

**Resource science of medicinal plants  
The syllabus of the discipline 2021**

**TEACHERS**



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**3. Website:** <https://cnc.nuph.edu.ua>

**4. Information about teachers:**

**Natalia POPOVA**

Doctor of Pharmaceutical Sciences, Professor, Professor of the Department of Chemistry of natural compounds and nutriviology of the National Pharmaceutical University. Experience of scientific and pedagogical activity – 38 years. Reads courses: Pharmacognosy, Resource science of medicinal plants, Nutriviology (for Ukrainian and foreign citizens studying in English). Research interests: chemistry of natural compounds, plant cultivation.

**Ganna TARTYNSKA**

Candidate of Pharmaceutical Sciences, assistant of department of chemistry of natural compounds and nutriviology of the National university of pharmacy. Experience of scientific and pedagogical activity – 9 years. Reads courses: Pharmacognosy, Resource science of medicinal plants, Nutriviology (for Ukrainian and foreign citizens studying in English). Research interests: chemistry of natural compounds, plant cultivation.

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Candidate of Pharmaceutical Sciences, assistant of department of chemistry of natural compounds and nutriviology of the National university of pharmacy. Experience of scientific and pedagogical activity – 6 years. Reads courses: Pharmacognosy, Resource science of medicinal plants, Nutriviology (for Ukrainian and foreign citizens studying in English). Research interests: chemistry of natural compounds, plant cultivation.

**5. Consultations:** take place every Friday from 11.00 to 14.00 at the Department of Chemistry of Natural Compounds and Nutriviology.

**6. Brief annotation:** the discipline " Resource science of medicinal plants " is a mandatory discipline for the second (master's) level in the specialty 226 Pharmacy, industrial pharmacy, educational program "Pharmacy". Final control – final control of modul.

**7. The purpose of the discipline:** to teach students to assess the stocks of medicinal raw materials in specific thickets, to know the resources of the plant world for human health and obtain the data necessary for the development of a program of rational use, protection and reproduction of resources, as well as to deepen knowledge of medicinal plants.

**8. The format of the discipline:** remote lectures and practical classes, practical classes in the face for optimal mastering of topics.

**9. Program learning outcomes:** Based on the learning outcomes, higher education students will be able to:

- According to the results of training, applicants for higher education will be able to:
- to be guided in modern problems of maintenance of pharmaceutical production of LRS;
- predict and find promising species of plants - sources of specific biologically active substances;
- to estimate stocks of medicinal raw materials on concrete thickets;
- develop and forecast the effectiveness of the rational use and restoration of plant resources;
- organize and conduct procurement, acceptance and standardization of medicinal plant raw materials, including in the field;
- to carry out a set of measures aimed at storage and multiplication of LR thickets and plants listed in the "Red Book of Ukraine";
- organize agro-technical measures and conduct expert evaluation of their effectiveness;
- to carry out harvesting and drying, primary processing and storage of medicinal raw materials;
- recognize impurities of morphologically similar plant species during harvesting, acceptance and certification of raw materials;

- calculate yields, operational stocks and annual possible harvest of wild medicinal plants.

**10. Scope of the discipline:** 3,0 ECTS credits: 90 hours of classroom classes, of which 6 hours - lectures, 24 hours - practical classes. 60 hours of independent work.

**11. Prerequisites of the discipline:** "Latin", "Pharmaceutical Botany", "Pharmacognosy", "Industrial Technology of Medicines", "Pharmacology", "Nutritiology".

**12. Hardware and software:** computers for testing, multimedia device, screen.

**13. Policies of academic discipline:** no forms of violation of academic integrity are tolerated. In case of such events - response in accordance with the provisions of NUPh.

**14. The scheme of the discipline:**

Data	Lectures	Materials of educational and methodical complex
01.09.2021-16.01.2022  / 17.01.2022-01.05.2022	Purpose and tasks of resource science of medicinal plants. Search for industrial arrays of medicinal plants	<a href="https://cnc.nuph.edu.ua/educational-process-for-the-quarantine-period/">https://cnc.nuph.edu.ua/educational-process-for-the-quarantine-period/</a>
	Geobotanical bases of resource science of medicinal plants	
	Legal bases of use and protection of natural resources of Ukraine.	
	Determination of yield of medicinal plant raw materials by different methods and accounting of raw material stocks	
	Periodicity of exploitation of industrial stocks of medicinal plants. Drawing up plans for the volume of procurement of medicinal plant raw materials. Design of cartographic material.	
	Raw material base of medicinal plants in Ukraine. Wild and cultivated medicinal plants in Ukraine. New promising medicinal plants.	
Data	Practical lesson	Materials of educational and methodical complex
01.09.2021-16.01.2022  / 17.01.2022-01.05.2022	Tasks of Medicinal plants resource science. Basic geobotanical and resource science terms. Selection of objects for resource surveys.	<a href="https://cnc.nuph.edu.ua/educational-process-for-the-quarantine-period/">https://cnc.nuph.edu.ua/educational-process-for-the-quarantine-period/</a>
	Working out a calendar plan of region's resource study. Identification of arrays of medicinal plants of the region according to the literature and reporting data.	
	<i>Control of the SM 1</i>	
	Estimation of the resources amount of medicinal plant material on certain brushwood using methods of registration plots, model specimens and projecting covering. Calculation of the plant material biological and operational reserves.	
	Phytocenoses of Ukraine. Green and Red Books. Preparation of crude drug. Development of recommendations on rational procurement of medicinal plants. The ways of medicinal raw material entry to the market.	
<i>Control of the SM 2</i>		

	<i>Final module control of Module 1.</i>	
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**15. Evaluation system and requirements:** evaluation is carried out on a 100-point scale: current control - 1-2 points, final control of assimilation of MR 1– 16-26 points, final control of assimilation of MR 2 – 16-26 points, final modular control - 25-40 points. Forms of control: oral examination, written, theoretical and test control.