

**SYLLABUS**  
**CERTIFICATE COURSE**  
**HERBAL MEDICINE AND HERBAL**  
**PRODUCTS**

Department of Botany, St. Aloysius College (Autonomous), Mangalore

**Theory + Practicals** **30 Hrs**

**Unit-I Introduction to Plants** **5 hrs**

Classification of Plants into major groups. Salient features of Angiosperms. Plant and its Parts - morphology and Functions. Classification – Artificial, Natural and Phylogenetic system. Nomenclature – Binomial nomenclature and rules. Taxonomic hierarchy-Concept of Species, Genus, Family, Order, Class, Division and Kingdom. Field survey, Herbarium and Botanical garden.

**Unit-II Ethnomedicine & Pharmacognosy** **5 hrs**

Ethnomedicine – Definition, history and its scope Methods of disease diagnosis and treatment , Plants in folk culture – *Areca catechu*, *Aegle marmelos*, *Musa paradisiaca*, *Ficus benghalensis*, *Curcuma domestica*, *Cyanodon dactylon* , *Sesamum indicum* and other species

Pharmacognosy - History, Definition and scope. Systems of Indian Medicines – Brief account on Ayush – Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy

**Unit-III Concepts & Methods of Herbal Medicine** **5 hrs**

Concepts - the dosha, dhatu, mala and agni. Methods- Juice (svarasa), Powder (churna), Decoction (kvatha), paste (kalka), Infusion (phanta), Cold Infusion (situ kasaya), Milk Preparation (ksira paka), Linctus or Jam (avaleha, lehya, paka, prasa or khanda ), Medicated Oil and Ghee (taila and ghrita), Alcoholic Preparations (asava and arista), Pills or Tablets (gutika, vati and modaka)

**Unit-IV Medicinal Plants for Human health** **5 hrs**

Medicinal uses of Piperaceae, Combretaceae, Lamiaceae, Acanthaceae, Euphorbiaceae, Zingiberaceae, Poaceae, Apocyanaceae etc.

Health and balanced diet (Role of proteins, carbohydrates, lipids and vitamins)

Plants in day today life –*Ocimum sanctum*, *Centella asiatica*, *Mangifera indica*, *Cocos nucifera*, *Cassia auriculata*, *Aloe vera* etc. Nutritive and medicinal value of some fruits and vegetables

Plants for Cardiovascular diseases, cardiac drugs of plant origins – alkaloids, anticoagulants, Pulmonary / respiratory disorders – asthma, bronchitis, common cold, allergy . Urinogenital disorders , Drugs for dissolving kidney stones, Memory stimulants, Anti inflammatory drugs, Anticancer drugs

## Practicals

10 Hrs

1. Identification of Medicinal plants and raw materials of medicinal plants. Amla, Bulb (Garlic), Rhizome Ginger, Castor, Cinchona, Neem and Flower bud– Clove.
2. Poisonous plants – *Abrus precatorius* seeds, *Strychnos nux-vomica*
3. Identification of Medicinal Plants- Locally available 20 medicinal plants
4. Methods of different Herbal Preparations- Extraction methods- infusion, decoction, digestion, maceration, percolation, solvent extraction.
5. Herbal products : Juice (svarasa), Powder (churna)
6. Screening of phytochemicals primary and secondary metabolites. (carbohydrates, proteins, lipids, phenolics, flavonoids, pigments, alkaloids, volatile oils, terpenes, resins).
7. Extraction of Essential oils from locally available aromatic plants
8. Maintenance of Herbal Garden
9. Field and Industrial Visits

## References

1. K.Gopalakrishna Bhat, 2003. *Flora of Udupi*. Published by Indian Naturalist, 2003
2. Magadi R Gurudev *Karnatakada Aushadhiya Sasyagalu* Published by Divyachandra Prakashana
3. Paranjpe Prakash Dole Vilas A 2006. *A Text Book of Rasashastra*. Published by Chaukhamba Sanskrit Pratishthan
4. Ravindra Angadi 2016. *A Textbook of Bhaisajya Kalpana Vijana (Pharmaceutical Science)*

5. J. B. Harborne 2013. *Phytochemical Methods: A Guide to Modern Techniques of Plant Analysis*