



## THE SYLLABUS OF THE EDUCATIONAL COMPONENT ASSESSMENT OF HEALTHCARE TECHNOLOGIES

for higher education applicants 5 year full-time forms of education  
educational programme "Pharmacy"  
speciality "226 Pharmacy, industrial pharmacy"  
area of knowledge "22 Health care"

second (master's) level of higher education

### TEACHERS

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#### Information about the teacher

[https://socpharm.nuph.edu.ua/  
category/teachers/nazarkina-  
viktoriia-mykolaivna/](https://socpharm.nuph.edu.ua/category/teachers/nazarkina-viktoriia-mykolaivna/)

1. **Name of the higher education institution and structural unit:** National University of Pharmacy, Department of Social Pharmacy
2. **Department address:** Kharkiv, Valentynivska street, 4, 3-4th floor, phone 057-67-91-81
3. **Department website:** <http://socpharm.nuph.edu.ua>
4. **Consultations:** take place in an online format according to the teachers' schedule posted on the department's website
5. **Abstract of the educational component:** Health technology assessment (HTA) uses validated methods to determine the value of a medical technology (MT) at different stages of its life cycle to inform decision-making on its financing (procurement, reimbursement, inclusion in regulatory lists). HTA involves the assessment of clinical efficacy, safety, costs and economic impact, ethical, social, cultural and legal issues, organizational and environmental aspects, as well as broader implications for the patient, relatives, caregivers and the public. HTA is a modern and necessary tool for informing decisions on the rational allocation and use of financial resources in the healthcare sector, which is used after the stage of registration on the market of medicines
6. **Purpose of teaching the educational component:** to form a set of knowledge about effective planning and evaluation of the effectiveness of medical technologies in higher education students
7. **Competencies in accordance with the educational programme:**  
**Soft- skills / General competencies (GC):**  
 GC 2. Ability to apply knowledge in practical situations, make informed decisions.  
 GC 4. Ability to think abstractly, analyze and synthesize, learn and be modernly trained.  
 GC 6. Knowledge and understanding of the subject area and understanding of professional activities.  
 GC 9. Skills in the use of information and communication technologies.  
 GC 12. Ability to conduct research at the appropriate level.  
**Hard-skills / Professional (speciality) competencies (PC):**  
 PC 5. Ability to monitor the effectiveness and safety of the use of medicines by the population according to data on their clinical and pharmaceutical characteristics, as well as taking into account subjective signs and objective clinical, laboratory and instrumental criteria for examining the patient.  
 PC 9. Ability to analyze and predict the main economic indicators of pharmacy institutions, to calculate the main taxes and fees, to form prices for medicines and medical devices in accordance with the current legislation of Ukraine.  
 PC 11. Ability to analyze socio-economic processes in pharmacy, forms, methods and functions of the pharmaceutical supply system and its components in world practice, indicators of need, effectiveness and availability of pharmaceutical care in terms of health insurance and reimbursement of the cost of medicines.  
 PC 12. Ability to use in professional activities knowledge of regulatory and legal acts of Ukraine and

*recommendations of good pharmaceutical practices.*

### **8. Programme learning outcomes (PLO):**

*PLO 2. Apply knowledge of general and special disciplines in professional activities.*

*PLO 4. Demonstrate the ability to independently search, analyze and synthesize information from various sources and use these results to solve typical and complex specialized tasks of professional activity.*

*PLO 6. Argue information for decision-making, be responsible for them in standard and non-standard professional situations; adhere to the principles of deontology and ethics in professional activities.*

*PLO 9. To carry out professional activities using information technology, "Information databases", navigation systems, Internet resources, software and other information and communication technologies.*

*PLO 12. Analyze information obtained from scientific research, summarize, systematize and use it in professional activities.*

*PLO 17. Use data from clinical, laboratory and instrumental studies to monitor the effectiveness and safety of medicines. PLO*

*PLO 21. To calculate the main economic indicators of pharmacies, as well as taxes and fees. To form all types of prices (wholesale, retail and purchase) for medicines and other goods of the pharmacy assortment.*

*PLO 23. Take into account data on socio-economic processes in society for pharmaceutical provision of the population, determine the effectiveness and availability of pharmaceutical care in terms of health insurance and reimbursement in*

*PLO 24. Plan and implement professional activities on the basis of regulatory legal acts of Ukraine and recommendations of good pharmaceutical practices*

### **9. The status of the educational component: elective**

**10. Prerequisites of the educational component:** *pharmacology, organization and economics of pharmacy, public procurement, pharmacoeconomics*

**11. The scope of the educational component:** *3 ECTS credits; the number of hours for the educational component is 90: for full-time students - 8 hours of lectures, 32 hours of practical classes, 50 hours of independent work*

### **12. Organisation of the teaching process:**

#### **Teaching methods:**

The following methods are used:

- *explanatory (information and reproductive) method:* lecture-based learning – lectures, audio and video materials, other educational content;
- *reproductive method:* traditional practical, seminar classes;
- *problem-based learning:* problem lecture, problem seminar/webinar, etc.; case-based learning – case study method;
- *partially-search method:* game-based learning – business games, simulation games, role-playing games; project-based learning; team-based learning, training course;
- *research method:* research-based learning – participation in research work, preparation of abstracts of reports at the conference, scientific articles

### **The content of the educational component:**

#### **Content module 1. Introduction to health technology assessment**

**Topic 1:** *Basic theoretical concepts and historical aspects of the development of health technology assessment.*

**Topic 2.** *Principles of building a system of health technology assessment in world practice. Organization of intergovernmental cooperation. Regulations on HTA*

**Topic 3.** *Regulatory and legal regulation of health technology assessment. Guidelines for the health technology assessment.*

#### **Content module 2. HTA methodology and use of assessment results for decision-making.**

**Topic 4.** *Methodological principles of health technology assessment. Basic model of HTA.*

**Topic 5.** *Evaluation of clinical efficacy and safety of medicines.*

**Topic 6.** *Methods for assessing the economic feasibility of medical technologies. Impact on the budget.*

**Topic 7.** *Scientific and applied aspects of applying the results of health technology assessment.*

### **Organisation of individual work:**

*Individual work includes studying questions on topics of the educational component that are not included in classroom learning, and performing tasks on these issues in order to consolidate the theoretical material.*

**13. Types and forms of control:*****Types and forms of control:******Current control:***

*Knowledge control in each lesson (on each topic):* oral questioning, passing test tasks, solving situational (calculation) tasks, etc.

*Control of content modules:* passing test tasks, solving situational (calculation) tasks, etc.

*Conditions for admission to the control of content modules:* for admission to the control of content module 2, you must have a minimum number of points for the topics of content module 1, for the control of content module 1.

***Semester control:***

*The form of semester control:* semester credit test.

*Conditions for admission to the semester control:*

– to the semester credit test – the current rating is more than 60 points, the academic detention of missed practical classes, the fulfillment of all types of work and requirements provided for in the working programme of the educational component.

**14. The assessment system for the educational component:*****Assessment of the acquisition of topics of the educational component during classes:***

<i>The number of the lesson of the educational component</i>	<i>The maximum number of points by lesson</i>	<i>Distribution of the maximum number of points per lesson by type of work</i>	<i>Types of work for which the applicant receives points</i>
<i>Content module 1</i>			
<b>Lesson 1.</b>	8	2	<i>testing</i>
		3	<i>oral answer</i>
		3	<i>solving situational problems</i>
<b>Lesson 2.</b>	8	3	<i>oral answer</i>
		3	<i>solving situational problems</i>
		2	<i>solving problems for individual work</i>
<b>Lesson 3.</b>	8	1	<i>testing</i>
		2	<i>oral answer</i>
		3	<i>solving situational problems</i>
		2	<i>solving problems for individual work</i>
<i>Total points for content module 1</i>		24	
<i>Content module 2</i>			
<b>Lesson 4.</b>	8	1	<i>testing</i>
		1	<i>oral answer</i>
		3	<i>solving situational problems</i>
		3	<i>solving problems for individual work</i>
<b>Lesson 5.</b>	8	2	<i>oral answer</i>
		3	<i>solving situational problems</i>
		3	<i>solving problems for individual work</i>

Lesson 6.	8	2	<i>oral answer</i>
		3	<i>solving situational problems</i>
		3	<i>solving problems for individual work</i>
Lesson 7.	8	2	<i>oral answer</i>
		3	<i>solving situational problems</i>
		3	<i>solving problems for individual work</i>
Lesson 8.	8	2	<i>testing</i>
		3	<i>oral answer</i>
		3	<i>solving situational problems</i>
Total points for content module 2:		40	
Total points per module:		64	

The study of the educational component by higher education applicants is possible through non-formal education. Instead of performing types of work on the topic of the educational component, the following types of work of a higher education applicant can be credited: participation in master classes, forums, conferences, seminars, webinars on the topic of the educational component (with the preparation of essays, abstracts, informational messages, etc.; it is confirmed by the program of the event, or abstracts of reports, or the corresponding certificate).

***The assessment of applicants by type of work during classes:***

<b><i>Types of work for which the applicant receives points</i></b>	<b><i>The maximum number of points</i></b>
<i>testing</i>	6
<i>answers to theoretical questions</i>	18
<i>solving situational problems</i>	24
<i>solving problems for individual work</i>	16
<b>Total points:</b>	<b>64</b>

***The assessment during the content module control:***

<i>Types of work for which the applicant receives points</i>	<i>Distribution of the maximum number of points for the content module control by type of work</i>	<i>The maximum number of points for the content module control</i>
<i>Content module 1</i>		
<i>testing</i>	6	16
<i>presentation</i>	10	
<i>Content module 2</i>		
<i>solving problems for individual work</i>	20	20
<i>Total points for control of the content modules:</i>		36

**Assessment of individual work of a higher education applicant:**

*during the current control:* 16 points: 4 points – writing an abstract (lesson 3, 8), 12 points – solving situational (calculation) problems (lesson 2, 4-7)

*during the control of content module 1:* cards for content module 1 include theoretical questions and test tasks on the topic 1-3

*during the control of content module 2:* cards for content module 2 include calculation tasks on the topic 4-7.

***The assessment scale of semester credit test:***

When studying the educational component, several assessment scales are used: 100-point scale, four-point scale (“Excellent”, “Good”, “Satisfactory”, “Unsatisfactory”) differentiated scale (for semester differentiated credit test and examination) and undifferentiated assessment (pass/fail), two-point scale (for semester credit test) and ECTS rating scale. Results are converted from one scale to another according to the table.

Total points by a 100-point scale	ECTS rating scale	Assessment by a four- point scale	Assessment by an undifferentiated scale
90-100	A	Excellent	passed
82-89	B	Good	
74-81	C		
64-73	D	Satisfactory	
60-63	E		
35-59	FX	Unsatisfactory	failed
1-34	F		

**15. Educational component policies:**

*Academic Integrity Policy.* It is based on the principles of academic integrity given in the Regulation “On measures to prevent cases of academic plagiarism in the NUPh”. Cheating when assessing the success of a higher education applicant during control activities in practical (seminar, laboratory) classes, monitoring of content modules and semester examinations is prohibited (including using mobile devices). Abstracts must have correct text links to the literature used. Identification of signs of academic dishonesty in the written work of a higher education applicant is the basis for its disregard by the teacher.

*Class attendance policy.* A higher education applicant is required to attend academic studies (Regulation “On the organisation of the educational process of the NUPh”) according to the class schedule (<https://nuph.edu.ua/rozklad-zanyat/>), adhere to ethical standards of behaviour.

*Policy on deadlines, academic detention, improving the rating, and eliminating academic debt.* Academic detention of missed classes by a higher education applicant is carried out in accordance with the “Regulations on academic detention of missed classes by applicants and the procedure for eliminating the academic difference in the curriculum in the NUPh” in accordance with the schedule for academic detention of missed classes set at the Department. Improving the rating and eliminating academic debt on the educational component is carried out by higher education applicants according to the procedure given in the Regulation “On the procedure for assessing the learning outcomes of higher education applicants in the NUPh”. Higher education applicants are required to comply with all deadlines set by the Department for performing types of written works on the educational component. Works that are submitted in violation of deadlines without valid reasons are rated at a lower rating – up to 20% of the maximum number of points for this type of work.

*Policy on challenging the assessment on the educational component (appeals).* Higher education applicants have the right to appeal the assessment on the educational component obtained during control activities. The appeal is carried out in accordance with the “Regulations on appealing the results of semester control of knowledge of higher education applicants in the NUPh”.

*Policy on the recognition of learning outcomes obtained through non-formal and/or informal education by higher education applicants.* Higher education applicants have the right to recognise the results of training acquired in non-formal and informal education in accordance with the Regulation “On the procedure for recognising learning outcomes obtained through non-formal and/or informal education by applicants for higher education in the NUPh”.

Within the framework of academic freedom of the teacher, instead of performing types of work on the topic of the educational component, it is possible to credit a non-formal education of a higher education applicant.

**16. Information and methodological support of the educational component:**

<b>Required reading</b>	<i>Health technology assessment [Electronic resource] : a workshop / A. S. Nemchenko [et al.]. - Electronic text data. - Kharkiv : NUPh, 2023. - 101 p.</i>
<b>Additional literature for in-depth study of the educational</b>	<ol style="list-style-type: none"> <li>1. <i>A Guide to ICER's Methods for Health Technology Assessment. Institute for Clinical and Economic Review, 2020. 43 p. URL: <a href="https://icer.org/wp-content/uploads/2021/01/ICER_HTA_Guide_102720.pdf">https://icer.org/wp-content/uploads/2021/01/ICER_HTA_Guide_102720.pdf</a></i></li> <li>2. <i>Angelis, A., Lange A., Kanavos P. Using health technology assessment to</i></li> </ol>

<b>component</b>	<p>assess the value of new medicines: results of a systematic review and expert consultation across eight European countries. <i>The European Journal of Health Economics</i>. 2018. Vol. 19, № 1. P. 123–152.</p> <p>3. ATC/DDD Index 2022. WHO Collaborating Centre for Drug Statistics Methodology. URL: <a href="https://www.whocc.no/atc_ddd_index/">https://www.whocc.no/atc_ddd_index/</a> .</p> <p>4. Consolidated Health Economic Evaluation Reporting Standards 2022 (CHEERS 2022) statement: updated reporting guidance for health economic evaluations / D. Husereau et al. <i>BMC Medicine</i>. 2022. Vol. 20, № 23. DOI:10.1186/s12916-021-02204-0</p> <p>5. Guidelines for the Economic Evaluation of Health Technologies: Canada. 4th ed. 2017. URL: <a href="https://www.cadth.ca/sites/default/files/pdf/guidelines_for_the_economic_evaluation_of_health_technologies_canada_4th_ed.pdf">https://www.cadth.ca/sites/default/files/pdf/guidelines_for_the_economic_evaluation_of_health_technologies_canada_4th_ed.pdf</a></p> <p>6. Guiding principles for good practices in hospital-based health technology assessment units / L. Sampietro-Colom et al. <i>International Journal of Technology Assessment in Health Care</i>. 2015. Vol. 31, № 6. P. 457–465.</p> <p>7. Health expenditure and financing. OECD. Stat. URL: <a href="https://stats.oecd.org/index.aspx?DataSetCode=SHA">https://stats.oecd.org/index.aspx?DataSetCode=SHA</a></p> <p>8. Health technologies and pharmaceuticals programme: annual report 2018. – Copenhagen : WHO Regional Office for Europe, 2019. – 38 p.</p> <p>9. ICER Guide to Understanding Health Technology Assessment (HTA). Boston, Institute for Clinical and Economic Review, 2018. 12 p. URL: <a href="https://icer.org/wp-content/uploads/2020/10/ICER-Guide-to-Understanding-Health-Technology-Assessment-6.19.18.pdf">https://icer.org/wp-content/uploads/2020/10/ICER-Guide-to-Understanding-Health-Technology-Assessment-6.19.18.pdf</a>.</p> <p>10. Kosyachenko K. L., Nemchenko A. S. Methodological approaches to development of the national guidelines of the health technology assessment. <i>Вісник фармації</i>. 2014. № 1. С. 54–57.</p> <p>11. Regulation (EU) 2021/2282 of the European Parliament and of the Council of 15 December 2021 on health technology assessment and amending Directive 2011/24/EU (Text with EEA relevance): <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R2282">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R2282</a></p> <p>12. Role of Health Technology Assessment in Pharmaceutical Market Access in Developed Countries / R. Kahveci et al. <i>Pharmaceutical Market Access in Developed Markets</i>. Torino : SEEd Medical Publishers, 2018. P. 225-256.</p> <p>13. The HTA Core Model – 10 Years of Developing an International Framework to Share Multidimensional Value Assessment / F. B. Kristensen et al. <i>Value Health</i>. 2017. Vol. 20, № 2. P. 244–250. DOI: 10.1016/j.jval.2016.12.010.</p>
<b>Up-to-date electronic information resources (journals, websites, etc.) for in-depth study of the educational component</b>	<p>1. <a href="https://www.dec.gov.ua/">https://www.dec.gov.ua/</a> - State Expert Center of the Ministry of Health of Ukraine</p> <p>2. <a href="https://www.ispor.org/">https://www.ispor.org/</a> - International Society for Pharmacoeconomic Research</p> <p>3. <a href="https://htai.org/">https://htai.org/</a> - International Society for Health Technology Assessment.</p> <p>4. <a href="https://hta.ua/pro-hta">https://hta.ua/pro-hta</a> - Health Technology Assessment.</p> <p>5. <a href="https://pubmed.ncbi.nlm.nih.gov/">https://pubmed.ncbi.nlm.nih.gov/</a> - PubMed resource.</p> <p>6. <a href="http://https://www.cochrane.org/">http://https://www.cochrane.org/</a> - Cochrane Library.</p> <p>7. <a href="https://www.embase.com">https://www.embase.com</a> - EMBASE database.</p> <p>8. <a href="https://www.nice.org.uk/">https://www.nice.org.uk/</a> - National Institute for Clinical Excellence (NICE) clinical guidelines database.</p> <p>9. <a href="https://www.sign.ac.uk/">https://www.sign.ac.uk/</a> - Scottish Intercollegiate Guidelines Network (SIGN) database of clinical guidelines.</p>
<b>Moodle distance learning system</b>	<a href="https://pharmel.kharkiv.edu/moodle/course/view.php?id=5168">https://pharmel.kharkiv.edu/moodle/course/view.php?id=5168</a>

**17. Material and technical support and software of the educational component:** computers, a set of services for organizing online and distance learning - Google Workspace for Education Standard, ZOOM video conferencing software, MOODLE 3.9.8 modular object-oriented dynamic learning environment