

St. Xavier's College (Autonomous), Ahmedabad

Syllabus of Semester – II of the following department under Faculty of Science based on Under Graduate Curriculum Framework - 2023 to be implemented from the Academic Year 2023-24.

FACULTY OF SCIENCE

DEPARTMENT OF BOTANY

Course	Title	Content	Hours/week	Credit
SEC	Herbarium Techniques	U-I: Introduction to Herbarium and Collection U-II: Processing and Maintenance of specimens	4 hrs	2

BSc. (Hons.) Botany

Category – IV

Skill Enhancement Course: Herbarium Techniques

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credit Distribution of The Course			Eligibility Criteria	Pre-requisite(s) of the Course (if any)
	Lecture	Tutorial	Practical / Practice		
Herbarium Techniques (BO-2650)	2	0	0	10 + 2 from a recognized board in any stream	Basics of Biology

LEARNING OUTCOME(LO)

On completion of this course, the student will be able-

LO1: To understand history, role, types, importance of herbaria also to gain knowledge on collection method.

LO2: To understand processing of specimens and maintenance of herbarium.

COURSE OUTCOME(CO)

On Completion of this course, the student has been able to-

CO1: Discuss history, role, types, importance of herbaria also will be able to explain collection method of plants.

CO2: Explain processing of specimens also describe how to maintain an herbarium.

UNIT I: Introduction to herbarium and Collection (15L)

1. INTRODUCTION TO HERBARIUM

- History of herbarium and Objectives of herbarium
- Herbarium sheet
- Role of herbarium in teaching and research
- Types of herbaria and Functions of herbarium
- Important herbaria of the world and Major herbaria in India

2. COLLECTION

- Field equipment's
- Kinds of field work
- Collection
- What to collect?
- Field note book (field diary)

UNIT II: Processing and Maintenance of Specimens (15L)

3. PROCESSING OF SPECIMENS

- Poisoning
- Pressing
- Drying
- Mounting
- Stitching
- Labelling
- Identification / determination of plants
- Incorporation
- Arrangement of specimens
- Lending

4. MAINTENANCE

- Fumigation
- Heating
- Chemical treatment
- Handling of specimens

5. Collection, Preservation & Identification of Algae.

6. Survey, Collection, Identification and Preservation of Wild Mushrooms.

7. Collection, Preservation and Storage of Bryophytes

Suggestive Reading:

- Manual Herbarium Technique.pdf (Training Course On Herbarium Techniques And Methodology. BSI).

Suggested Online Links/Readings:

<https://swayam.gov.in>

[https://www.iscnagpur.ac.in/knowledge_learning_files/5.7 General Open Access e-Resources.pdf](https://www.iscnagpur.ac.in/knowledge_learning_files/5.7_General_Open_Access_e-Resources.pdf)

<https://www.tkdil.res.in/tkdil/langdefault/common/Home.asp?GL=Eng>

<https://ndl.iitkgp.ac.in>

<https://nptel.ac.in/course.html>

www.ncert.in

<https://books.google.co.in>

Pedagogy:

1. Lecture method with teaching aids.
2. Audio-Visual Teaching mode with Projector Method.
3. Dialogue and context-based class.
4. Assignments, Learning seminar, Class Test
5. Open Online Sources and Tutorials.

MODE OF EVALUATION:

ASSESSMENT	MARKS
INTERNAL	
Attendance	05
Assignments	05
Continuous Internal Assessment I and II	15
TOTAL	25 marks
EXTERNAL	
End Semester Exam	25 marks

Students will prepare and present (in pairs) a Submission related to the topic of Assignment on allotted topics. These Submission will be presented in form of PPT/ Activity/ Hand written notes etc. Points for evaluation: Presentation (20%) + Content (20%) + explanation (20%) +Creativity (20%) + Overall impression (20%).