



ST ALOYSIUS COLLEGE(AUTONOMOUS) MANGALURU - 575003

Re-accredited by NAAC with 'A' Grade – CGPA 3.6
Recognised as Centre for Research Capacity Building under UGC-STRIDE
Recognised by UGC as "College with Potential for Excellence"
College with 'STAR STATUS' conferred by DBT, Govt. of India

DEPARTMENT OF BOTANY

OFFERS

CERTIFICATE COURSE ON



HERBAL MEDICINE & HERBAL PRODUCTS



Course duration : 30 hours
Open to all UG & PG students

Course highlights

- ✓ *Medicinal plants for human health*
- ✓ *Herbal medicine preparations*
- ✓ *Ethnomedicine*
- ✓ *Pharmacognosy*
- ✓ *Field and industrial visits*



SYLLABUS
CERTIFICATE COURSE
HERBAL MEDICINE AND HERBAL
PRODUCTS

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

Theory+ Practicals30 Hrs

Unit-IIntroduction to Plants5 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-IIEthnomedicine&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*, *Cyanodondactylon* , *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-IIIConcepts& Methods of Herbal Medicine5 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 (ksirapaka), 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, Antiinflammatory drugs, Anticancer drugs

Course Outcome

Determining the efficacy of herbal medicine. Identifying and determining the type of adulterant

Verifying the role of ethnobotany and ethnopharmacology in • herbal drug evaluation. Screening of natural product by using different in vitro and in • vivo techniques. Determining toxicity of crude drug.

Practicals 10Hrs

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 visit

References

1. K.Gopalakrishna Bhat, 2003. *Flora of Udupi*. Published by Indian Naturalist, 2003
2. Magadi R Gurudev *Karnatakada Aushadhiya Sasyagalu* Published by DivyachandraPrakashana
3. Paranjpe Prakash Dole Vilas A 2006. *A Text Book of Rasashastra*. Published by Chaukhamba Sanskrit Pratishtan
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*