



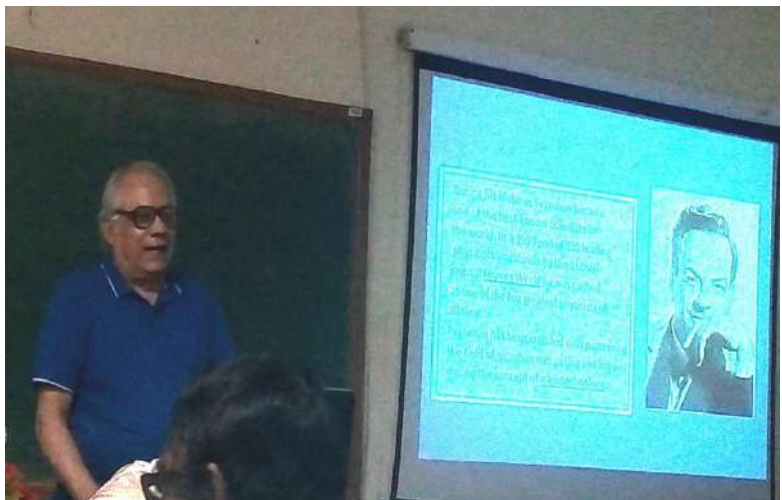
BARASAT GOVT. COLLEGE
GOVERNMENT OF WEST BENGAL

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PROSPECTUS

POST GRADUATE DEPARTMENT OF BOTANY



**SEMINARS ORGANIZED BY THE DEPARTMENT
(2016-2019)**



POST GRADUATE DEPARTMENT OF BOTANY

PROSPECTUS FOR POST-GRADUATE COURSE

Prof. Debesh Roy (WBSES), Principal has been a source of inspiration to the Department. His vision and administrative acumen has not only helped the Post Graduate course to grow, but also develop in quality. In spite of his busy schedule, he finds time to attend the Expert Committee meetings and offer valuable suggestions. He has encouraged the departmental faculty members to carry out Research Projects and participate in workshops and Seminars.

POST GRADUATE DEPARTMENT OF BOTANY**The Department and its Staff members**

The post graduate course in Botany commenced in 2003 with 25 students. It was then under the ambit of Calcutta University. In the next academic session, i.e, 2004 the Department was granted academic autonomy by the University. However in 2008, Barasat Govt. College came under the jurisdiction of West Bengal State University (WBSU), but the Department retained its academic autonomy status. The course curriculum-syllabus, examinations etc. are overseen by an Expert Committee comprising of 5 senior academicians (drawn from different Universities and Research Institutes) together with departmental faculty members. This Department has started to follow the M.Sc. course and syllabus in CBCS system as stipulated by the WBSU from 2019 onwards and a new PG BoS has been formed by the WBSU. The department regularly organizes seminar lectures delivered by academicians of national and international repute.

EXPERT COMMITTEE MEMBERS

- ❖ **Prof. Sanjoy Guha Roy, Prof. of Botany, WBSU & Coordinator of PG BoS (BGC)**
- ❖ **Prof. G.G. Maity, Retd. Prof. University of Kalyani**
- ❖ **Prof. N. D. Paria, Retd. Prof. University of Calcutta**
- ❖ **Prof. P. D. Ghosh, Retd. Prof. University of Kalyani**

The Department has a total of 10 teaching posts:

- ❖ West Bengal Senior Education Service, WBSES (Professor) - 1 Post
- ❖ West Bengal Education Service, WBES (Associate Professor & Assistant Professor) - 9 Posts.

Present Faculty members:

•**Dr. Jukta Adhikari, Ph.D.**, WBSES, Professor. He has over 35 years of teaching and administrative experiences. Plant Physiology & Biochemistry are the domains of his specialization.

•**Dr. Nirmalendu Das, Ph.D.**, WBES, Associate Professor of Botany, has been teaching for more than 23 years at UG and PG levels. His area of specialization is Microbiology.

•**Dr. Narayan Chandra Karmakar, Ph.D.**, WBES, Associate Professor of Botany, has been teaching for 19 years at UG and PG levels. His area of specialization is Ecology.

•**Dr. Subhra Talai Mukhopadhyay, Ph.D.**, WBES, Assistant Professor of Botany, has been teaching for 17 years at UG and 11 years at PG levels. Her area of specialization is Pharmacognosy.

•**Sri Dibyendu Sekhar Mahanty, M.Sc**, WBES, Assistant Professor of Botany, has been teaching for 10 years at UG and PG levels. His area of specialization is Plant Physiology, Biochemistry & Molecular Biology.

•**Dr. Sautrik Basu, Ph.D.**, WBES, Assistant Professor of Botany, has been teaching for 11 years at UG and PG levels. His area of specialization is Cell Biology, Molecular Genetics & Plant Biotechnology.

•**Dr. Mihir Halder, Ph.D.**, WBES, Assistant Professor of Botany, has been teaching for 5 years at UG and PG levels. His area of specialization is Genetics & Genomics.

The faculty members are engaged in active research and they have collectively published more than 100 scientific research papers in several reputed national as well as international journals. They have participated in over 50 seminars/symposiums in India and abroad, besides being Guest Lecturers, Resource Persons and Counsellors in other Universities and Colleges. They also act regularly as Head Examiners, Moderators, Paper Setters and Tabulators in University Examinations.

The Department is served by 2 State Aided College teachers (SACT):

•**Dr. A. Bandopadhyay** (Mycology & Plant Pathology)

•**Dr. S. Gupta** (Cytogenetics & Genomics)

There are Guest Lecturers as well whose valuable services are also availed:

•**Dr. Kunal Sen**, Ph.D. Retd. WBES

•**Dr. R.N. Bhattacharyya**, Ex-Professor of Botany, Presidency University & Retd. WBES

The teacher student ratio therefore stands at less than 1:4 at the PG course. The Dept. is served by two full time and two contractual non-teaching staff members whose hard work and dedication allow for smooth running of several practical classes simultaneously.

•**Sri Asit Sengupta**

•**Smt. Subhra Sikdar**

•**Sri Susanta Kr. Das** (Contractual Staff)

•**Sri Madhusudan Sarkar** (Contractual Staff)

•The Dept. spreads over 8000 sq. ft on the entire top floor of the main College building

•The Seminar Library holds nearly 500 books while the Central Library has over 3200 books exclusively on Botany. All the laboratories of the Dept. are well equipped with good number of instruments for PG classes.

•The Dept. is also in the process of establishing a Herbarium on local Flora, a database on local Mycoflora and a Medicinal-Aromatic garden.

•Over the last 5 years, the Dept. has organized seminar lectures on relevant topics such as Climate Change, Sunderban Biosphere, Neo Darwinism, Cancer Biology, Current trends in Stem Cell Biology and Regenerative Medicines, Molecular Biology of HIV, Floristic survey of Jarwa Reserve Forest (Andaman Island), Nanotechnology and Experimental Pharmacology.

- There are plans to hold workshops on plant Biotechnology, Chromatographic Techniques, Methods of Soil and Water Analysis in near future.
- List of few eminent academicians who delivered valuable talks in this PG Dept. in the last 5 years:
 - Prof. Niranjana Bhattacharya, MD, MS, FSOG, FICOG, FAIS, FICS, FACS, D.Sc.** Head, Dept. of Regenerative Medicine and Translational Science & Dr. Subhas Mukhopadhyay Chair Professor, CSTM, Kolkata.
 - Prof. Samir Kumar Patra, Ph.D.** Head, Dept. of Life Sciences, Laboratory of Epigenetics and Cancer Genomics, Rourkela, Orissa
 - Prof. Andrew Burd. MBChB, MD** Chief of Division of Plastic, Reconstructive and Aesthetic Surgery, Department of Surgery, Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, NT, Hong Kong.
 - Prof. Ornella Parolini, Ph.D.** Director of the E. Menni Research Centre (CREM), Fondazione Poliambulanza; President of the International Placenta Stem Cell Society (IPLASS), Professor of the Dept. of Molecular Biology and Immunology, Poliambulanza Hospital Foundation-Institute, Brescia, Italy.
 - Prof. Sekhar Chakraborty, Ph.D., FNA, FNASc, FASc & T.** Ex Director, NICED, Kolkata.
 - Dr. Tapas Chakraborty, Ph.D.** Retd. Scientist, Botanical Survey of India
 - Prof. Asok K Mukherjee, Ph.D. & PDF (USA),** Retd. Professor of Botany. University of Burdwan.
 - Prof. S.K Tripathi, MD, DM,** Professor & Head of Pharmacology, CSTM, Kolkata.

Present Academic Advisors of this Department:

- Prof. Niranjana Bhattacharya, MD, MS, FSOG, FICOG, FAIS, FICS, FACS, D.Sc.,** Head, Dept. of Regenerative Medicine and Translational Science & Dr. Subhas Mukhopadhyay Chair Professor, CSTM, Kolkata.

•**Prof. Sanjukta Bhattacharya, M.A., Ph.D.** Full Bright Fellow & member of UGC- NAAC Peer Team, Retd. Professor of I.R Department, Jadavpur University, Kolkata.

COURSE CURRICULUM

Currently there are 32 seats in the Post Graduate Course (Reserve quota included)

The 2 year course is completed in 4 half yearly semesters with CBCS pattern of WBSU.

The academic calendar:

The course shall comprise a total credit of 92 (ninety two), and a total of 1200 marks distributed over the four semesters. The courses shall be grouped as Departmental core courses, and Electives comprising of DSE, SEC & AECC and will carry credits according to the number of theoretical classes required, study hours and laboratory hours.

1st Semester: July - December

2nd Semester: January -May

3rd Semester: July - December

4th Semester: January -May

Semester wise Course, Credit and Marks distribution

Semester	Type of course	Credit	Marks	Total
I	Departmental 1 (Integrated Life Sciences)	4	50	Marks : 275 Credits : 22
	Departmental 2 (Diversity of Plant Life-Algae & Bryophytes)	4	50	
	Departmental 3 (Fungal & Oomycete Biology)	4	50	
	Departmental 4 (Plant Viruses & Bacteria)	4	50	
	Departmental 5 (Laboratory Course)	4	50	

	AECC 1	2	25	
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II	Departmental 6 (Angiosperm Systematics)	4	50	Marks : 275 Credits : 22
	Departmental 7 (Plant Ecology and Environmental Biology)	4	50	
	Departmental 8 (Plant Pathology & Crop Protection)	4	50	
	Departmental 9 (Diversity of Plant Life-Pteridophytes, Gymnosperms, Paleobotany & Palynology)	4	50	
	Departmental 10 (Laboratory Course)	4	50	
	SEC 1 # Tree & Wood Biology # Biodiversity & Conservation	2	25	

	Departmental 11 (Molecular & Cellular Genetics & Plant Breeding)	4	50	Marks : 300 Credits : 24
	Departmental 12 (Plant Physiology & Biochemistry)	4	50	

III	Departmental 13 (DSE1) # Plant Developmental Biology and Plant Anatomy # Phytochemistry and Pharmacognosy	4	50	
	Departmental 14 (Laboratory Course - Molecular & Cellular Genetics & Plant Breeding)	4	50	
	Departmental 15 (Laboratory Course - Plant Physiology & Biochemistry)	4	50	
	GEC 1 # Biosafety and Lab practices #Instrumentation	4	50	
IV	Departmental 16 DSE 2 # Plant Virology & Molecular Mycology # Molecular Genetics & Advanced Cell Biology # Advanced Plant Physiology & Biochemistry	4	50	Marks : 300 Credits : 24
	Departmental 17 DSE 3 # Molecular Plant Pathology # Applied Plant Breeding & Plant Tissue Culture # Plant Molecular Biology	4	50	
	Departmental 18 (P) Laboratory course (Of DSE 2 & 3)	4	50	
	Departmental 19 (P) Laboratory course	4	50	

	(Seminar Presentation)			
	Departmental 20 (P) (Dissertation Project Work)	8	100	

Choice of electives:

DSE- Departmental courses 13 (DSE1) in Semester III, 16 (DSE2) and 17 (DSE3) in Semester IV are the Departmental Specific Electives courses. One course each from each DSE has to be taken by the student. For Departmental courses 16 (DSE2) and 17(DSE3), only the following combinations will be permitted.

Course combinations	Departmental course 16 (DSE2)	Departmental course 17 (DSE3)
Combination 1	# Plant Virology & Molecular Mycology	# Molecular Plant Pathology
Combination 2	# Molecular Genetics & Advanced Cell Biology	# Applied Plant Breeding & Plant Tissue Culture
Combination 3	# Advanced Plant Physiology & Biochemistry	# Plant Molecular Biology

SEC- One course in Semester II from among the choices given

GEC- One course in Semester III from among the choices given for students of other Departments.

AECC- Course to be conducted by Botany department for Botany students.

Assessment modalities:

Theory

Departmental courses (Departmental 1-4, 6-9, 11-13, 16 & 17) to have a Mid Term Examination for 15 marks and End term examination of 35 marks.

Laboratory courses & Project

Laboratory Courses 5, 10, 14, 15 & 18 to have continuous evaluation for 80% of the allotted marks and for 20% marks an examination will be held in presence of external expert/(s) which may include all, one or some of the following modes of assessment: *viva voce*, presentation, submissions, field note books, herbarium sheets, etc.

Departmental 19 (P) will consist of a presentation by the students (with the help of ICT tools) of the key findings/review of the project work of Departmental 20 (P) which will be assessed by external expert on the day of the examination.

Departmental 20 (P) will be a project work (experimental/review) for which a dissertation will have to be submitted and assessed by external expert/(s).

The topic of choice will be dependent on the choices the students give in Departmental 15 (DSE2) & Departmental 16 (DSE3) and finalized in consultation with the concerned teacher.

For Detailed Syllabus the students are requested to visit the Website of WBSU



DEPARTMENTAL ACTIVITIES



EXCURSIONS (2018 - 2020)

