Pune District Education Association's

Waghire College of Arts, Commerce and Science,

Saswad, Purandar, Pune.

DEPARTMENT OF BOTANY

Course: Bachelor of Science in Botany (NEP - 2020)

Duration: 3 Years

Credit Framework: B.Sc. Framework (NEP - 2020)

Type of Awards and Stages of Exit

Sr. No.	Type of Award	Stage of Exit	Mandatory Credits
1.	Undergraduate Certificate in Botany	After successful completion of the First year Semesters	44
2.	Undergraduate Diploma in Botany	After the successful completion of the Second year Semesters	88
3.	Bachelor of Science in Botany	After the successful completion of the Third year Semesters	132

AIMS AND OBJECTIVES

- To develop employability-oriented diversified course content.
- To introduce skill-oriented specialized education by introducing in-depth learning concepts.
- To expose students to systematic academic inquiry and exhibit courtesy to the vast universe of basic and applied knowledge of plants.

SYLLABUS

FYBSc (NEP 2020)

PROGRAM OUTCOMES (PO's)

According to NEP-2020 criteria, the Under-Graduate degree in Botany (F.Y.B.Sc. Botany) program at PDEA's Waghire College Saswad, (affiliated to Savitribai Phule Pune University, Pune), is structured to provide students with advanced field-related knowledge and essential fundamentals. Through a unique combination of required major core courses with in-depth exposure to multidisciplinary minor, elective, and vocational skill courses, among other courses, students will be trained and acquire the fundamental and advanced knowledge essential to the plant sciences industries.

With the knowledge gained in the field of plant sciences, this upgraded curriculum will develop educated, outcome-oriented candidates who are nurtured through discovery and learning, equipped with practice and skills to deal with practical problems, and competent with recent pedagogical trends in education, including E-learning, flipped class, hybrid learning, and experiential learning. These candidates will become responsible citizens, transforming the nation to lead the world in the future.

After successful completion of the Under Graduate (UG) Degree program, the students would be able to:

PO1: Attain thoughtful proficiency in the field of plant sciences.
PO2: Acquire the ability to perform in multidisciplinary domains.
PO3: Attain the ability to exercise intelligence of scientific knowledge for investigation and innovation and nourishment of the world.
PO4: Learn value based ethical practices and principles committed to professional ethics.
PO5: Incorporate 21st century skill oriented self-directed and life-long learning.
PO6: Obtain ability to inculcate the knowledge of plant science in diverse contexts with global perspective.
PO7: Attain maturity to harness the destiny and responds to one's calling.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Recall the diversity, classification, evolution, and developmental changes among the plants concerning lower and higher plant groups and create a knowledge base in understanding the basis of plant diversity, economic values, and taxonomy of plants.
PSO2: Understand the advanced concepts of Genetics, Cell Biology, and Plant Biotechnology of plants and their implementation for the improvement of crop productivity.
PSO3: Acquire and utilize the skills of post-harvest, flower design, fruit processing and dehydration techniques, organic farming, and various plant processing technologies for developing the economy of the growing world.
PSO4: Know about the importance of Medicinal plants and their useful parts, economically important plants in our daily life, traditional medicines and herbs, and their relevance in modern times.
PSO5: Inculcate the methodology followed in plant breeding, pharmacognosy, herbal drug technology, plant protection, propagation, and improvement.
PSO6: Adapt methods of scientific research in plant improvement programs and create entrepreneurship, and employment in society.
PSO7: Analyze the impact of scientific and technological advances on the environment and society. Understand the importance of biodiversity conservation, green cover development, and carbon sequestration, and utilize the knowledge for sustainable development.
PSO8: Explore the knowledge of biotic and abiotic stress tolerance, plant-microbe interaction, and Integrate pest management for making the revolution in agriculture.
PSO9: Enrich the ability of critical thinking, development of scientific attitude, handling of problems and generating solutions, improve practical skills, and enhance communication skills.
PSO10: Apply the fruitful knowledge of plant sciences and plant resources for the sustainable development, and betterment of society and the environment by recognizing ethical values.
PSO11: Become competent enough in various analytical and 21st-century technical skills related to plant sciences for their exploration.

PSO12: Exhibit the potential to effectively accomplish tasks independently and as a member or leader in diverse teams, and in multidisciplinary settings.
PSO13: Employ critical thinking-based problem-solving and practical skills about botanical techniques and computational knowledge and apply strategies for environmental conservation.
PSO14: Demonstrate knowledge and scientific understanding to identify research problems, design experiments, use appropriate methodologies, analyze and interpret data, and provide solutions. Exhibit organizational skills and the ability to manage time and resources.