:***

***On-line resources*:**
**Safety, Reliability and Risk Management - An Integrated Approach.**
http://app.knovel.com/web/toc.v/cid:kpSRRMAIA1/viewerType:toc/root_slug:safety-reliability-risk/url_slug:safety-reliability-risk?&b-cat-id=211&b-topic-name=Manufacture%20%26amp%3B%20Processing&b-topic-slug=manufacture-amp-processing&b-order-by=name&b-sort-by=ascending&b-off-set=25&b-filter-by=all-content&b-sub-cat-id=55

Date of completion of this version of Module Specification ……
Date of approval by the Faculty Programme Approval and Review Sub-committee: ……

This project has been funded with support from the European Commission. This module specification reflects the views only of the authors and the Commission cannot be held responsible for any use which may be made of the information contained therein

[i] *indicate level (e.g. first, second or third cycle; sub-level if applicable). All qualifications in the European Higher Education Area are located within three cycles - undergraduate; graduate and doctoral studies*

[ii] *permissible credit values as set out in Institution's Academic Regulations*

[iii] *European Credit Transfer System*

[iv] *indicate 0.5, 1, 1.5 or 2*

[v] *delete as applicable*

[vi] *insert month and year of first/next delivery of module*

[vii] *identify all participating Schools other than Originating School*

[viii] *To be defined*

[ix] *please indicate, in chronological order of submission date, each assessment component by type, e.g. examination, oral, coursework, project, dissertation*

[x] *indicate* Yes *to specify the assessment component(s) to be passed in order to pass the module*

[xi] *please note the requirement to give full consideration to issues of equality, diversity and accessibility*

Tempus

This project has been funded with support from the European Commission. This module specification reflects the views only of the authors and the Commission cannot be held responsible for any use which may be made of the information contained therein