

Course Code	Course Name	Credits
26BY605	ETHNOBOTANY AND HERBAL SCIENCES	04

Course Objectives

- To develop a comprehensive understanding of the concept, scope and interdisciplinary nature of ethnobotany, including its historical development and present status in India.
- To familiarize students with ethnobotanical research methodologies and modern computer-based tools for data analysis.
- To examine the role of ethnobotany in modern medicine through the study of selected medicinal plants and their phytochemical and therapeutic significance.
- To provide knowledge on legal, ethical, and conservation aspects of ethnobotany and sustainable management of medicinal plant resources.

Learning Outcomes

Upon successful completion of this course it is intended that a student will be able to:

- Describe ethnobotanical principles, identify major tribal groups of India and classify plant uses.
- Demonstrate skills in conducting ethnobotanical surveys, preparing herbarium specimens and utilizing software and quantitative tools for data analysis.
- Interpret the medicinal significance of selected plants and relate traditional knowledge with modern pharmacological uses.
- Evaluate policies related to access and benefit sharing and propose conservation strategies for endangered medicinal plants.

Unit 1 - Ethnobotany Introduction (12 Hrs.)

Concept, scope and objectives, Ethnobotany as an interdisciplinary science, Ethnobotany throughout history, Current topics in ethnobotany, Indian ethnobotany: present status and future prospect, Major and minor ethnic groups or Tribals of India, Plants used by tribals as food, intoxicants, beverages, resins and oils.

Unit 2 - Methodology of Ethnobotanical Studies (12 Hrs.)

Field work, Herbarium, Ancient Literature, Archaeological findings, Temples and sacred places, Quantitative indices used in ethnobotanical research, Computer applications in Ethnobotany, Softwares used in ethnobotany, Computer-assisted data analysis.

Unit 3 - Ethnobotany and Legal aspects (12 Hrs.)

Ethnobotany as a tool to protect interest of ethnic groups, Access and benefit sharing, Biopiracy, Intellectual Property Rights, Bioprospecting of traditional knowledge, Trade in Indian medicinal plants.

Unit 4 – Role of Ethnobotany in Modern Medicine (12 Hrs.)

Ethnobotany, phytochemistry and modern uses of *Artemisia*, *Azadirachta indica*, *Curcuma longa*, *Indigofera tinctoria*, *Piper methysticum*, *Rauvolfia serpentina*, *Trichopus zeylanicus* and *Withania*.

Unit 5 - Herbal Drug and Conservation of Medicinal Plants (12 Hrs.)

Indian system of medicine, Taxonomy and uses of important medicinal and aromatic plants, Approaches for herbal drug discovery and development, Conservation of endangered and endemic medicinal plants.

Reference Books:

1. Jain, S. K. (Ed.). (1989). Methods and approaches in ethnobotany. Society of Ethnobotanists.
2. Jain, S. K. (1990). Contributions to Indian ethnobotany. Scientific Publishers.
3. Jain, A. K. (Ed.). (1995). Indian ethnobotany: Emerging trends. Scientific Publishers (India).
4. Jain, S. K. (1995). Manual of ethnobotany. Scientific Publishers.
5. Pullaiah, T., Krishnamurthy, K. V., & Bahadur, B. (Eds.). (2017). Ethnobotany of India, Volume 5: The Indo-Gangetic region and central India. Apple Academic Press.
6. Pullaiah, T., Krishnamurthy, K. V., & Bahadur, B. (Eds.). (2016). Ethnobotany of India: Volume 1: Eastern Ghats and Deccan. Apple Academic Press.
7. Schmidt, B. M., & KLASER Cheng, D. M. (Eds.). (2018). Ethnobotany: A phytochemical perspective. Wiley-Blackwell.