

ST. XAVIER'S COLLEGE (AUTONOMOUS)

AHMEDABAD

Botany Syllabus for Four-Year Undergraduate Programme as per National Education Policy (NEP-2020) (Semester I/II/III)



(EFFECTIVE FROM JUNE 2023)

**ST. XAVIER'S COLLEGE (Autonomous),
AHMEDABADBOTANY
Theory syllabus**

PROGRAMME SPECIFIC OUTCOMES

PSO1: Knowledge: Understanding the nature and basic concepts of all the plant groups, their morphonology, anatomy, taxonomy, physiology, biochemistry, genetics, components at the molecular level, the relationship between structure and function, plant diversity, and ecology.

PSO2: Laboratory skills: Students learn to carry out practical work in the field and in the laboratory related to interpreting plant morphology and anatomy, plant identification and collection, vegetation analysis techniques, physiochemical analyses of plant materials, analysis of data using appropriate statistical methods, documentation of field visits, visits to gardens and nurseries.

PSO3: Environmental concern: Students become aware of natural resources and understand the impact of plant diversity in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development with respect to assessment, conservation and utilization of floral diversity.

PSO4: Employability/future prospects: Students develop critical thinking, scientific attitudes, problem-solving skills, presentation skills, teamwork capacities, and an aptitude that is highly valuable to employers in the sector of academia, research and industry and which will facilitate them for taking up and shaping successful careers in Botany.

PSO5: Scientific communication: Effective written and oral scientific communication skills, especially the ability to transmit the fundamental concepts of the subject in a clear and concise manner.

PSO6: Life-long learning: Students are prepared for lifelong learning by drawing attention to the vast world of knowledge of plants and by enhancing their ability to engage in independent learning by introducing them to the methodology of systematic academic inquiry.

St. Xavier's College (Autonomous), Ahmedabad
Syllabus of Semester – I/II/III 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
MDC	Plant Biodiversity (MDC203-1C)	U – I: Biodiversity: Global and Indian U– II: Biomes & Natural History U– III: Plant Diversity U– IV: Human-Wildlife Interaction	4 hrs	4

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Syllabus of Semester – I/II/III of the following departments under the 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

BSc. (Hons.) Botany

Multidisciplinary Course: Plant Biodiversity

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credit Distribution of The Course			Eligibility Criteria	Prerequisite(s) of the Course (if any)
	Lecture	Tutorial	Practical / Practice		
Plant Biodiversity (MDC203-1C)	4	0	0	10 + 2 from a recognized board in any stream	Basic Science subjects

LEARNING OBJECTIVES (LO)	
LO-1	To acquire knowledge on Biodiversity at global and Indian levels.
LO-2	To gain knowledge of Biomes and Natural History.
LO-3	To understand basic concepts of plant diversity and Human-wildlife interactions.
Course OUTCOMES (CO)	
On Completion of this course, the student will be able to	
CO-1	Discuss Biodiversity at the global and Indian levels.
CO-2	Describe Biomes and Natural History.
CO-3	Explain basic concepts of plant diversity and Human-wildlife interactions.

Unit – I: Biodiversity: Global and Indian (15L)

1. Biodiversity –Definition, levels, importance, threats, Global and local efforts for conservation.
2. Biodiversity Hot Spots – Global & Indian
3. Conservation of biodiversity: in-situ and ex-situ.

Unit – II Biomes & Natural History (15L)

1. Biomes of the world
2. Characteristic flora and fauna
3. Biogeographic classification of India.

Unit – III Plant Diversity (15L)

1. Sampling for quantification, different forms
2. Agro-diversity, forests and medicinal plants

Unit – IV: Human-wildlife interaction (15L)

1. Conservation vs protection, Concept of buffer zones, wildlife corridors.
2. Role of government and NGOs in controlling human-wildlife interactions
3. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.

Suggestive Reading:

- Text Book for Environmental Studies for Undergraduate Courses; 3rd Edition Erach Bharucha for UGC, 2021 Orient Black swan Pvt Ltd.

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.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:

Evaluation will be divided into two parts.

ASSESSMENT	MARKS
INTERNAL	
Attendance	05
Assignment	10
Continuous Internal Assessment I and II	35
TOTAL	50 marks
EXTERNAL	
End Semester Exam	50 marks

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