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Training Course for Hydrologists, Experts in Water Management

(4 ECTS – 120 h)

THE ECONOMIC SECTOR TRANSFORMATION (WATER MANAGEMENT): CHANGES, CHALLENGES AND GOVERNANCE

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Overview

ClimEd

In the "Global Goals for Sustainable Development of Ukraine for 2015-2030" one of the 17 main pillars notes the need to “ensure the availability and sustainable use of water and sanitation for all”. By the decree of the President of Ukraine dated September 30, 2019, the emphasis is placed on the fact that these goals should be taken into account when determining the directions of scientific research. The signing of the Association Agreement between Ukraine, on the one hand, and the European Union (EU) and its member states, on the other hand, which took place in 2014, opened up new opportunities for the development of our country in various spheres of public life, including the sphere of environmental protection. For Ukraine in the field of environmental protection, the implementation of EU legislation occurs within eight sectors, regulated by 29 sources of law (directives and regulations) of the EU in this area. The sector "water quality and water resources management, including the marine environment" includes 6 Directives: Water Framework (WFD), Flood, On Marine Strategy, On Urban Wastewater, On Drinking Water, Nitrogen.

For the water sector in Ukraine, the main task is to implement the provisions of the international Water Framework Directive 2000/60 / EU (EU WFD), which deals with the basin principle of water resources management and achieving a good state of natural water quality and Water Flood Directive 2007/60 / EU (EU WFD), which provides for the protection of settlements and cultural heritage sites from flooding during spring floods and rainfall floods, especially in the face of climate change; as well as state documents - Water legislation of Ukraine concerning special standards that determine the conditions for the use of waters, assessment of their ecological state and include standards for the environmental safety of water use, standards for the maximum discharge of pollutants, technological standards for the use of water resources, requirements for the operation of irrigation and drainage systems, etc.

The study of these directives, the acquisition of knowledge and skills to achieve the goals set in them should become the basis of refresher courses on integrated water resources management (IWRM) and the possibility of their use in current and possible future climatic conditions.

For many decades, the Odessa State Environmental University has been developing scientific approaches to assessing and predicting the state of water resources in Ukraine in the absence and inadequacy of hydrological observation data, as well as in the case of a significant transformation of the water regime of rivers as a result of water management transformations. The territory of southern Ukraine is characterized by the existence of a shortage of water resources and is vulnerable to climate change, therefore, considerable attention was paid to the use of meteorological information, including data from climatic scenarios, in the development of mathematical models of runoff in various phases of its formation.

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Audience Description

- ***Primary audience for the training*** - decision makers in the field of water resources management.

- ***Secondary audiences*** - practicing hydrologists, hydrologists-forecasters, hydraulic engineers, water workers who wish to improve their qualifications for career advancement.

Basic knowledge and skills of the main audience - knowledge and understanding of the theoretical foundations of earth sciences as a complex natural system; the ability to monitor natural processes; justify the choice and use field and laboratory methods for the analysis of natural and anthropogenic systems and objects; know the basic methods of modeling and forecasting the flow of rivers and coastal zones; know the regulatory framework for water use in Ukraine; have theoretical knowledge and practical skills in such sciences as hydrology (hydrophysics, hydrography, hydro-calculations, hydro-forecasting, etc.)

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Expected Impacts (Training Goals)

- ***The aim of the courses*** is to form knowledge about the basic principles of sustainable development in the field of water resources management in the face of climate change, the ability to comprehensively assess the quantitative and qualitative indicators of water sources and introduce mechanisms for economic stimulation of environmental activities of business entities and effective planning of the state of water resources.
- As a result of attending refresher courses, students will acquire skills that are valuable for the sustainable development of the country, which will be able to independently conduct research on the hydrosphere and its components, solve complex practical and / or scientific problems in the field of hydrology and integrated water resources management in the face of climate change, provide a comprehensive assessment of possible negative consequences for the country's water resources.

The main objectives of refresher courses are:

- - study of the provisions and requirements of EU directives;
- - familiarization of students with modern models of calculations and forecasts of river runoff in conditions of climatic changes, developed at OSENU with the aim of improving water resources management and introducing IWRM principles;
- - gaining knowledge and practical skills in the application of models for calculating extreme river runoff in the context of climate change in order to comply with the Flood Directive.

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Learning Needs

As noted above, the presence in organizations of specialists with skills and competencies that allow to effectively implement and follow the principles of sustainable development of the region and the country as a whole, modernize and improve their practical activities, adapt to climate change, allow them to be modern, competitive, efficient and profitable enterprise.

The uniqueness of the subject matter of the courses for students lies in the fact that it is the only one in the entire southern region of Ukraine, it combines the areas of knowledge - the integrated use of water resources with an emphasis on the structure of the water economy in Ukraine, knowledge of the regulatory framework of the Water legislation of Ukraine, water management in conditions of climate change , theoretical and practical foundations for the operation of irrigation and drainage systems, is quite relevant in the arid region of the country.

The object of study and activity is natural and anthropogenic objects and processes in the hydrosphere in their interconnection, transformations and their development in space and time.

The content of the courses is aimed at developing students' ability to solve complex scientific problems and practical research problems in the study of the hydrosphere in its interaction with other geospheres of the Earth at different spatial and temporal scales, to make decisions on the rational use of water resources in terms of their water management, the impact of climate change on industries economy of the state.

Educational needs are directly related to understanding the essence of new methods for assessing the country's water resources, engineering calculations of the probabilistic characteristics of maximum river runoff and predictive monitoring of spring flood runoff characteristics, assessing the water regime of coastal seas, which are constantly changing under climate change conditions on the planet and in the region. It is also planned to master the technological skills of the user of the new software products "SEIM" and "CAGUAR" (they are special developments of OSENU).

Professional competencies that will be considered during the training:

- ✓theoretical knowledge of modern principles of nature management, interaction of nature and society with the use of rational use of natural resources, environmental aspects and the foundations of environmental legislation;
- ✓possession of modern research methods that are used in production and research organizations in the study of the hydrosphere and its components;
- ✓knowledge about the mechanisms of formation of the qualitative composition of surface waters and scenarios of its development for assessing and predicting the state of water bodies;
- ✓skills of practical application of methods for calculating the formation of channel processes in interaction with channel flows
- ✓knowledge of the main anthropogenic factors affecting the change in the runoff of water bodies in different phases of its regime, necessary for calculating the quantitative characteristics of these changes in different conditions;
- ✓performance of space-time analysis of the results of observations of hydrological processes and phenomena;
- ✓to process and interpret data on the state of water resources in modern climate conditions;
- ✓use methods of mathematical modeling to solve problems of hydrological forecasts and calculations;
- ✓bring to consumers a qualitative and quantitative assessment of the state of water bodies and disseminate special forecasts for users, including warnings about hazardous phenomena;
- ✓critically assess the state and water regime of the coastal areas of the seas and estuarine sections of rivers;
- ✓plan the rational use of water resources and carry out their integrated management in order to protect and preserve them in the face of climate change;
- ✓possession of knowledge and practical skills in planning, organizing, motivating, controlling and regulating the activities of specialized enterprises and institutions.

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Learning Outcomes

Knowledge LO1-2	Identify and define the main principles of sustainable development policies in the management of water resources, taking into account climate change, and show how to achieve them
Comprehension LO3	Classify and draw conclusions on the state of surface waters in order to choose the best measures to improve their condition in accordance with the EU WFD requirements
Application LO4-5	Apply modern computational models and methodologies to determine hydrometeorological characteristics of run-off factors and assess possible changes in their values over climate scenarios
Analysis LO6	Analyses the characteristics of water-body run-off conditions taking into account local factors and investigate the relationship between climatic and run-off values
Synthesis LO7	Propose a plan of action for local governments to provide early warning of extreme forecast run-off values, thus minimizing negative effects on the population's livelihood
Evaluation LO8	Design and / or plan for adaptation to increasing climate variability and change through better water resources management, namely, in policies, with the right investments to improve knowledge and information sharing on climate, water and adaptation, as well as investing in comprehensive and sustainable data collection and monitoring systems

As a result of training in the courses, students will gain practical skills:

- principles of water resources management in the context of climate change;
- mathematical modeling for standardizing design characteristics and long-term forecasts of maximum river flow;
- assessing the amount of river water resources and the regime of coastal sea areas, taking into account anthropogenic changes in catchments, taking into account changes in the global and regional climate;
- set a mathematical problem, process and systematize the initial information (including when using the software package of the Ukrainian Hydrometeorological Center "Automated workstation of a hydrologist - AWS-hydro" processing the analysis of the homogeneity and stationarity of time series of hydrometeorological observations (http://www.geodigital.ru/soft_hydr);
- determine and describe the parameters of the selected mathematical model (in the software computational complexes "SEIM" and "CAGUAR"), analyze the results in accordance with the existing assessment criteria and adapt them to the current state of surface waters of the land;
- to adapt the results of the mathematical model to the conditions of modern climate changes and the water regime of rivers;
- map and generalize the forecast values of runoff layers and maximum flood discharge (in the form of modular coefficients), the probability of their occurrence in a long-term period, assess the forecast for the current year (including rivers that have not been studied hydrologically);
- calculate complex criteria of water quality, coefficient of natural water pollution in order to support environmental safety;
- to carry out, using the regularities of the distribution of pollutants, forecasting of pollution of surface waters of the land.

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Content Scope

Block I "POLICY OF THE EUROPEAN UNION IN THE SPHERE OF PROTECTION AND RATIONAL USE AND PRESERVATION OF WATER RESOURCES"

MOOC #1

A policy framework for the protection and use of water resources aimed at introducing the principles of the European Water Framework Directive 2000/60 / EC, which aims to protect and improve the condition of water resources and promote their sustainable and balanced use. Adaptation to climate change in water resources management.

1.1 Convergence with European Union (EU) water policy. A short guide for partner countries to the European Neighborhood Policy
1.2 Classification of surface waters depending on their ecological status
1.3 Water diplomacy in the context of the EU Water Initiative. Analysis of international experience in water resources management with a view to its implementation in Ukraine.
1.4 Strengthening the legal and institutional framework for water resources management in order to adapt water resources management to climate change processes, including the development of water diplomacy with neighboring countries in transboundary basins.
1.5 Assessment of the legislation of Ukraine, related to the legal support for the management of the coastal strip of the seas.

MOOC #2

An integrated principle of all management actions and activities in the process of using water resources to ensure greening. Introduction of a mechanism for economic stimulation of environmental activities of business entities, effective planning of the state of water resources and reduction of anthropogenic pressure on them, consolidation of efforts to overcome water-related disasters.

2.1 Regulatory framework, strategic documents and organizational structure. International experience in the implementation of basin water management systems.
2.2 Mission of the Global Water Partnership (GWP) as a basis for sustainable development and water resources management at all levels.
2.3 Key problems of integrated water resources management based on the basin principle.
2.4 Management of Ecosystem Services: An Implementation Strategy for Ukraine. Aquatic ecosystem services in the context of climate change
2.5 Problems of integrated water use in the context of climate change. Consequences of the construction of reservoirs, hydraulic structures (canals and dams), the development of hydropower

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Content Scope

Block II "CLIMATE VULNERABILITY OF WATER RESOURCES"

MOOC #3

Strategies for assessing the future impact of climate change on river flows. Analysis of fluctuations in climatic factors of runoff formation, on which conclusions are drawn regarding fluctuations in water content, and data of climatic scenarios that are used in models of runoff formation.

3.1 Forecasting monitoring of hydrological characteristics of spring water floods at climate service.
3.2 Probabilistic-stochastic modeling of the floods as a important part of the climate service and integrated water management of Ukraine.
3.3 Climate-Runoff Model for Calculating and Forecasting Changes in Water Resources Data Based on Climate Scenarios Data on the Example of the Danube River Watershed and rivers of the South-Western Black Sea region. The concept of "climatic", "natural" river flow and accounting for water management transformations in the catchment. Changes in climatic factors for the formation of annual river flow and their consequences.
3.4 Impact of climate change on the hydrological regime of the Black and Azov seas.

MOOC #4

A framework for climate services at the national level, which provides for the maximum possible responsibility of national institutions for hydrology, meteorology, flood protection, forecasting and warning, irrigation, drought monitoring, river regulation, navigation, aqua ecology, coastal zone management and the location of climate centers on its territory for the sustainable development of the state.

4.1 Management of extreme events (floods and droughts) of the state of water bodies, that is, rational redistribution of water resources and their provision for various purposes of economic sectors.

4.2 National monitoring of water resources.

4.3 Guidance for the step-by-step establishment of a national framework for climate services.

4.4 Prepare a national strategic and action plan for a national framework for climate services.

4.5 Mobilizing resources to support the activities of the national framework for climate services.

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Content Scope

The list of topics that will not be covered during training in the courses:

- Forest management and climate change. The role of forests in the formation of runoff. Impact of deforestation on water resources.
- Major stresses of European forests due to climate change. Methods of conducting climate-oriented forestry.
- Criteria for the selection and application of hydrological models.
- Scenarios and modeling in a transboundary context
- Regularities of variability of oceanological processes in modern conditions of natural and anthropogenic load.
- International agreements concerning coastal areas and oceans.
- Assessment of the impact of climate change on the marine environment in the modern period.
- Methods to prevent negative impacts on coastal zones from climate change.
- Vulnerability assessment in relation to water resources management.
- Groundwater Resources Assessment under the Pressures of Humanity and Climate Change (GRAPHIC)
- Financing climate change adaptation in transboundary basins
- Drought management in the face of climate change. Characterization of historical droughts. Determination of the degree of danger.
- Review of the main impacts of droughts. Drought indicators. Development of a drought management program.

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Learning Solutions and Delivery Modes

WEEK #1

Informal learning

Online

through self-education according to official Internet sources (the selected methods will create a base of theoretical knowledge and understanding of the main provisions of the indicated topics of the module through self-control and self-examination)

WEEK #2-4

Formal learning

Online

Face-to-face

blended learning, where activities are provided:

- thematic lectures, lectures-discussions, lectures-consultations, watching educational videos, blitz-survey, independent study of individual issues, self-control and self-examination, test control; (*online and offline in the classroom*)
- practical tasks, cases, individual assignments, essays, creative assignments, group work, independent practical assignments (*only offline in the classroom*)

WEEK #4-5

Semi-formal

On-location

mentoring (the chosen method involves individual training, during which theoretical issues are studied independently and through lectures and consultations, and practical tasks are worked out in a mixed mode).

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Learning Strategies

Week #1	**Discussion Strategy**	***Tactic Student-centered discussion***	The teaching material of the first week is quite widely used in the modern world and many course participants may be familiar with it. Therefore, the chosen strategy and tactics will allow the critical reading and writing method to master the material as efficiently and successfully as possible, and then consolidate the knowledge during the discussion, where more experienced listeners will share their knowledge and skills with the rest, but at the same time, course trainers will supervise the listeners for a more complete and comprehensive assimilation of information.
Week #2-3	**Query Strategy**	***Problem-Based Learning Tactics***	Training events are presented in the form of thematic lectures, lectures-discussions, lectures-consultations, watching educational videos, blitz-polls, independent study of individual issues. Topics covered during this period will be voiced by leading domestic scientists and professors, based on their experience and knowledge.
Week #3-4	**Case strategy**	***Tactics Case studies (case method)***	Educational activities of this period imply a set of practical tasks, cases, individual assignments, essays, creative assignments, group work, and independent practical assignments. For successful mastering and obtaining practical skills on the basis of the university there is a material and technical base with experienced instructors.
Week #4-5	**Experiential Learning Strategy**	***Tactics Projects***	The main students of the courses will be decision-makers on water resources management, so the skills and experience gained in creating a project of solutions or activities under the guidance of mentors will allow you to complete the course as productively as possible by the example of your own enterprise

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Learning Activities

Discussion Options	More than Lecture	Focus on Practice	Bigger Tasks
Week #1	Week #2-3	Week #3-4	Week #4-5
☐ Readings	☐ Problems, Questions, Cases	☐ Practice exercises	☐ Problem-based learning
☐ Demonstration	☐ Demonstration	☐ Tutorials	☐ Projects
☐ Case studies	☐ Lectures	☐ Case studies	☐ Collaborative decisions
	☐ Readings	☐ Small group	
	☐ Collaborative decisions	☐ Collaborative decisions	

Role of coaches:

- creating a base of information and literary sources for successful assimilation of theoretical material, preparation of presentations and instructional videos, topics of discussion meetings, creation of self-testing and control tests, preparation of practical tasks, materials, briefcases, work assignments

Role of pupils:

- participation in all the activities envisaged, the ability to self-control, creative approaches to the tasks assigned, work in the team, the ability to make decisions

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Learning Activities

Week #1	**4 hours – discussion; 20 hours - self-study**	Students independently study the provided educational material using the method of critical reading and writing to obtain initial knowledge for successful completion of the courses. Students will pass an entrance test to determine the degree of readiness to master the courses. At the end of the first week, live communication will be organized according to the type of a round table and it will be again proposed to pass the test control.
Week #2-3	**20 hours - lecture work, 14 hours - independent work**	According to the schedule, listeners are given thematic lectures, lectures-discussions, lectures-consultations, watching educational videos, a blitz survey, independent study of individual issues, self-control and self-examination, test control; (*online or offline in the classroom*)
Week #3-4	**28 hours - classroom work, 10 hours - independent work**	All educational activities of this period imply work on the material and technical base of the university, where practical tasks, cases, individual assignments, essays, creative assignments, work in groups, independent practical assignments (*only offline in the classroom*) are provided, namely: *Practical Criteria 1* 1) Determination of the problems of the water economy of the region; drawing up an action plan for the integrated management of a certain water body in order to improve its condition; 2) Assessment of qualitative and quantitative indicators of the state of the water source; 3) Creation of a draft solution of strategies for sustainable development of the region in the context of climate change with integrated water resources management; *Practical Criteria 2* 1) Realization of the model of long-term forecasting of maximum water discharge of spring floods using the computer complex; 2) Determination and generalization of characteristics of overland inflow; 3) Calculation of the climatic, natural and disturbed by economic activity of the annual flow of rivers; 4) Highlighting the climatic component in sea level fluctuations
Week #4-5	**24 hours - self-study**	Work at the workplace with a mentor (consultations, discussions) on the creation of an individual project on the example of your own enterprise

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Learning Assessment

Before (Diagnostic)	The entrance test control will allow students to determine their level of knowledge for successful completion of the courses, as well as a number of topics that need to be paid attention to, and which may not be considered. For the trainers, this will give an idea of the level of training of the trainees and focus on the weaknesses of the trainees.
During (Formative)	Test control after each section will allow trainers to understand the degree of assimilation of the training material
After (Summative)	As a result of completing the courses, students will receive a credit that will show the degree of assimilation of learning outcomes according to the criteria, assessing:

Satisfactorily	•On the basis of the results of control measures (4 tests and 2 test-cases), the listener showed a sufficient level (> 65% of correct answers in the tests) Assimilation of theoretical material and correct solution of all practical problems and cases without justification of the results (*LO1-3*)
Good	•Adoption of the theoretical basis at a good level (> 82% of correct answers) on the results of 4 tests (*LO1-3*), active participation in the oral blitz polls, correct solution of all practical problem-cases with analysis of the obtained results and valid conclusions (*LO4-6*)
Excellent	•The theoretical questions are fully absorbed at a sufficiently high level (> 95% of correct answers) on the results of the test control (*LO1-3*). The practical tasks were performed correctly with valid conclusions and proposals for implementation (*LO4-6*). Active participation in oral blitz polls, participation in discussions, leadership in group tasks (*LO 7*). Materials for participation in the conference or publication in the periodical professional publications on the results of creative tasks (*LO8*) have been prepared

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Training Storyboard

Acquisition

Conventional method	Digital technology
reading books, papers	reading multimedia, websites, digital documents and resources
listening to teacher presentations face-to-face, lectures	listening to podcasts, webcasts
watching demonstrations, master classes	watching animations, videos

Collaboration

Conventional method	Digital technology
small group project	small group projects using online forums, wikis, chat rooms, etc.
discussing others' outputs	discussing others' outputs
building joint output	building a joint digital output

Discussion

Conventional method	Digital technology
tutorials	online tutorials
seminars	seminars
discussion groups	email discussions
class discussions	discussion groups
	discussion forums
	web-conferencing tools
	synchronous and asynchronous

Investigation

Conventional method	Digital technology
using text-based study guides	using online advice and guidance
analysing the ideas and information in a range of materials and resources	analysing the ideas and information in a range of digital resources
using conventional methods to collect and analyse data	using digital tools to collect and analyse data
comparing texts	comparing digital texts
searching and evaluating information and ideas	using digital tools for searching and evaluating information and ideas

Practice

Conventional method	Digital technology
practising exercises	using models
doing practice-based projects	simulations
labs	microworlds
field trips	virtual labs and field trips
face-to-face role-play activities	online role play activities

Production

Conventional method	Digital technology
producing articulations using:	producing and storing digital documents
statements	representations of designs
essays	performances, artefacts
reports	animations
accounts	models
designs	resources
performances	slideshows
artefacts	photos
animations	videos
models	blogs
videos	e-portfolios.

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Training Storyboard

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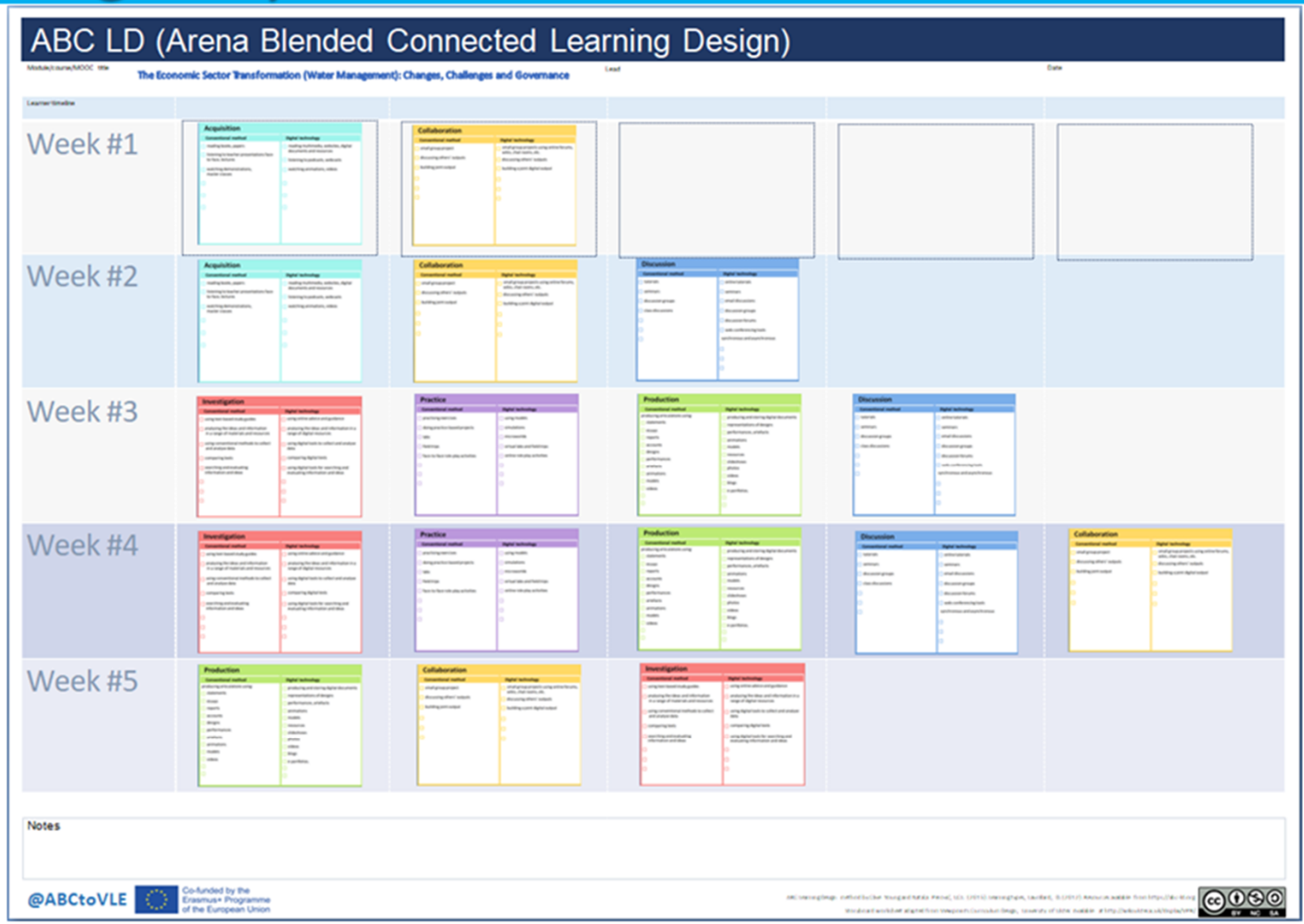

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Training Storyboard

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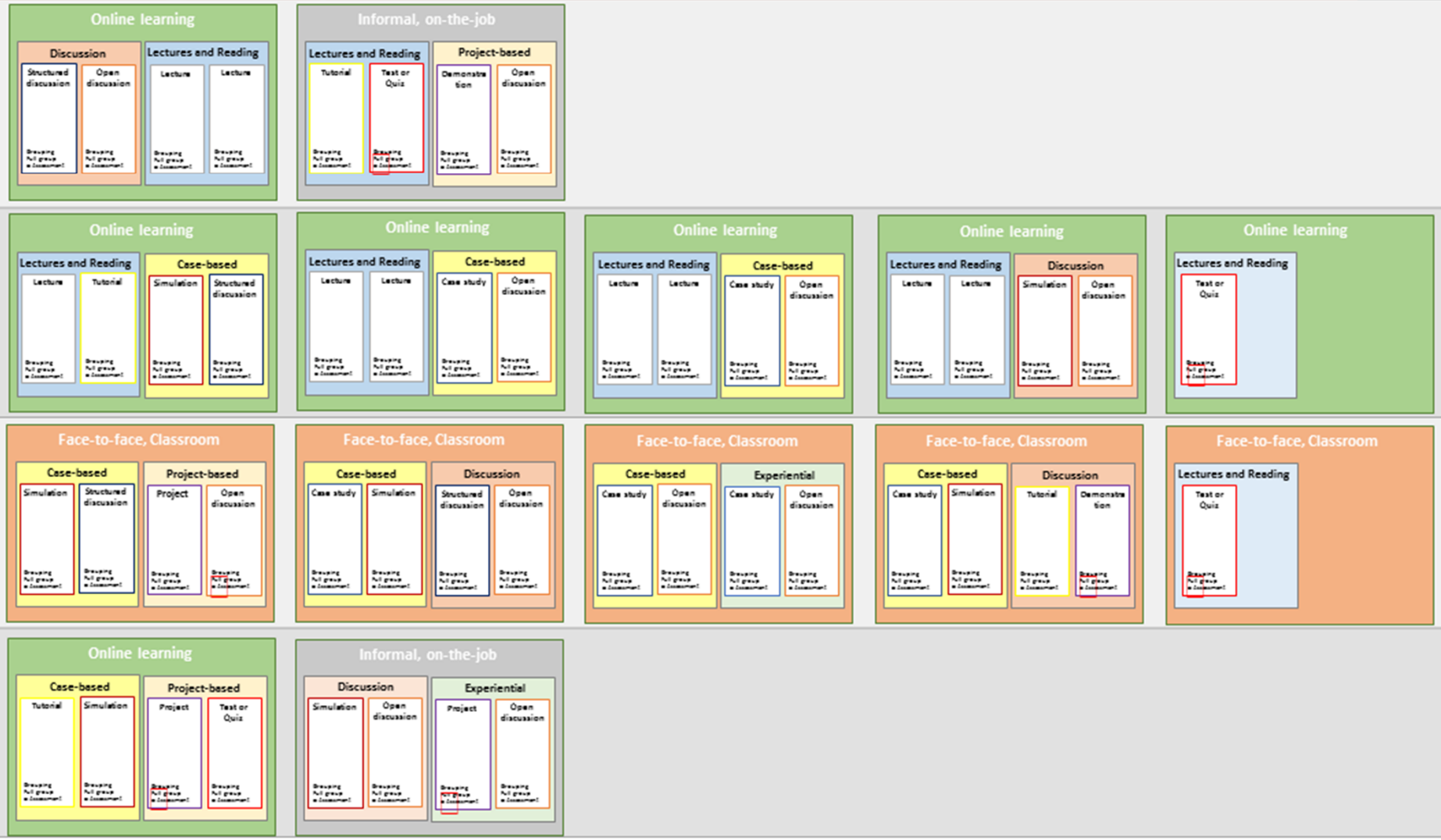

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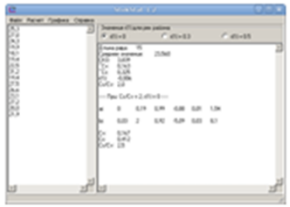
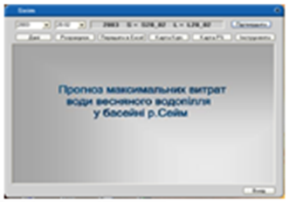
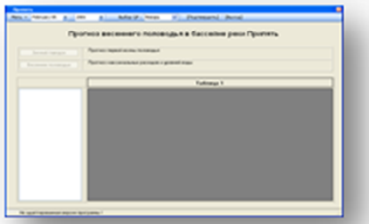
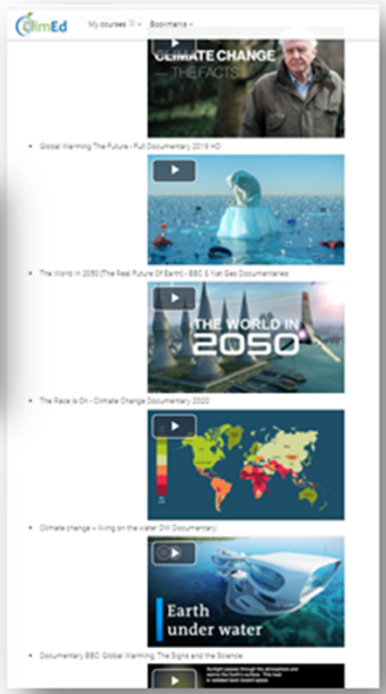
Learning Resources and Tools



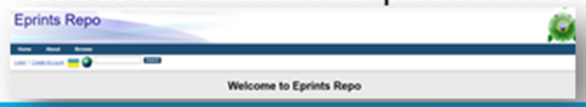






This course will use the following existing resources:

- personal computers;
- interactive equipment;
- specialized software "Automated workstation of a hydro-forecaster (AWP-hydro)"
- computer program "STOK_STAT" for statistical processing, analysis of homogeneity and stationarity of time series of hydrometeorological observations, construction of supply curves for runoff quantities, research of correlation analysis of runoff series (http://www.geodigital.ru/soft_hydr);
- computer program "CAGUAR" for calculating the estimated duration of water inflow from the slopes to the channel network T0 by the numerical method, which was proposed by Evden Gopchenko in the framework of the genetic formula for runoff (developed by OSENU);
- software package "SEIM" "Forecast of the maximum water discharge of spring floods in the basin of the Desna, Seim, left tributaries of the Middle Dnieper" for the territorial long-term forecast of the maximum spring flood runoff and automatic construction of charts of expected values and their availability in operational mode in the basins rivers of the middle reaches of the Dnieper, according to the method developed by Evgen Gopchenko and Zhannetta Shakirzanova (developed by OSENU).
- the components of the educational and methodological complex of courses are freely available in the repository of electronic educational and methodological and scientific literature (http://eprints.library.odeku.edu.ua/), as well as the educational platform Moodle
- video series from the Internet:



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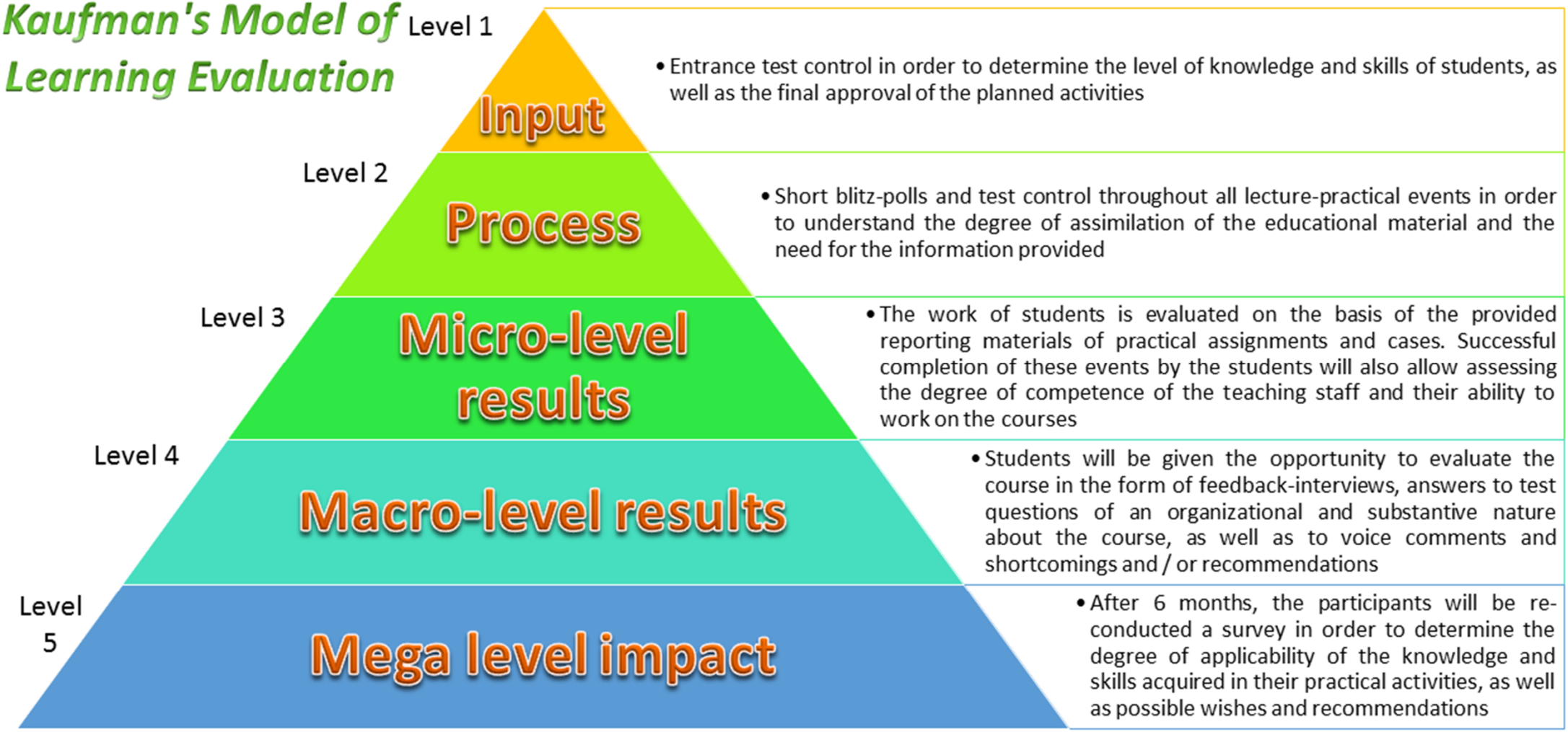
Training Evaluation

Kaufman's Model of Learning Evaluation



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Human Resources

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Anhelina Dokus, Ph.D (Geography)

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Constraints and Risks

Constraints might include:

- take the time of the classroom (within the academic year)
- workload of the material and technical base of the university and the scientific and pedagogical staff
- budget availability for students
- number and location of listeners
- level of basic knowledge and skills of students

Risks to the project might include:

- large volume and complexity of information
- technical limitations (for distance learning)
- employment of the teaching staff and students with the main work
- budgetary risks of the possibility of paying for courses
- schedule restrictions
- different degrees of PC proficiency by listeners
- the ability of students to adopt modern teaching methods
- funding for the creation and implementation of courses
- to overcome the epidemiological risk creating a flexible schedule of courses taking into account the epidemiological situation in the country and in the world

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Milestones and Schedule

Project Plan completed	2 months
Learning needs assessed	during development of the TDP
Learning outcomes reviewed and approved	2 weeks before the delivery of the TDP
Content outline developed	1.5 months during the development of the TDP
Learning activities designed	1.5 months during the development of the TDP
Assessment plan complete	2 weeks before the delivery of the TDP
Scheduling of all human, technical, and facility resources	one month before the start of the course
Learning resources developed or adapted	3-4 months before the start of the course
Training delivered (begin date/end date)	announcement 1 month before the start of the courses, the duration of the courses is 5 weeks (120 hours - 4 ECTS credits)
Training evaluation complete	5 levels of Kaufman assessment: I - on the first day of the course II - for 2-3 weeks of courses III - during 3-4 weeks of courses IV - at the end of the courses at the round table and questionnaire V - after 6 months at a round table and a questionnaire

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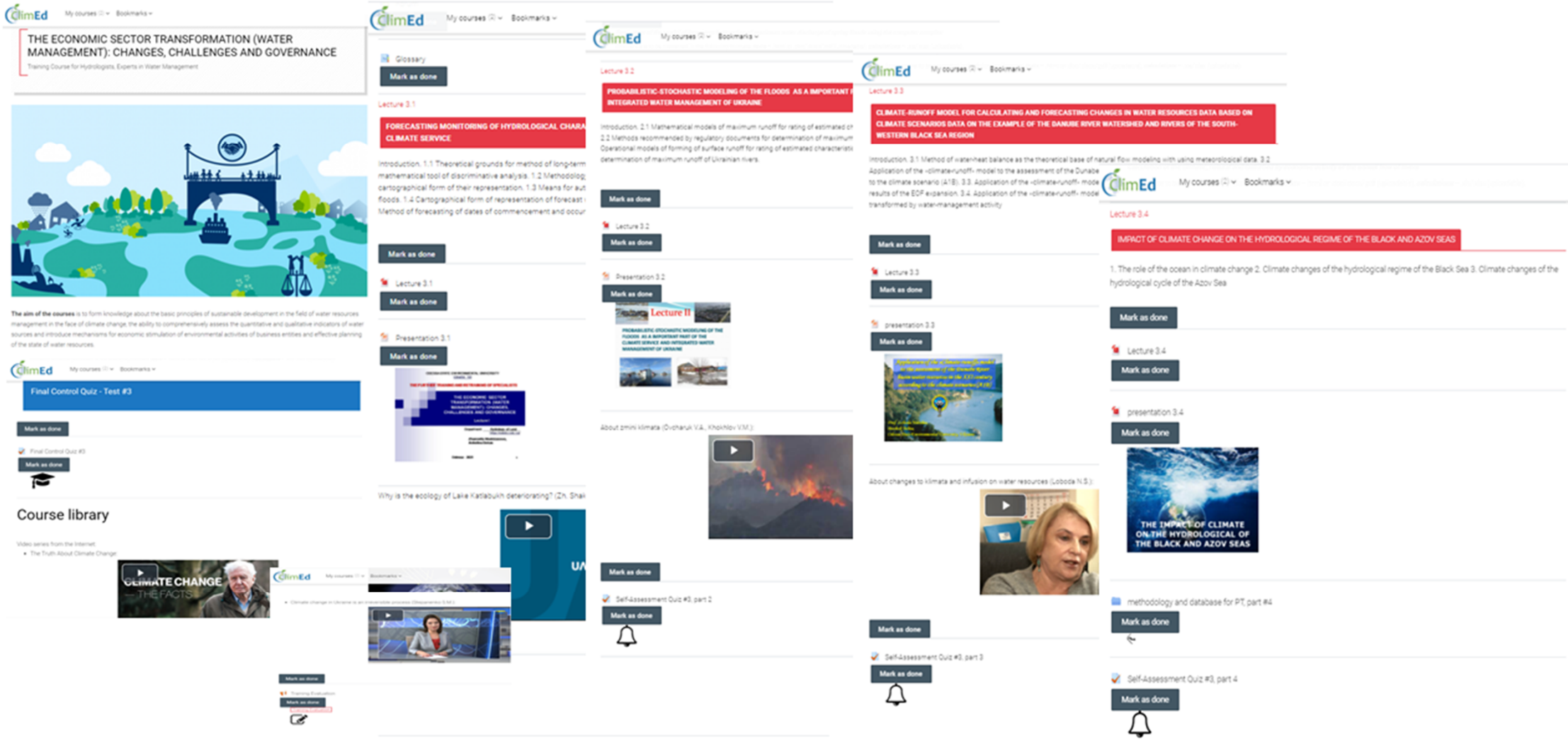
MOOC #3 is 4 "Strategies for assessing the impact of climate change on river flows in the future"



MOOC #3 is 4 "Strategies for assessing the impact of climate change on river flows in the future"

Training Evaluation

Leave a review about the course you have taken. Rate its structure and content, as well as the teachers.

* Обязательно

Training Course for Hydrologists, Experts in Water Management *

Мой ответ

Your contribution *

	Weakly	Few	Enough	Hard	Very hard
How hard did you study	○	○	○	○	○

Knowledge level *

	Very bad	Badly	Satisfactorily	Good	Excellent
Skills / knowledge level at the beginning of the course	○	○	○	○	○
Skills / knowledge level at the end of the course	○	○	○	○	○

level at the beginning of the course	○	○	○	○	○
Skills / knowledge level at the end of the course	○	○	○	○	○
Skills / knowledge level required to complete the course	○	○	○	○	○
Educational value of the course	○	○	○	○	○

Qualification and responsiveness of teachers *

	Definitely not	No	I am at a loss to answer	Yes	Definitely yes
Lecturers successfully delivered lectures / presentations	○	○	○	○	○
Presentations were clear and well organized	○	○	○	○	○
Teachers tried to interest students	○	○	○	○	○
Teachers used course time effectively	○	○	○	○	○
You could turn to teachers for help and get it	○	○	○	○	○
Assessments were made quickly and accompanied by informative feedback	○	○	○	○	○

What was the most valuable and useful thing in this course? *

Мой ответ

Your suggestions for improving the course *

Мой ответ

Why did you choose this course? *

- ○ It was mandatory
- ○ The time was right
- ○ Out of interest
- ○ Другое:

Are you ready to apply the acquired knowledge in your professional activities? *

- ○ Yes
- ○ No
- ○ I am at a loss to answer

Do you have colleagues for whom the course would be useful? Write their contact details *

Мой ответ

Отправить

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ClimEd

Thank you!