

DEPARTMENT OF BOTANY

Overview

**Undergraduate Programmes Offered
and Student-intake Strength**

Courses offered

Faculty

Laboratory Staff

Facilities

Botanical Society

Overview

Botany or Plant Science is an integral component of Life Sciences and deals with study of all aspects of plants. Teaching of Botany was started in the College as a part of Biology course in the Pre-Medical programme and continued for B.Sc. General (group B) programme. A full-fledged Botany Department was established in the College only after the introduction of B.Sc. honours programme in 1990. Since then, a committed team of highly qualified and motivated teachers have raised the Department to a level of excellence.

Presently the Department offers botany courses in B.Sc. honours and B.Sc. Life Science programmes, with a student-intake strength of 34 and 68, respectively. Few of these courses are also open to students of other departments as the General Elective Courses. In these courses, students are taught the fundamental subjects such as Diversity, Morphology, Anatomy, Taxonomy, Physiology and Biochemistry of plants and also the modern disciplines including Plant Genetics and Molecular Biology, Plant Biotechnology, Environmental Biotechnology, Bioinformatics and Biostatistics, Plant Improvement and Conservation, and Industrial and Environmental Microbiology. On completion of the programmes, students are eligible to seek employment or higher education in various institutes concerned with teaching, education, research, forest services, agriculture, horticulture, as well as administrative services. Many alumni of the Department have found opportunities for higher education in India and abroad, and some are currently holding faculty positions in prestigious institutes such as Indian Institute of Science, Bengaluru, and All India Institute of Medical Sciences, New Delhi.

The faculty of the Department is devoted to both teaching and research. Teachers have publications in national and international peer-reviewed journals and books. Many of the teachers have been actively engaged in framing curricula, revising syllabus and writing e-lessons for school as well as college courses. The faculty conducts workshops for botany teachers of the colleges to keep them updated on the recent advancements in various areas of plant science.

Teaching in the Department is done using not only the traditional chalk and black-board but also through charts, live and herbarium specimens, power-point presentations, nature walks and field visits. The USP of the department is accessibility of the staff to students. The teaching as well as non-teaching staff of Department continuously strive to make sure that students can approach them for help without hesitation. Remedial classes are regularly conducted for students who wish to improve their scores. A healthy academic atmosphere of the Department encourages students to interact with teachers both inside and outside the class, discuss recent developments and demonstrate innovative ideas. Teacher mentors are assigned to groups of students to guide and mentor them at every step.

A vibrant research environment has been created in the Department. Students interested in pursuing research are sent to intern with scientists at National Institute of Immunology, New Delhi, under the Science *Setu*, a bridge programme between National Institute of Immunology, Delhi, and Dyal Singh College, during the summer and winter breaks. The CUBE (Collaboratively Understanding Biology Education) Programme, an initiative of HBCSE (Homi Bhabha Centre for Science Education) which is a national centre for TIFR (Tata Institute of Fundamental Research), Mumbai, guides students to carryout simple research projects at their convenience. Under this programme our students have presented their work at CUBE meets at HBCSE, and in All India Cell Biology Conference held at Goa in December, 2018. Students also participate in the research internship programs conducted by the college, and in research projects funded by various funding agencies. Many innovation research projects have been successfully completed by teachers and students of the Department.

Undergraduate Programmes Offered and Student-intake Strength

Choice Based Credit System (CBCS) Programme	Number of Seats					Total
	General	Other Backward Classes	Scheduled Casts	Scheduled Tribes	Economically Weaker Section	
B.Sc. (H) Botany	16	9	5	2	2	34
B.Sc. (Prog) Life Science	31	18	10	5	4	68

There is also provision to admit 2, 2, 1, 1 students in honours program and 3, 3, 2, 1 students in Life Science program under the persons with disabilities, Kashmiri migrants, sports quota and extra-curricular activities, respectively.

Botany Courses offered in Choice Based Credit System (CBCS)

Pro-gramme	Type of Course	Name of Course	Course Code	Credits		
				Theor-y	Practi-cals	To-tal
B.Sc. (Ho-nours)	SEMESTER I					
	Core Course-I	Microbiology and Phycology	32161101	4	2	6
	Core Course-II	Biomolecules and Cell Biology	32161102	4	2	6
	Generic Elective-I	Biodiversity (Microbes, Algae, Fungi and Archegoniatae)	32165101	4	2	6
	Generic Elective-I	Plant Anatomy & Embryology	32165102	4	2	6
	SEMESTER II					
	Core Course-III	Mycology and Phytopathology	32161201	4	2	6
	Core Course-IV	Archegoniatae	32161202	4	2	6
	Generic Elective-II	Plant Ecology and Taxonomy	32165201	4	2	6
	SEMESTER III					
	Core Course-V	Anatomy of Angiosperms	32161301	4	2	6
	Core Course-VI	Economic Botany	32161302	4	2	6
	Core Course-VII	Genetics	32161303	4	2	6
	Skill Enhancement Course-I	Ethnobotany	32163301	2	2	4
	Skill Enhancement Course-I	Intellectual Property Rights	32163302	2	2	4
	Generic Elective-III	Plant Physiology and Metabolism	32165301	4	2	6
	Generic Elective-III	Environmental Biotechnology	32165302	4	2	6
	SEMESTER IV					
	Core Course-VIII	Molecular Biology	32161401	4	2	6
	Core Course-IX	Ecology	32161402	4	2	6
Core Course-X	Plant Systematics	32161403	4	2	6	

	Skill Enhancement Course-II	Biofertilizers	32163403	2	2	4
	Skill Enhancement Course-II	Medicinal Botany	32163404	2	2	4
	Generic Elective-IV	Economic Botany and Biotechnology	32165401	4	2	6
	SEMESTER V					
	Core Course-XI	Reproductive Biology of Angiosperms	32161501	4	2	6
	Core Course-XII	Plant Physiology	32161502	4	2	6
	Discipline Specific Elective-I	Analytical Techniques in Plant Sciences	32167501	4	2	6
	Discipline Specific Elective-II	Biostatistics	32167502	4	2	6
	SEMESTER VI					
	Core Course-XIII	Plant Metabolism	32161601	4	2	6
	Core Course-XIV	Plant Biotechnology	32161602	4	2	6
	Discipline Specific Elective-III	Industrial and Environmental Microbiology	32167601	4	2	6
	Discipline Specific Elective-IV	Bioinformatics	32167608	4	2	6
	B.Sc. Programme in Life Sciences	SEMESTER I				
Core Course-I		Biodiversity	42161101	4	2	6
SEMESTER II						
Core Course-II		Plant Ecology and Taxonomy	42161201	4	2	6
SEMESTER III						
Core Course-III		Plant Anatomy & Embryology	42164301	4	2	6
Skill Enhancement Course-I		Biofertilizers	42163302	2	2	4
SEMESTER IV						
Core Course-IV		Plant Physiology and Metabolism	42164401	4	2	6
Skill Enhancement Course-II		Medicinal Botany	32163404	2	2	4
SEMESTER V						
Discipline Specific Elective-I	Cell & Molecular biology	42167901	4	2	6	

	Discipline Specific Elective-I	Bioinformatics	42167905	4	2	6
	Skill Enhancement Course-III	Ethnobotany	42163512	2	2	4
SEMESTER VI						
	Discipline Specific Elective-II	Economic Botany and Biotechnology	42167901	4	2	6
	Discipline Specific Elective-II	Analytical Techniques in Plant Sciences	42167904	4	2	6
	Skill Enhancement Course-IV	Intellectual Property Rights	42163601	2	2	4

FACULTY

Permanent

Dr. Inderjeet Singh Bakshi

Dr. Poonam Mohindra

Dr. Poonam Mehta

Dr. Neeru Bhandari

Dr. P. Chitrlekha

Dr. Saloni Gulati

Dr. Roma Katyal

Dr. Anita Rani

Dr. Jasleen Kaur Kalia

Laboratory Staff



Mr. Jagjeet Singh
(Laboratory Assistant,



Mr. Ram Kishan
(Laboratory Assistant)
Store in-charge)



Mr. Surinder Singh
(Laboratory Assistant)



Mr. Dhiren Bahera
(Laboratory Attendant)



Mr. Sanjay Pathania
(Laboratory Attendant)



Mr. Neeraj Kumar
(Laboratory Attendant, Contractual)

Facilities

The Department boasts of three well-equipped **laboratories** with projectors for power point presentations. Modern equipments such as laminar flow cabinet, autoclave, BOD incubator, incubator-shaker, photo-microscopes, digital balances, electrophoresis units, UV transilluminator are available for practical and research activities.

A **Botanical Garden**, an important requirement in the teaching of botany, is maintained by the Department. Many economically important plants as well as plants required for regular class work are being grown in the garden.

The Department also manages a **Museum** of wet and dry preserved specimens and a small **Department Library** functioning with the books donated by the faculty of the Department.



Botanical Society

Prakriti, the Botanical Society of Dyal Singh College, is managed entirely by students of the department with the advice of teachers appointed as convenors and co-convenors. At the beginning of every session, the society elects its office bearers for the post of President, Vice-President and Secretary from 3rd year, 2nd year and 1st year, respectively, to train them for leadership quality. The office bearers and members of the society organise various activities like lectures by eminent academicians, inter-college botanical fests for students to showcase their talents, educational field-trips to places rich in plant diversity such as hill stations, botanical gardens, and biodiversity parks, throughout the session. Visits to research institutes and industries are also arranged to acquaint students with modern techniques and processes in use. The society, in collaboration with NSS and non-governmental organizations such as WWF-India, is involved in creating awareness in the general public on environmental issues such as plastic management, water conservation, tobacco misuse and waste recycling, and also undertakes plantation drives at various localities in Delhi.

