

**SYLLABUS OF THE EDUCATIONAL COMPONENT**  
**Nutriciology**

**for applicants for higher education of 3 year of study full time form of education (4,10д)англ year of study)**

**educational program "Pharmacy"**  
**specialty "226 Pharmacy, industrial pharmacy"**  
**field of knowledge "22 Health care"**  
**the second (master's) level of higher education**

**TEACHERS**



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**1. The name of higher education establishment and department: the National University of Pharmacy, Department Chemistry of Natural Compounds and Nutriciology**

**2. Address of the department: Kharkiv 61168, st. Valentinovskaya, 4**

**3. Web site of the department: [cnc.nuph.edu.ua](http://cnc.nuph.edu.ua)**

**4. Information about teachers:**

**Popova Natalia**, Doctor of Pharmaceutical Sciences, Professor of the Department of Chemistry of Natural Compounds and Nutritiology. Experience of scientific and pedagogical activity – 40 years. He teaches courses: "Pharmacognosy", "Pharmacognosy with the basics of phytocosmetics", "Pharmacognosy with the basics of resource science", "Nutritiology", "Resource science of medicinal plants". Research interests: chemistry of natural compounds, plant cultivation.

**POPYK Andrii**

Candidate of Pharmaceutical Sciences, assistant of Prof. of Department of Chemistry of Natural Compounds and Nutriciology of the National Pharmaceutical University. Experience of scientific and pedagogical activity – 8 years. Reads courses: «Pharmacognosy with the basics of resource science», «Resourse science of medicinal plants», «Nutritiology». Research interests: chemistry of natural compounds, plant cultivation.

**Tartynska Ganna**, Assistant of the Department of Chemistry of Natural Compounds and Nutrition, Candidate of Pharmaceutical Sciences. Experience of scientific and pedagogical activity – 9 years. He teaches courses: "Pharmacognosy", "Pharmacognosy with the basics of phytocosmetics", "Pharmacognosy with the basics of resource science", "Nutritiology", "Resource science of medicinal plants". Research

interests: chemistry of natural compounds, plant cultivation.

**SKREBTSOVA Kateryna**, Candidate of Pharmaceutical Sciences, assistant of Department of Chemistry of Natural Compounds and Nutriciology of the National Pharmaceutical University. Experience of scientific and pedagogical activity – 10 years. Reads courses: «Pharmacognosy with the basics of resource science», «Resource science of medicinal plants», «Nutritiology». Research interests: chemistry of natural compounds, plant cultivation.

**5. Consultations:** take place on Wednesdays from 12.05 to 12.50 at the Department of Chemistry of Natural Compounds and Nutritiology.

**6. Brief summary of the educational component:** Nutriciology is discipline of the first bachelor's level of specialty 226 "Pharmacy" of the educational-professional program "Pharmacy".

**7. The purpose statement of studying the educational component:** the formation of a system of theoretical knowledge, practical skills and abilities of higher education on the organization of nutrition of healthy and sick people at different ages of life through the application of modern scientific provisions of nutrition and assessment of nutritional composition of foods used for prevention and treatment .

**Course format:** conducting lectures and practical classes for optimal mastering of topics.

**8. Competences in accordance with the educational program:**

**Soft-skills / General competences (GC):**

GC 6. Knowledge and understanding of the subject area and understanding of professional activity.

**Hard-skills / Professional (special) competences (PC):**

PC 16. The ability to organize and carry out the procurement of medicinal plant raw materials in accordance with the rules of the Good Practice of Cultivation and Collection of Raw Materials of Plant Origin (GACP), as a guarantee of the quality of medicinal plant raw materials and medicines based on them. The ability to predict and calculate ways to solve the problem of preservation and protection of thickets of wild medicinal plants, in accordance with current legislation.

PC 20. Ability to develop methods of quality control of medicinal products, including active pharmaceutical ingredients, medicinal plant raw materials and auxiliary substances using physical, chemical, physico-chemical, biological, microbiological, pharmacotechnological and pharmaco-organoleptic control methods.

**9. The program learning outcomes: (PLO):**

PLO 7. Perform professional activities using creative methods and approaches.

PLO 28. Organize and carry out rational procurement of medicinal plant raw materials. Develop and implement measures for the protection, reproduction and rational use of wild species of medicinal plants.

**10. Status of the educational component:** *selective*.

**11. Prerequisites of the discipline:** "Normal and pathological human physiology", "Organic chemistry", "Biological chemistry", "Pharmacognosy"

**12. The volume of the educational component:** 4.0 ECTS credits (120 h): 8 hours - lectures, 32 hours - practical classes, 80 hours of independent work.

**13. Organization of training:**

**Teaching format of the educational component:** lectures, practical classes.

### **Content of the educational component:**

#### **Content module 1. *Nutrients in foods. diet, nutritional status, dietary supplements.***

**Topic 1. Nutrition: subject, purpose and objectives**

**Topic 2. Nutrition: modern approaches, principles, recommendations**

**Topic 3. Macro- and micronutrients**

**Topic 4. Diet, general characteristics of diets**

**Topic 5 Non-traditional (alternative) diets**

**Topic 6 Nutritional status**

**Topic 7. Dietary supplements. food products for special dietary consumption Ingredients of DS**

#### **Content module 2. *Nutritional correction of diseases***

**Topic 9.** Nutritional correction for food intolerance and food allergies.

**Topic 10.** Nutritional correction of diabetes.

**Topic 11.** Nutritional correction of obesity and diseases of the gastrointestinal tract.

**Topic 12.** Nutritional correction of diseases of the cardiovascular system.

**Topic 13.** Nutritional correction of urinary system's diseases.

**Topic 14.** Nutritional correction of musculoskeletal system's diseases.

#### 14. Forms and types of academic achievements supervision:

##### *Forms and types of academic achievements supervision*

*Current control* of theoretical and practical knowledge in the form of an oral, written and test survey using standardized methods for diagnosing knowledge, abilities and skills is carried out at each laboratory session in accordance with the specific goals of the topic and during the individual work of the teacher for topics that are not included in the structure of the lesson and are developed by the student of higher education independently.

*Control of content modules* - control of theoretical knowledge in the form of an oral, written and test survey of applicants for higher education, as well as practical skills in determining the identity and benignity of MPM. Control refers to knowledge and skills, both acquired in classes, and objects and topics developed independently by students of higher education.

When *studying the educational component* «Nutriciology», students of higher education take a semester exam. The exam on pharmacognosy with the basics of resource science is conducted in written form during the exam session, according to the schedule.

*Form of control* - semester credit.

#### 15. Evaluation system of the educational component:

The results of the semester control in the form of a semester credit are evaluated on a 100-point, undifferentiated scale ("passed", "failed") and on the ECTS scale.

*Points from the educational component are calculated according to the following ratio:*

Types of assessment	Maximum number of points (% of the number of points per module - for content modules)
Модуль 1	
Content module 1: • assessment of topics (1-7) (work in classes 1-7): work in classes (oral survey, writing input controls, solving logical problems); • control of content module 1 (solving theoretical, practical and logical tasks)	50 (50 %)
Content module 2: • assessment of topics (8-12) (work in classes 8- 12): work in classes (oral survey, writing input controls, solving logical problems); • control of content module 2 (solving theoretical, practical and logical tasks)	50 (50 %)
Semester control of the module	100

**The independent work of students of higher education is evaluated during the current control and during the control of the content module**

#### 16. Academic policies of the educational component:

*The policy of the educational component* ("rules of the game") is determined by the requirements of the department to the applicant for higher education when studying the educational component regarding academic integrity, regarding attending classes, regarding deadlines, working out, increasing the rating,

liquidating academic debts, regarding contesting the evaluation of the educational component (appeals), etc. In this point, the Regulations and other normative documents of the National University of Pharmacy are specified, in accordance with which requirements are set for the applicant for higher education when studying the educational component and the policy of the department is formed.

*For example, Academic Integrity Policy.* It is based on the principles of academic integrity stated in the POL "On measures to prevent cases of academic plagiarism at the National University of Pharmacy". Cheating during the evaluation of an applicant for higher education during supervision activities in practical (seminar, laboratory) classes, supervision of content modules and the semester exam is prohibited (including the use of mobile devices). Abstracts must have correct text references to the used literature. The detection of signs of academic dishonesty in the student's written work is a reason for the teacher not to credit it.

*Class attendance policy.* An applicant for higher education is obliged to attend classes (POL "On the organization of the educational process of the National University of Pharmacy ") according to the schedule (<https://nuph.edu.ua/rozklad-zanyat/>), to observe ethical norms of behavior.

*Policy regarding deadlines, working out, rating increase, liquidation of academic debts.* The completion of missed classes by an applicant for higher education is carried out in accordance with the POL "Regulations on the completion of missed classes by applicants and the procedure for eliminating academic differences in the curricula of the National University of Pharmacy" in accordance with the schedule for working out missed classes established by the department. Increasing the rating and liquidating academic debts from the educational component is carried out by the applicants in accordance with the procedure specified in the POL "On the procedure for evaluating the results of training of applicants for higher education at the National University of Pharmacy ". Applicants of higher education are obliged to comply with all deadlines set by the department for the completion of written works from the educational component. Works that are submitted late without valid reasons are assessed at a lower grade - up to 20% of the maximum number of points for this type of work.

*Policy on appeals of evaluation of the educational component (appeals).* Applicants for higher education have the right to contest (appeal) the evaluation of the educational component obtained during control measures. The appeal is carried out in accordance with the POL "Regulations on appealing the results of the final supervision of knowledge by applicants of higher education at the National University of Pharmacy".

## 17. Information and educational and methodical support of the discipline:

<b>The main reading suggestions</b>	<ol style="list-style-type: none"> <li>1. Lecture notes on nutriciology / Попова Н.В., Очкур А. В., Казаков Г.П., Ковалёв С.В., Алфёрова Д.А. X.: НФаУ,2018. 120 с.</li> <li>2. Dietary Supplements Compendium: 1st edition. – The United States Pharmacopeial Convention. – Rockville, MD. – 2009. – 1836 p.</li> <li>3. Dietary Supplements of Plant Origin. A nutrition and health approach / Edited by M. Maffei. – Taylor &amp; Fransis Ltd. – London, New York. – 2003. – 242 p.</li> <li>4. Food Lipids. Chemistry, nutrition, and biotechnology: 2nd edition, rev. and exp. / Edited by C.C. Akoh and D.B. Min. – Marcel Deccer, Inc. - New York. – 2002. – 1014 p.</li> <li>5. Herbal Products. Toxicology and clinical pharmacology: 2nd edition. / Edited by T.S. Tracy and R.L. Kingston. – Humana Press. – Totowa, New Jersey. – 2007. – 300 p.</li> <li>6. Phytochemicals as bioactive agents / Edited by W.R. Bidlack, S.T. Omaye, M.S. Meskin, D.K.W. Topham. - Boca Raton, Florida. - 2000. – 296 p.</li> <li>7. The Oxford Book of Health Foods. A comprehensive guide to natural remedies / J.G. Vaughan, P.A. Judd. – Oxford University Press. - New York. – 2006. – 223 p.</li> </ol>
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<b>Supplementary reading suggestions for in-depth study of the educational component</b>	<ol style="list-style-type: none"> <li>1. Гігієна харчування з основами нутриціології: Підручник; У 2-х кн. Кн. 1. / Т.І. Аністратенко, Т.М. Білко, О.В. Благодарова та ін.; За ред. проф. В.І. Ципріяна. К.: Медицина, 2007. 528 с.</li> <li>2. Нутриціологія: навч. посібник / Н.В.Дуденко [та ін.]; під ред. Н.В.Дуденко. Х.: Світ книг, 2013. 560с.</li> <li>3. Фізіологія харчування: підручник / Павлоцька Л.Ф., Дуденко Л.В., Левітін Є.Я. та ін. Суми: Університетська книга, 2011. 473 с.</li> <li>4. Конспект лекцій по нутрициологии для студентов фармацевтических Вузов / Попова Н.В., Очкур А. В., Казаков Г.П., Ковалёв С.В., Алфёрова Д.А. Х., 2014. 120 с.</li> <li>5. Гурвич М.М. Лечебное питание. Полный справочник. М.: Эксмо, 2009. 800 с.</li> </ol>
<b>Current electronic information resources (magazines, websites) for in-depth study of the educational component</b>	<ol style="list-style-type: none"> <li>1. Сайт кафедри хімії природних сполук - <a href="http://www.cnc.nuph.edu.ua">www.cnc.nuph.edu.ua</a></li> <li>2. Сайт бібліотеки НФаУ - <a href="http://lib.nuph.edu.ua">http://lib.nuph.edu.ua</a></li> <li>3. Національна бібліотека України імені В. І. Вернадського - <a href="http://www.nbuv.gov.ua">http://www.nbuv.gov.ua</a></li> <li>4. Сайт ХНУ ім. В. Н. Каразіна - <a href="http://www.univer.kharkov.ua">http://www.univer.kharkov.ua</a></li> <li>5. Сайт Наукової бібліотеки ХНМУ - <a href="http://libr.knmu.kharkov.ua">http://libr.knmu.kharkov.ua</a></li> <li>6. Харківська державна наукова бібліотека імені В.Г.Короленка - <a href="http://korolenko.kharkov.com">http://korolenko.kharkov.com</a></li> <li>7. The National Center for Biotechnology Information advances science and health - <a href="http://www.ncbi.nlm.nih.gov/pubmed">http://www.ncbi.nlm.nih.gov/pubmed</a></li> <li>8.</li> </ol>
<b>Distance learning system Moodle</b>	<a href="https://pharmel.kharkiv.edu/moodle/course/view.php?id=3644">https://pharmel.kharkiv.edu/moodle/course/view.php?id=3644</a>

**18. Technical support and software of the educational component:** computers for testing, multimedia device, screen.