

## SYLLABUS PHARMACEUTICAL BOTANY

1. Goals, subfields and methods in botany . Pharamceutical botany – significance of medicinal plants.
2. Plant cell – shape, size, building blocks, plant-specific structures – cell wall (function, chemical composition, cell wall growth and changes in the chemical composition).
3. Plant cell. Cytoplasm – structure and functions; plant-specific organelles – plastids (types, structure and functions).
4. Plant cell. Vacuole (structure, functions and chemical composition of the vacuolar content) and ergastic inclusions.
5. Plant tissues– definition, classification. Parenchyma – structure, characteristics and functions.
6. Plant tissues– definition, classification. Dermal tissues – epidermis and epidermal structures – structure, main and accessory functions. Bark – structure and function.
7. Plant tissues– definition, classification. Supportive tissues – structure, function and types.
8. Plant tissues– definition, classification. Vascular tissues – types and function. Vascular bundles – structure of open and closed bundles.
9. Plant tissues– definition, classification. Secretory tissue – functions.
10. Plant organs – classification. Root (*Radix*) – morphology, anatomy and functions.
11. Stem (*Caulis*) – morphology and anatomy, functions.
12. Modified stems and roots – types и function.
13. Leaf (*Folium*) – morphology. Modified leaves.
14. Leaf (*Folium*) – anatomy. Function of leaves.
15. Flower (*Flos*) – morphology и anatomy. Types of flowers.
16. Inflorescences (*Inflorescentia*) –types. Pollination.
17. Seed (*Semen*) and fruit (*Fructus*) – development and structure. Types of fruits – classification. Fruit and seed dispersal.
18. Plant systematics – goals and questions. Botanical classification and nomenclature. Taxons and taxonomic categories. Macroclassification.
19. Cyanobacteria ( *Cyanoprokaryota*) – general characteristics, representative taxa and importance to humans.
20. Eukaryote algae (*Rhodophyta and Bacillariophyta*) – general characteristics, representative taxa and importance to humans.
21. Eukaryote algae (*Phaeophyta and Chlorophyta*) – general characteristics, representative taxa and uses.
22. Spore-bearing plants (*Bryophyta and Lycopodiophyta*) – general characteristics and medicinal plants.
23. Spore-bearing plants (*Equisetophyta and Polypodiophyta*) – general characteristics and medicinal plants.
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24. Seed plants ( *Magnoliophyta*) –general characteristics, classification. Gymnosperms (*Ephedraceae and Ginkgoaceae*) - general characteristics and medicinal representatives.
25. Gymnosperms (Families *Pinaceae, Cupressaceae and Taxaceae*) – general characteristics, agricultural and medicinal representatives.

26. Angiosperms. *Magnoliopsida* – general characteristics. Families *Lauraceae* and *Magnoliaceae* – general characteristics, medicinal and agricultural species .
27. Families *Ranunculaceae* and *Berberidaceae* – general characteristics and medicinal plants.
28. Families *Papaveraceae* and *Fumariaceae* – general characteristics and medicinal plants.
29. Families *Fagaceae*, *Betulaceae* and *Juglandaceae* – general characteristics, medicinal and agricultural species.
30. Families *Caryophyllaceae*, *Polygonaceae* and *Chenopodiaceae* – general characteristics, medicinal and agricultural species.
31. Families *Clusiaceae*, *Ericaceae* and *Primulaceae* – general characteristics and medicinal plants.
32. Families *Violaceae*, *Salicaceae* and *Cucurbitaceae* – general characteristics, medicinal and agricultural species.
33. Families *Brassicaceae*, *Tiliaceae* and *Malvaceae* – general characteristics, medicinal and agricultural species.
34. Families *Moraceae*, *Cannabaceae* and *Urticaceae* – general characteristics, agricultural and medicinal species.
35. Families *Euphorbiaceae* and *Rosaceae* – general characteristics, medicinal and agricultural species.
36. Families *Fabaceae* and *Aceraceae* - characteristics, medicinal and agricultural species.
37. Families *Hippocastanaceae*, *Rutaceae* and *Anacardaceae* – general characteristics and medicinal plants.
38. Families *Linaceae*, *Geraniaceae* и *Rhamnaceae*– general characteristics and medicinal plants.
39. Families *Cornaceae*, *Araliaceae* and *Apiaceae* – general characteristics, medicinal and agricultural species.
40. Families *Caprifoliaceae*, *Valerianaceae* and *Rubiaceae* – general characteristics and medicinal species.
41. Families *Solanaceae*, *Convolvulaceae* and *Cuscutaceae* – general characteristics, medicinal and agricultural species.
42. Families *Boraginaceae* and *Scrophulariaceae* – general characteristics and medicinal plants.
43. Families *Plantaginaceae* and *Lamiaceae* – general characteristics, medicinal and agricultural species.
44. *Asteraceae* – general characteristics, medicinal and agricultural species.
45. *Liliopsida* – general characteristics. Families *Melanthiaceae* и *Iridaceae* – general characteristics, medicinal and economically-important species.
46. Families *Liliaceae*, *Aliaceae* and *Amaryllidaceae* – general characteristics, лечебни и използвани types.
47. Families *Asparagaceae*, *Dioscoreaceae* and *Orchidaceae* – general characteristics and medicinal plants.
48. Families *Poaceae* and *Araceae* – general characteristics, important food and medicinal Plants.