

**Kavayitri Bahinabai Chaudhari North Maharashtra
University, Jalgaon**

Ordinance 181

Name of College

R. C. Patel Arts, Commerce and Science College, Shirpur

Name of career oriented course

Certificate Course in Ethnobotany

Faculty

SCIENCE

Academic year

(2022-23)

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

Ordinance 181

College name	:	R. C. Patel Arts, Science and Commerce College, Shirpur
Title of the course	:	Certificate Course in Ethnobotany
Aims/Objective of the course	:	The aim of Ethnobotany is to explore how these plants are used as medicine for the society and also maintain proper documentation of indigenous knowledge about medicinal plants
Duration of the course	:	1 Year
Fees structure	:	500/-
Course structure	:	Paper I: Studies on medicinal plants Paper II: Plant Diversity and Human Health Paper III: Lab Course
Eligibility for admission	:	XIIth Science

Skeleton of course:

Sr No	Paper	Name of subject	Theory / Practical	Teaching hours	Maximum marks allotted			Passing			Credit
					External	Internal	Total	External	Internal	Total	
1.	Paper I	Studies on medicinal plants	Theory	90	60	40	100	24	16	40	6
2.	Paper II	Plant diversity and Human Health	Theory	90	60	40	100	24	16	40	6
3.	Paper III	Lab course	Practical	120	60	40	100	24	16	40	8

Minimum staff : 03

Mode of examination : Internal and external
(Theory and Practical)

Detail syllabus : Syllabus copy attached

CCEB 101: Studies on Medicinal plants

Topics	Lectures allotted (in hrs)
1. Foundation in Ethnobotany	
1.1 Definition, scope & importance.	15
1.2 Plants and human relationship.	
1.3 Resemblance in between Ethnobotany & Economic botany.	
1.4 History of medicinal plants.	
2 Herbarium and its techniques :	
2.1 Definition and importance.	15
2.2 Herbarium and its techniques.	
2.2.1 Collection	
2.2.2 Drying & pressing	
2.2.3 Mounting	
2.2.4 Arrangement of herbarium sheets	
2.2.5 Labelling of herbarium sheets	
3. Ethnobotany of Tribes in Khandesh:	
3.1 Thakur	15
3.2 Bhil	
3.3 Pawara	
3.4 Banjara	
4. Ethnobotany of some plants (with their botanical name, general characters, distribution, phytochemistry and plant parts use and their importance)	
4.1 <i>Azadirachta indica</i> (Neem)	30
4.2 <i>Datura metel</i> Linn (Dhotara)	
4.3 <i>Adhatoda visica</i> (Adulsa)	
4.4 <i>Ocimum sanctum</i> (Tulsi)	
4.5 <i>Curcuma longa</i> (Haldi)	
4.6 <i>Madhuka indica</i> (Mahua)	
4.7 <i>Phyllanthus imbilica</i> (Aamla)	
4.8 <i>Aloe vera</i> (Ghritkumari)	
4.9 <i>Citrus limon</i> (Lemon)	
4.10 <i>Allium sativum</i> (Garlic)	
4.11 <i>Saraca asoca</i> (Ashoka)	
4.12 <i>Carica papaya</i> (Papaya)	
4.13 <i>Solanum virgatum</i> (Wild Brinjal)	
4.14 <i>Acacia nilotica</i> (Babul)	
4.15 <i>Trachyspermum ammi</i> (ova)	
5. Ayurveda of Medicine:	
5.1 Principles and Merit and Demerits of medicinal plants.	15
5.2 Methods of preparation of Ayurvedic medicine.	
5.3 Standardization of Ayurvedic medicines.	
Total	90

CCEB 102: Plant Diversity and Human Health

Topics	Lectures allotted(in hrs)
1. Plant Diversity:	
1.1 Plant Diversity its scope and importance.	
1.2 Genetic Diversity.	
1.3 Species Diversity.	15
1.4 Medicinal Plants Diversity at the Ecosystem level.	
1.5 Environment for medicinal plants.	
2. Loss of Biodiversity:	
2.1 Loss of genetic diversity.	15
2.2 Loss of species diversity.	
2.3 Loss of Ecosystem diversity.	
2.4 Loss of agrobacterium, projected scenario for biodiversity loss.	
3. Conservation of Biodiversity	
3.1 Conservation of Biodiversity	25
3.1.1 Conservation of Genetic diversity	
3.1.2 Species diversity	
3.1.3 Ecosystem diversity	
3.2 In situ and ex situ conservation.	
3.3 Social approaches to conservation.	
3.4 Biodiversity awareness programmes sustainable development.	
4. Energy Conservation	
4.1 Sources of energy: Conventional and Non-Conventional.	15
4. 2 Non-conventional Sources of energy: Solar and Wind energy.	
4.3 Prospective alternatives for energy petro plants and biogas.	
5. Pollution	
5.1 Air pollution: Sources, types, effect of air pollution on plants and Humans.	20
5.2 Water pollution-Causes, effect and control measures.	
5.3 Global warming and Climate change- Greenhouse effect, Ozone depletion, L NINO and LA NINA.	
5.4 International efforts to tackle climate change.	
Total	90

CCEB-103: Lab Course

Sr. No.	Lab course	Lectures allotted (in hrs)
1.	Study of Medicinal Plants using local flora (any 15)	30
2.	Preparation of ayurvedic medicines from suitable medicinal plants.	10
3.	Herbarium and its techniques.	10
4.	To study medicinal plants and its plant parts used as medicines.	10
5.	Collection of medicinal plants from local flora. (any 05)	10
6.	Distribution of Medicinal plants in Khandesh region.	10
7.	Study of soil texture.	10
8.	Determination of pH and analysis of soil samples for carbonate, nitrate and sulphates.	10
9.	Ethnic tribes and medicinal plants.	10
10.	Field visit.	10
	Total	120

References:

1. Text Book of Ethnobotany. P.C. Trivedi and Niranjana Sharma. Published by Pointer Pub, 2011. ISBN 10: 8171326552 / ISBN 13
2. Cultivation and Utilisation of Medicinal and Aromatic Crop by C. Atal & V. Kappor
3. Production Technology of Medicinal and Aromatic Crop by A.A. Farooqi M.M Khan
4. Insect and Mites infesting Medicinal plant in India by S.K.Gupta Bishen Singh Mehendrapal singh Dehradun
5. Medicinal Chemistry: A Molecular & Biochemical Approach by Mogaidey and Donald
6. Patil, D.A. (2003) Flora of Dhule and Nandurbar District (Maharashtra). Bishen
7. Kshirsagar, S.R. and D.A.Patil (2008) Flora of Jalgaon District, Maharashtra,
8. Saxena, M. M. (1990) Applied Environmental Biology (Resource and management)
9. Agrawal, K.C. (1996). Environmental Biology, Agro-Botanical Publisher, Bikaner India
10. Dash, M.C.(1993).Fundamentals of Ecology, Tata McGraw Hill Publishing Co. Ltd
11. Verma, P. S. and V.K. Agrawal, Principles of ecology. S. Chand & co. (Pvt.) Ltd. Ram
12. Odum, E. P. (1986).Fundamental of Ecology, Natraj Publishers, Dehra –Dun, India.Nagar, New Delhi. India
13. Maheshwari, J.K. (1996). Ethnobotany in South Asia. Scientific Publishers, Jodhpur
14. Jain, S.K. (Ed) (1995).A Manual of Ethnobotany (IInd Ed.) Scientific Publisher sinha, Rajiv, K and S. Sinha (2001). Ethnobiology, Sura Publications, Jaipur, India.