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## OPEN/GENERAL ELECTIVE COURSE (OE/GE): PLANTS FOR HUMAN WELFARE

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Open for Second Year Graduate Student w.e.f. 2024-25

**RECOMMENDED BY THE BOARD OF STUDIES IN BOTANY  
AND  
APPROVED BY THE ACADEMIC COUNCIL**

Devrukh Shikshan Prasarak Mandal's  
Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and  
Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh.  
Tal.Sangmeshwar, Dist. Ratnagiri-415804, Maharashtra, India

Academic Council Item No: 03

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Science/Arts/Commerce
Name of the Class to Which the course is Open	:	Second Year, Semester Fourth
No. of Credits	:	02
Title of the Course	:	Plants for Human Welfare
Course Code	:	BTOE204
Passing Marks	:	40%
Nature of Course	:	Open Elective Course (OE)
Level	:	UG
Pattern	:	60:40
Status	:	Multidisciplinary- Open to all in the First Year
To be implemented from Academic Year	:	2024-25

## Open Elective Course (OE) in Plants for Human Welfare

(With effect from the academic year 2024-25)

**SEMESTER-IV**

**Paper No.– I**

**Course Title: Plants for Human Welfare**

**No. of Credits - 02**

**Type of Vertical: Open/General Elective**

**COURSE CODE: BTOE204**

### Learning Outcomes Based on BLOOM's Taxonomy:

After completing the course, the learner will be able to...		
Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	Remember	Recall medicinal properties of plants and their applications.
CLO-02	Understand	Explain diversity of plant species and their utility in various aspects
CLO-03	Apply	Apply sustainable practices in plant resource management
CLO-04	Analyse	Differentiate diverse range of plant-based resources that contribute to human welfare, including food, medicine, fuel, and construction materials
CLO-05	Evaluate	Justify significance of traditional knowledge systems related to plants and their role in preserving cultural heritage and biodiversity.

**Syllabus for Open/General Elective Course in  
Plants for Human Welfare**

**(With effect from the academic year 2024-25)**

**SEMESTER-IV**

**Paper No.– I**

**Course Title: Plants for Human Welfare**

**No. of Credits - 02**

**Type of Vertical: Open/General Elective**

**COURSE CODE: BTOE204**

<b>COURSE CONTENT</b>			
<b>Module No.</b>	<b>Content</b>	<b>Cr</b>	<b>L</b>
<b>I</b>	<ul style="list-style-type: none"> <li>➤ Origin of cultivated plants</li> <li>➤ Domestication of plants and origin of agriculture.</li> <li>➤ Major and minor food yielding crops</li> <li>➤ Cereals and millets - Uses and byproducts of Wheat, Rice, Maize, Jowar, Bajara and Nachani.</li> <li>➤ Pulses - Uses and byproducts of Bengal gram, Pigeon Pea, Moong bean, Udid, Soybean, etc.</li> <li>➤ Edible oil yielding plants - Groundnut, Safflower, Mustard, Sesame, Coconut, Sunflower, Soybean, Rice-bran</li> <li>➤ Non edible oil yielding plants- Neem oil, Karanj oil, Castor oil</li> <li>➤ Fruits and vegetables</li> <li>➤ Spices and condiments</li> </ul>	01	15
<b>II</b>	<ul style="list-style-type: none"> <li>➤ Plants for medicinal and pharmaceutical uses</li> <li>➤ Plants for cloth making</li> <li>➤ Plants for timber, construction materials</li> <li>➤ Plants for paper industry</li> <li>➤ Plants for biofuel fuel production</li> <li>➤ Plants for aromatics, perfumery</li> <li>➤ Plants for beverage (alcoholic and non-alcoholic) production</li> <li>➤ Environmental benefits of plants</li> <li>➤ Cultural and aesthetic value of plants</li> <li>➤ Traditional knowledge systems related to plants and their role in preserving cultural heritage and biodiversity.</li> <li>➤ Sustainable practices in plant resource management</li> </ul>	01	15
<b>Total</b>		<b>02</b>	<b>30</b>

**References:**

1. A Text Book of Economic Botany A.V.S. Samba Murty, N.S. Subrahmanyam.
2. Economic Botany in the Tropics - S.L. Kochhar.
3. Economic Botany - Albert F. Hill.
4. Economic Botany B.P. Pandey. -
5. Economic Botany - S. Sen.
6. Economic Botany - Ashok Bende, Ashok Kumar.
7. A Text Book of Economic Botany - V. Verma.
8. A Text Book of Botany Volume III - S.N. Pandey, A. Chaddha.
9. Botany of Field Crops D. Daniel Sundararaj, G. Tulsidas. -
10. Text Book of Biochemistry E.S. West, W.R. Todd, - H.S. Mason, J.T.V. Bruggin.
11. Oil seeds and oil milling in India - a cultural and historical survey. Achaya K.T. (1990)  
Oxford & IBH Publishing C. Pvt. Ltd. New Delhi.
12. Glossary of Indian Medicinal Plants - R.N. Chopra, S.L. Nayar, I.C. Chopra.
13. Indian Medicinal Plants - A.V. Sale.
14. Compendium of Indian Medicinal Plants - Volume I, Ram P. Rastogi, B.N. Mehrotra.
15. Economic Botany - Beryl Brintnall Simpson, Molly Conner - Ogorzaly.