

**Value added Course
On
Ethnomedicinal Practices
By
Dinabandhu Mahavidyalaya, Bongaon
Session: 2024-25**

➤ **Course Objectives and Course outcome**

The **Course Objective** of an **Ethnomedicinal Practice** course is to provide students with a comprehensive understanding of the traditional use of plants, herbs, and natural substances in different cultures for medicinal purposes. The course aims to bridge the gap between traditional knowledge and modern scientific understanding, focusing on the healing practices of indigenous and local communities. It also emphasizes the importance of conservation, sustainability, and ethical considerations in the study and practice of ethnomedicine.

Here is an outline of typical **course objectives** for an **Ethnomedicinal Practice** course:

1. Understand the Concept of Ethnomedicine

- **CO1:** Define ethnomedicine and recognize its role in traditional healing systems across different cultures and regions.
- **CO2:** Explore the historical context and evolution of ethnomedicine, and its connection with folklore, spirituality, and local customs.
- **CO3:** Compare traditional medicinal practices with modern Western medicine and understand the interplay between them.

2. Learn About Ethnobotany and Medicinal Plants

- **CO4:** Identify and classify a wide range of plants, herbs, and other natural substances used in traditional healing practices.
- **CO5:** Understand the botanical, pharmacological, and toxicological properties of medicinal plants.
- **CO6:** Study the local and regional variations in the use of plants for medicinal purposes, and explore the cultural significance of these practices.

3. Explore Global Traditional Healing Systems

- **CO7:** Study various ethnomedical systems worldwide, such as Ayurveda, Traditional Chinese Medicine (TCM), Native American medicine, and African traditional healing.
- **CO8:** Understand the role of ritual, spirituality, and holistic approaches in ethnomedicinal practices.

- **CO9:** Recognize the value of oral traditions, community knowledge, and indigenous practices in preserving ethnomedicinal knowledge.

4. Investigate the Scientific Basis of Ethnomedicine

- **CO10:** Analyze the modern scientific methods used to validate the medicinal efficacy of plants and natural substances.
- **CO11:** Investigate the pharmacological properties of plant-based medicines through phytochemical analysis and clinical trials.
- **CO12:** Understand the role of ethnomedicine in modern drug discovery and the integration of traditional knowledge into contemporary health systems.

5. Understand Sustainable Practices in Ethnomedicine

- **CO13:** Learn the principles of sustainable harvesting, cultivation, and conservation of medicinal plants.
- **CO14:** Explore the ethical issues surrounding the collection and commercialization of traditional knowledge, including biopiracy and intellectual property rights.
- **CO15:** Promote the importance of biodiversity and the conservation of indigenous knowledge systems and natural resources.

6. Develop Practical Skills in Ethnomedicinal Practice

- **CO16:** Acquire hands-on experience in preparing traditional medicinal remedies, such as teas, tinctures, poultices, and oils.
- **CO17:** Practice identifying, harvesting, and processing medicinal plants for use in ethnomedicinal preparations.
- **CO18:** Understand safety, dosage, and contraindications when using ethnomedicinal plants and remedies.

7. Analyze the Cultural and Societal Context of Ethnomedicine

- **CO19:** Explore the cultural, social, and economic factors that influence the use of traditional medicine in different communities.
- **CO20:** Examine the role of gender, age, and social status in the practice and transmission of ethnomedicinal knowledge.
- **CO21:** Understand the integration of ethnomedicine with modern health care systems and its role in global public health.

8. Foster Critical Thinking and Research in Ethnomedicine

- **CO22:** Encourage students to critically evaluate ethnomedicinal practices, balancing cultural respect with scientific inquiry.
- **CO23:** Develop the ability to conduct research in the field of ethnomedicine, utilizing both ethnographic and scientific methodologies.

- **CO24:** Promote interdisciplinary approaches by integrating knowledge from anthropology, pharmacology, ethnobotany, and public health.

9. Promote Ethical and Responsible Practice in Ethnomedicine

- **CO25:** Understand the ethical implications of studying and utilizing ethnomedicine, including issues of cultural appropriation, informed consent, and community collaboration.
- **CO26:** Advocate for the protection of indigenous knowledge through legal frameworks such as the Convention on Biological Diversity and the Nagoya Protocol.
- **CO27:** Recognize the importance of mutual respect and collaboration between indigenous communities, researchers, and healthcare providers.

10. Apply Knowledge of Ethnomedicine to Modern Health Challenges

- **CO28:** Explore how ethnomedicine can contribute to addressing contemporary health issues such as chronic diseases, infectious diseases, and mental health.
- **CO29:** Investigate the role of ethnomedicine in integrative health care models and its potential for complementing modern medical treatments.
- **CO30:** Propose ways to integrate traditional medicinal knowledge into public health strategies and health education.

Overall Course Outcome:

Upon completing the **Ethnomedicinal Practice** course, students should be able to:

- **Identify and classify medicinal plants** used in various traditional healing systems and assess their potential for modern therapeutic use.
- **Understand the cultural, spiritual, and scientific foundations** of ethnomedicine and its global significance.
- **Evaluate the ethical and environmental issues** related to the commercialization and conservation of medicinal plants and traditional knowledge.
- **Integrate ethnomedicine with contemporary health practices**, promoting an inclusive approach to healthcare that respects and values indigenous knowledge systems.
- **Conduct research** into ethnomedicinal practices, using both traditional ethnographic techniques and modern scientific methods to validate plant-based therapies.

This course aims to provide a holistic understanding of ethnomedicine, cultivating an appreciation for traditional healing practices while encouraging scientific inquiry and sustainable practices. It prepares students to contribute to the growing field of ethnobotany, integrative medicine, and health conservation.

➤ **General Information and Course structure**

- Duration: 30 Hrs
- Entry Qualification: Hons. And General students of Biosciences
- Language: Bengali/ English
- Venue: Dinabandhu Mahavidyalaya, Bongaon
- Students per batch: 40
- Starting Date: 25.11.2024

➤ **Course Curriculum**

The **Ethnomedicinal Practice** course curriculum is designed to equip students with both theoretical knowledge and practical skills in the field of traditional medicine, focusing on the use of plants, herbs, and other natural substances for healing purposes across cultures. The curriculum combines ethnobotany, anthropology, pharmacology, and environmental sustainability. Below is a sample course curriculum for an **Ethnomedicinal Practice** program:

Topic 1: Introduction to Ethnomedicine and Traditional Healing Systems

Module 1: Introduction to Ethnomedicine

- **Definition and Scope of Ethnomedicine:** Overview of ethnomedicine and its global significance in traditional healing systems.
- **Historical Development:** The roots and evolution of ethnomedicine in indigenous cultures.
- **Ethnomedicinal vs. Modern Medicine:** Comparative analysis between traditional and modern medicinal systems.
- **Cultural Contexts:** Role of culture, spirituality, and community in shaping medicinal practices.

Module 2: Ethnobotany: The Relationship Between Plants and People

- **Introduction to Ethnobotany:** Study of plant use in human culture, with a focus on medicinal plants.
- **Plant Identification and Classification:** Botanical taxonomy, key features for plant identification, and classification of medicinal plants.

- **Plant Parts Used in Medicine:** Roots, leaves, flowers, bark, and seeds.
- **Methods of Plant Preparation:** Teas, tinctures, infusions, poultices, powders, and oils.

Module 3: Ethnopharmacology

- **Introduction to Pharmacology in Ethnomedicine:** Basic principles of pharmacology, how plant chemicals affect the human body.
 - **Phytochemicals in Medicinal Plants:** Alkaloids, flavonoids, terpenoids, glycosides, and essential oils.
 - **Bioactive Compounds:** Understanding the therapeutic properties of different plant compounds (e.g., anti-inflammatory, anti-bacterial, analgesic).
 - **Toxicity and Safety Considerations:** Risk management and adverse effects associated with plant-based remedies.
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Topic 2: Global Traditional Healing Systems and Practices

Module 4: Indigenous and Traditional Healing Systems

- **Traditional Chinese Medicine (TCM):** Historical development, key concepts (Qi, Yin-Yang), and herbal therapies.
- **Ayurveda:** Principles of balance in body and mind, common herbs, and treatment approaches.
- **African Traditional Medicine:** Common healing practices, plant-based treatments, and cultural significance.
- **Native American Medicine:** Plant use in traditional healing, spiritual dimensions of healing practices.
- **Other Regional Systems:** Indigenous healing traditions from South America, Australia, and Southeast Asia.

Module 5: Rituals, Spirituality, and Healing

- **The Role of Spirituality in Healing:** How rituals, prayers, and spiritual beliefs influence medicinal practices.
- **Holistic Approaches:** The integration of mind, body, and spirit in traditional medicine.
- **Herbal Rituals and Ceremonies:** The use of plants in ceremonial practices (e.g., sacred plants, purification rituals, and healing dances).
- **Shamanism and Healers:** The role of shamans, herbalists, and medicine men/women in different cultures.

Module 6: Fieldwork: Studying Traditional Healers

- **Ethnographic Research Methods:** How to conduct fieldwork with indigenous healers and gather traditional knowledge.
- **Documentation and Interviews:** Techniques for recording plant-based knowledge through interviews with local practitioners.

- **Community-based Knowledge Systems:** Importance of oral traditions in preserving ethnomedicinal knowledge.
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Topic 3: Scientific Validation of Ethnomedicinal Knowledge

Module 7: Scientific Basis of Ethnomedicine

- **Phytochemical Screening:** Techniques for isolating bioactive compounds from medicinal plants.
- **In Vitro and In Vivo Studies:** Laboratory methods for testing plant efficacy (cell cultures, animal models).
- **Clinical Trials:** How ethnomedicinal treatments are tested in human clinical trials.
- **Ethnopharmacology and Drug Discovery:** The contribution of traditional knowledge to modern pharmaceuticals.

Module 8: Herbal Medicine and Modern Health Systems

- **Integrative Medicine:** The merging of traditional medicine with conventional healthcare practices.
- **Herbal Medicine in Modern Healthcare:** The role of herbal treatments in managing chronic diseases (e.g., diabetes, hypertension, arthritis).
- **Regulation of Herbal Remedies:** Issues around the standardization, quality control, and regulation of herbal medicines.
- **Challenges and Opportunities:** Potential of ethnomedicine in addressing global health challenges.

Module 9: Ethical, Legal, and Environmental Issues in Ethnomedicine

- **Intellectual Property and Biopiracy:** Ethical issues in the use and commercialization of traditional knowledge and medicinal plants.
 - **Conservation of Medicinal Plants:** The importance of protecting biodiversity and sustainable harvesting methods.
 - **Legal Frameworks:** International agreements (e.g., the Nagoya Protocol) for protecting indigenous knowledge and natural resources.
 - **Ethical Fieldwork Practices:** Obtaining informed consent and respecting cultural sensitivities when studying indigenous practices.
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Topic 4: Applied Ethnomedicine and Practical Skills

Module 10: Practical Applications of Ethnomedicine

- **Herbal Preparations:** Hands-on workshops in creating herbal medicines (e.g., teas, salves, tinctures).

- **Making Medicinal Products:** Extraction methods, tincturing, making essential oils, and herbal ointments.
- **Safety and Dosage:** Proper dosage, potential side effects, and contraindications for common plant-based remedies.
- **Traditional Healing Demonstrations:** Visiting local traditional healers to observe and learn practical applications of ethnomedicine.

Module 11: Sustainable Practices in Ethnomedicine

- **Sustainable Harvesting:** Techniques for ethical and sustainable collection of medicinal plants.
- **Ethnobotanical Gardens:** How to create and maintain gardens that support the cultivation of medicinal plants.
- **Conservation and Cultivation of Endangered Species:** Protecting rare and endangered medicinal plants.
- **Eco-friendly Packaging and Marketing:** Sustainable practices in packaging and promoting herbal products.

Module 12: Research and Community Collaboration

- **Designing an Ethnomedicine Research Project:** How to develop a research proposal for ethnomedicinal studies.
- **Collaboration with Indigenous Communities:** Building partnerships with local communities for research and development of medicinal products.
- **Ethnobotanical Surveys:** Conducting surveys and mapping plant-based healing knowledge in different regions.
- **Final Project:** Students work on an independent or group project focused on a specific ethnomedicinal topic (e.g., a local herb or healing practice).

Assessment and Evaluation

- **Exams:** Written assessments covering theoretical aspects of ethnomedicine, ethnopharmacology, and global healing systems.
- **Practical Assessments:** Hands-on exams involving the preparation of herbal remedies or identification of medicinal plants.
- **Research Projects:** Fieldwork-based research projects, ethnobotanical surveys, or scientific studies on ethnomedicinal plants.
- **Field Trip Reports:** Documentation of visits to indigenous healers or ethnobotanical gardens, including analysis and reflection.

Key Skills Developed:

- **Plant Identification and Use:** Proficiency in identifying medicinal plants and understanding their uses in traditional systems.

- **Herbal Medicine Preparation:** Practical skills in preparing and administering traditional herbal medicines.
- **Ethnographic Research:** Skills in conducting fieldwork and documenting traditional healing knowledge.
- **Scientific Research:** Understanding how ethnomedicine can be studied scientifically and contribute to modern medicine.
- **Ethical Awareness:** Sensitivity to the ethical, legal, and cultural dimensions of ethnomedicine.

This **Ethnomedicinal Practice** curriculum is designed to provide a deep and interdisciplinary understanding of the traditional use of plants and natural substances for healing, while also preparing students to bridge the gap between traditional and modern medical practices. Students will gain both practical and academic knowledge, with an emphasis on sustainability, ethical practice, and community collaboration.

Topic	Class number	Hours
1	2	5
2	2	5
3	3	6
4	7	14

Principal: Dr. Biswajit Ghosh

IQAC coordinator: Dr. Rana Saha

Those who are interested may contact to the course coordinator for enrollment of their name.

Course Co-ordinator: Dr. Debadrito Das (Mob No: 8759228659)