

Botany Department Profile:

Year of Establishment : 1993

Programme Outcome:

- To provide knowledge to the students about various plant groups and their phylogeny.
- To make the students aware about the of applications of the plants.
- To inculcate the skills in the students related to lab., field & need based studies.
- To make the students aware about conservation and sustainable use of plants.
- To create foundation for further studies in Plant Science.
- To address the socio-economical ethics and challenges related to Botany.

Botany : Programmes & Courses: CBCS: Choice Based Credit System 2019 onwards

F.Y.B.Sc. Semester I (2019-20 onwards)	S.Y.B.Sc. Semester I (2020-21 onwards)
BO 111 Plant Life and Utilization – I	BO 231 Taxonomy of Angiosperms & Plant Ecology
BO 112 Plant Morphology and Anatomy	BO 232 Plant Physiology
BO 113 Practical's based on BO 111 and BO 112	BO 233 Practical's based on BO 211 & 212
Semester I	Semester I
BO 121 Plant Life and Utilization – II	BO 241 Plant Anatomy & Embryology
BO 122 Principles of Plant Science	BO 242 Plant Biotechnology
BO 123 Practical's based on 121 and 122	BO 243 Practical's based on BO 221 & 222

F.Y. B.Sc.: Course Outcome (P I: Plant Life and Utilization I & II)

First year Botany students will learn about the entire plant kingdom and life cycle patterns, General characters, Classification with respect to *Spirogyra*, *Agaricus*, *Riccia*, *Nephrolepis*, *Cycas* plants, Lichens and uses of Algae, Fungi, Bryophytes, pteridophytes, Gymnosperms , Angiosperms and their use for human beings.

P-II: Plant Morphology and Anatomy

The students will learn the morphological characters of plants which serve the basis of Taxonomy of Angiosperms. (Morphology is called as mother of taxonomy) Students will also learn the primary (internal) structure of plant organs (Dicot and Monocot root, stem and leaves: Plant Anatomy) which is basis of Anatomy and Embryology course, Anatomy in particular.

P-II: Principles of Plant Science: Students will undertake the basic studies require to learn Plant Physiology. At first year level they will learn various physiological phenomena like Osmosis, Diffusion, Plasmolysis etc In short, students will perform all fundamental studies at first year level which will be useful to them at second year level.

S.Y. B.Sc. (Course Outcome) P I Taxonomy of Angiosperms and Plant Ecology: Sem I

Second year Botany students will learn various classification systems (Artificial, Natural and Phylogenetic), rules of nomenclature, plant families and Plant Ecology with respect to the vegetation, adaptations of various plant groups.

Paper II: Plant Physiology- (Sem. I) To understand the mechanism of various metabolic processes in plants. Equip with skills and techniques related to plant physiology like growth measurement, soil pH, WHC of the soil, DPD, rate of transpiration etc.

Paper I: Plant Anatomy and Embryology (Sem. II) To make aware the students regarding the normal and abnormal secondary growth in plants including various tissue systems. They will also learn the pre and post fertilization changes/ processes (Pollination, endosperm formation etc) taking place in flowering plants.

Paper II: Plant Biotechnology (Sem. II) To keep pace with the advanced era, students will learn Biotechnological processes like fermentation, SCP Production, Enzymology etc

To provide and acquaint the students to all possible skills required to perform practical's.

Feedback from the students: It is collected every year (IQAC) with respect to Understanding of the Subject (Teachers'), Communication skills, Class control, Punctuality, Syllabus Completion, Use of teaching aids, Motivation and Counselling, Availability, Interaction with the students, Organization of the activities for the students (such as Study tours, Field visits, Guest lectures, Competitions etc).

Faculty Profile:

Number of Teaching Posts: Sanctioned = 02, Filled =02

* Out of total filled post: 01 Asso. Prof. and 01 Assist. Prof.

Teaching staff: Qualification, Designation, Specialization:

Teaching Staff	Qualification	Designation	Specialization	Teaching Experience	Mentionable:
K.K. Bagdane	M.Sc.	Asso. Prof. and Head	Angiosperm Taxonomy	30 Years	Recognised PG Teacher in Environmental Science by SPPU
P.V. Shelar	M.Sc. M.Phil, SET, NET	Assist. Prof.	Cytogenetics	16 Years	08 PG and 08 Years UG Teaching Experience

Percentage of lectures delivered and practical classes handled by temporary faculty:

Programme	Total Workload of Department	Total workload of Permanent Faculty	Percentage Lectures and Practical's engaged by Temporary Faculty
B.Sc. (SY Level)	56	44	21.43 %

Student -Teacher Ratio (Programme wise)

Level	Class	Number of Teachers	Student –Teacher Ratio
UG (SY Level)	B.Sc. Students Strength FY+SY (91+77) = 168 (2020-21)	02	84:1

Number of Academic Support Staff (technical), Administrative Staff; Sanctioned & Filled

Number of Support Staff (Lab Attendant)		
Name	Sanctioned	Filled
Mr. Rohidas Nalawade (Lab. Attendant)	01	01

Workshops/ seminars Organized: Discussion on Revised BSc Botany Theory Syllabus, Art of Answering, Career Guidance and counselling for Postgraduates, Intercollegiate Workshop on Flower Arrangement, College Level- Botany Fest.

Area of consultancy: Department has expertise in the plant identification, help for Identification of Plants present in colleges campuses (non sciences) for NAAC Purpose.

Green College Clean College (GCCC) : Department has actively involved in achieving GCCC Award for consecutive 02 years sponsored by Kirloskar Vasundhara Foundation.

Awards / Recognitions received by Faculty:

Name of the Faculty	Award / Recognition	Year
K.K. Bagdane	The Beat Students' Welfare Officer Award by SPPU	2013
	The excellence and Appreciation Award by PGK Mandal	2017

Academicians visited to the Department: Dr. (Mrs.) V.S. Nair, Dr. A.R. Nalawade, Dr. D.M. Mahajan, Dr. Sachin Punekar, Dr. Anil Dusane, Dr. S. Bolbhat, Dr. A.D. More, Dr. (Mrs.) Minakshi Mahajan, Dr.(Mrs.) Anuradha Kulkarni

Resource persons: Both the staff members delivered guest lectures (offline and online) under Faculty exchange programme held at Vidya Pratisthans' Arts. Commerce and Science College Baramati and K. J. Somaiya College Mumbai respectively.

Biological Excursions: Were organised for first and second year students at Biodiversity centre Mahabaleshwar and at Srivardhan and Harihareshwar respectively.

Minor Research Project: The proposals for MRP in Botany has been submitted to UGC and BCUD, awaiting for the sanctions.

Educational Videos uploaded on various media: Used the social media like Instagram, Linkden, Facebook, Whats' app, Youtube, Classroom app etc for providing educational information to the students and community.

Plant of the Week: An innovative idea of displaying a flowering plant on every Monday to welcome Botanist in a botanical way is carried out since 07 years. Plant is placed next to the department along with the Board consisting information like Botanical name, family, Common name, uses, date of display etc. Every year 42 plants are displayed. More than 300 plants has been displayed till date.

Other activities: Department staff has worked as a Presiding Officer at General Elections of Legislative Assembly of Maharashtra, Elections of Pune Municipal Corporation, General Elections of Loksabha etc

Infrastructural Facilities:

Departmental Library: No. of Books: 50
Internet facilities for Staff: 2 Nodes
Class rooms with ICT facility: 02 Classrooms
Spacious Lab.: 01 (42 X 40 Ft.)

Equipment's in Lab.: Air sampler, Arc indicator, Autoclave, Binocular microscopes (Dissecting), Burette potometer, Calorimeter, Centrifuge machine, Charts, Compound Microscopes, Computer with printer, Internet connection, Conductivity Meter, Lux meter, Dissecting Microscopes, Electronic balance (Digital), Gas connection, Hair hygrometer, Laminar air flow cabinet, Minimum and maximum thermometer, Oven, Over Head Project (OHP), Permanent slide cabinet, pH meter, plant press, Projector, Rough Balance, Spectrophotometer, Water bath.

Details on student Enrichment Programmes (Special Lectures/ Workshops etc): External Experts

Title of the Lecture	Names of Resource Person/s (External)
Plant tissue culture	Dr. A.R. Nalawade (Retired Prof.) A. Awate College, Manchar
Career Opportunities in Botany	Dr. Abhijeet Kulkarni, Instrumentation Dept., SPPU

Title of the Lecture	Names of Resource Person/s (External)
Career Opportunities in Research	Dr. Amit Yadav, National Centre for Cell Science, SPPU

Teaching methods adopted to improve student learning: ICT enabled Teaching, Use of Teaching aids, Use of Over Head Projector, Study Tours, Seminars, Home Assignments, Tutorials, Remedial teaching, Open book tests, Quiz Competition etc

Participation in Institutional Social Responsibility (ISR) and Extension and outreach activities:

Description of extension Activity	Duration
Expert Lecture on Mushroom Cultivation at Village Rule (NSS Camp)	Dec. 2017
Plant Survey and Documentation at Village Rule (NSS Camp)	Dec. 2018
Material / Clothing donation to Rostrum India Social Organization	March 2021

SWOT Analysis of the Department and Future Plans:

Strengths: Well Qualified and Experienced staff, Modern Infrastructure and well Equipped Lab., Well Established Terrace Botanical Garden, e-Herbarium, **Weaknesses:** Lack of Space, **Opportunities:** Competitive Examination Centre in the College Campus viz. MPSC/UPSC, **Challenges:** Bridging advanced and slow learners.

Future plan: To develop e-herbarium, To organize Seminar/Webinars/Workshops, To start T.Y.B.Sc. Course.

H.O.D., Botany

Mr. K.K. Bagdane