### DEPARTMENT OF BOTANY

UNIVERSITY SCHOOL OF SCIENCES,
GUJARAT UNIVERSITY, NAVRANGPURA, AHMEDABAD – 380009, India
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Head: Dr. Archana U. Mankad



#### BRIEF HISTORY

Department of Botany established in 1959 by (Late) Professor J. J. Chinoy is known all over for researches on Ascorbic acid, Growth and Development, Stress Physiology (Salt and Drought resistance) and Presowing seed treatments. Department has received many research grants from US - PL 480, DST, ICAR, UGC, CSIR, Gujarat Government, NGOs, Industries and other funding agencies. Presently, the thrust areas of research have diversified to Stress Physiology, Plant Tissue Culture and Biotechnology, Bioinformatics, Plant Biodiversity, Floristic studies, Horticulture, Floriculture, Medicinal plants, Phytochemistry, Ecology, Environmental Biology, Fungal Biology, Plant physiology, Palynology, Phytoremediation, Seed technology, Plant Biochemistry and Climate Change.

#### **❖** MISSION

The goal is to impart knowledge and training to equip interested individuals in plant sciences. To make efforts to learn ever changing concepts, achieve specialization in the front line areas of for respective opportunities. The efforts are also being made to produce entrepreneurs for prosperous ventures in the selected fields of their advancements with global perspectives.

#### ❖ VISION

The department is working hard to be "Center for Excellence" for training and capacity building with requirements of the time in Plant Sciences, Bioinformatics and Climate Change Impacts Management.

#### THE CULTURE

The department has a very good and serine atmosphere for study and research. The aim has always been to focus on the human dimension. The department brings us together with exceptionally supportive faculty members, students and alumni. The faculty aims to inculcate in the students a culture characterized by integrity, mutual respect, enthusiasm and hard work. Applied Botany Centre (ABC) - a center for coordination of PG and research programme for self-sufficient courses, Gujarat University Botanicals Society (GUBS) - a society, We 4 Nature - working groups, Gujarat University Learned Alumni of Botany (GULAB) - an alumni association, ANKUR - the newsletter are some of the important staff-students managed sections and working groups of the department organizes lots of teaching and co-curricular activities for the overall development of the students round the year. The Gujarat University web site showcases the GUBS activities.

#### THE ALUMNI

More than 1500 students have completed their study from the department. The alumni are very well placed in India and abroad. Many of them hold senior positions in major corporations and some are also successful entrepreneurs. They have contributed significantly in all the areas of plant science and have proved to be an invaluable asset to their respective organizations. They offer their insights and experiences to students of the department and share career advice through formal and informal exchanges.

#### **❖ INFRASTRUCTURE AND FACILITIES**

The department is having well developed, organized basic infrastructure.

#### Auditorium

The air conditioned Auditorium of 120 comfortable seating capacity is located at first floor with all necessary audio-video facility for organization of academic meetings.

### **Library**

The students of department have access to a well-stocked library, which comprises of extensive collection of plant sciences, Bioinformatics and Climate Change Impacts Management related books and periodicals, over and above the central library of the University. The collection of books is updated periodically as and when required.

**e-Library:** A collection of educational and informational CDs, DVDs and Soft copies of M.Sc./M.Phil. Dissertation and Ph.D. Thesis is maintained in electronic form for academic reference.

#### <u>Laboratory</u>

The department has full-fledged laboratories of Plant Physiology, Taxonomy, Horticulture, Ecology - Environmental Biology, Plant Tissue Culture - Biotechnology and Molecular Biology. The Department is equipped with UV Spectrophotometer, Refrigerated Centrifuge, Flame Photometer, Electrophoresis unit (DNA/Protein), PCR, Cryo-storage, Densitometer, UV Transilluminator, Chlorophyll meter, Leaf area meter, Tissue Culture Lab (AC), , PhotoFlourimeter, DO Meter, Turbidity Meter, Oil Separation Unit, BOD, incubator, GPS, Increment borer, Opisometer (Distance/Road measurer) and other necessary laboratory equipment, etc.

#### **Computer**

The laboratory at department functions in a fully networked environment providing computer facility. There are more than 30 computers in the department. The students have free access to 1000 mbps leased line internet connection.

#### **Greenhouse**

There is a greenhouse (1000 sq ft) for growing plants under suitable environmental condition for hardening of tissue culture raised plantlets. The collection of some important medicinal plants of our progressive state Gujarat is maintained in Medicinal Park of the department.

#### **Net House**

The net house (4000 sq ft) facilitates the pot/ field experiments of researchers and M.Sc. students

#### **Shade House**

The shade house (5000 sq ft) facilitates the pot/field/hardened plants of the experiments undertaken by researchers and M.Sc. students

#### **Medicinal Park**

There is collection of important medicinal plants and various plants forms collected from various areas/location of Gujarat and India.

#### Palm Groove

Palm groove have been established with around 50 different variety palms collected and preserved in protective fenced area.

#### Herbarium

The herbarium facility has a stock of plant herbaria, seed samples collected from various forests of Gujarat and India.

**e-Herbarium:** A electronically scanned collection of plants as e-herbarium has been initiated along with conventional herbarium.

#### **❖** RESEARCH OUTPUT

- Department is well known in India and abroad for its researches.
- Ph.D. produced More than 200M.Phil. produced More than 350
- Research publications More than 600 papers in reputed Journals.
- Faculty members have been duly recognized and awarded Fellowships of National and International honors.
- Department had several research projects funded by PL 480, CSIR, ICAR, UGC, DST, ISRO (SAC), DAE, MOES etc, State Government, Forest Department, GSBB, Industries and other funding agencies.
- The academic association is established with Iladevi Cataract Institute and IOL Research Institute, Center for Environment Education (CEE), Raman Environments, GEER Foundation, Gujarat Cancer and Research Institute (GCRI), Forest Department, Gujarat Council on Science and Technology (GUJCOST) and various universities of India and abroad.

#### **❖ DEPARTMENT PROFILE**

- DST (New Delhi) FIST sponsored department.
- Organization of National Seminars, Workshops, Symposium, Training courses, Conferences on regular basis.
- More than seven Refresher Courses in Botany, Life Sciences and Environment Sciences for in-service college and University teachers have been organized.
- Professor J. J. Chinoy and Prof. B. S. Vaidya Memorial Lectures are being delivered regularly by eminent Botanists every year.
- Applied Botany Centre (ABC) a center for coordination of PG and research programme for self-sufficient courses
- Gujarat University Botanicals Society (GUBS) a society for co-curricular activities
- We 4 Nature a working group for entrepreneurs
- Gujarat University Learned Alumni of Botany (GULAB) an alumni association of past students/associated Botanist
- ANKUR the newsletter for up to date information of latest happening in plant sciences
- Women Scientists (Six), a fellowship awarded by UGC, DST, DBT, New Delhi, have been working in the department on various fields.
- Research Associate for SAC-ISRO project is also associated
- Every year meritorious students have been awarded Inspire fellowship by DST.
- SC & ST students are awarded UGC, New Delhi, Rajiv Gandhi National Fellowship, every year.
- Minority students are awarded UGC, New Delhi, Maulana Azad National Fellowship every year.
- There are four gold medals awarded in various subjects being coordinated by the department
  - 1. Professor J. J. Chinoy Gold Medal

Botany

2. Professor C. K. Shah Gold Medal

Botany

3. Shri Sajivbhai Dayalbhai Patel Gold Medal

**Bioinformatics** 

4. Smt Rashmiben Rore Gold Medal

Climate Change Impacts Management

#### **❖** COURSE OFFERED: BOTANY

#### Course 1

Course Name	M.Sc.
Course Type	Grant in Aid.
Intake	30 students
Eligibility	As per University Rules; B.Sc. with Botany as
	main subject
Subject offered / Specialization	Advanced Plant Physiology.
Duration	2 years
Course Commencement	June
Admission Process	By Merit

Fees		l <sup>st</sup> Sem.	2 <sup>nd</sup> Sem. to 4 <sup>th</sup> Sem.	
	Boys	3690/-	3390/-	
	Girls	2190/-	1890/-	
Courses offered at	Department of Botany, University School of			
	Sciences, Gujarat University, Ahmedabad-			
	380009, Gujarat, India			
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		ıg	
/ Placement Facility	and Research.			

# Course 2

Course Name	M. Phil.		
Course Type	Grant in Aid.		
Intake	4 students per M. Phil. Guide		
Eligibility	55 % or above in M.Sc.		
Subject offered / Specialization	Advanced Plant Physiology/ Ecology		
Duration	l year		
Course Commencement	June		
Admission Process	By Merit in Entrance Exam & Interview		
Fees	Boys Rs. 4,590/-		
	Girls Rs. 3,090/-		
Courses offered at	Department of Botany, University School of		
	Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Research.		

# Course 3

Course Name	Ph.D.		
Course Type	Grant in Aid.		
Intake	7 students per Ph.D. guide		
Eligibility	55 % or	above in M.Sc	
Subject offered / Specialization	Advance	ed Plant Physic	ology/ Ecology
Duration	2 years		
Course Commencement	June		
Admission Process	By Merit in Entrance Exam & Interview		
Fees		l <sup>st</sup> Sem.	2 <sup>nd</sup> Sem. to 4 <sup>th</sup> Sem.
	Boys	5590/-	5090/-
	Girls	4090/-	3590/-
Courses offered at	Department of Botany, University School of		
	Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Res	earch.	

### **COURSE OFFERED: BIOINFORMATICS**

### Course:1

Course Name	M.Sc.			
Course Type	Self-financed			
Intake	15 students	15 students		
Eligibility	55 % or above in B.Sc			
Subject offered / Specialization				
Duration	2 years			
Course Commencement	June			
Admission Process	By entrance exam & Interview			
Fees per semester	1 <sup>st</sup> Sem. 2 <sup>nd</sup> Sem. to 4 <sup>th</sup> Sem.			
	Rs. 15,500/-	Rs. 15,000/-		
Courses offered at	Department of Botany, University School of			
	Sciences, Gujarat University, Ahmedabad-			
	380009, Gujarat, India			
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching			
/ Placement Facility	and Research.			

### Course:2

Course Name	M. Phil.		
Course Type	Self-financed		
Intake	4 students per M. Phil. (	Guide	
Eligibility	55 % or above in B.Sc.		
Subject offered / Specialization			
Duration	l year		
Course Commencement	June		
Admission Process	By entrance exam & Interview		
Fees	1 <sup>st</sup> Semester 2 <sup>nd</sup> Semester		
	Rs. 7,500/-	Rs. 7,000/-	
Courses offered at	Department of Botany, University School of Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Research.		

# Course:3

Course Name	Ph.D.
Course Type	Self-financed
Intake	7 students per Ph. D. Guide
Eligibility	55 % or above in B.Sc.
Subject offered / Specialization	
Duration	2 years
Course Commencement	June

Admission Process	By entrance exam & Interview	
Fees	l <sup>st</sup> Sem. 2 <sup>nd</sup> Sem. to 4 <sup>th</sup> Ser	
	Rs. 18,500/-	Rs. 18,000/-
Courses offered at	Department of Botany, University School of	
	Sciences, Gujarat University, Ahmedabad-	
	380009, Gujarat, India	
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching	
/ Placement Facility	and Research.	

### COURSE OFFERED: CLIMATE CHANGE IMPACTS MANAGEMNT

# Course: 1

Course Name	M.Sc.		
Course Type	Self-financed		
Intake	30 students		
Eligibility	55 % or above in B.Sc	).	
Subject offered / Specialization			
Duration	2 years		
Course Commencement	June		
Admission Process	By entrance exam & Interview		
Fees	1 <sup>st</sup> Sem. 2 <sup>nd</sup> Sem. to 4 <sup>th</sup> Sem.		
	Rs. 15,500/-	Rs. 15,000/-	
Courses offered at	Department of Botany, University School of		
	Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Research.		

### Course:2

Course Name	M. Phil		
Course Type	Self-financed		
Intake	4 students per M. Phil. Guide		
Eligibility	55 % or above in B.Sc.		
Subject offered / Specialization			
Duration	l year		
Course Commencement	June		
Admission Process	By entrance exam & Interview		
Fees	1 <sup>st</sup> Semester 2 <sup>nd</sup> Semester		
	Rs. 7,500/-	Rs. 7,000/-	
Courses offered at	Department of Botany, University School of		
	Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Research.		

### Course:3

Course Name	Ph.D.		
Course Type	Self-financed		
Intake	7 students per Ph.D. guide		
Eligibility	55 % or above in B.Sc	·	
Subject offered / Specialization			
Duration	2 years		
Course Commencement	June		
Admission Process	By entrance exam & Interview		
Fees	1 <sup>st</sup> Sem.	2 <sup>nd</sup> Sem. to 4 <sup>th</sup> Sem.	
	Rs. 18,500/-	Rs. 18,000/-	
Courses offered at	Department of Botany, University School of		
	Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Research.		

# COURSE OFFERED: PG DIPLOMA IN PLANT TISSUE CULTURE

### Course: 1

Course Name	P.G. Diploma in Plant Tissue Culture		
Course Type	Self-financed		
Intake	15 students		
Eligibility	55 % or above in B.Sc	,	
Subject offered / Specialization			
Duration	l year		
Course Commencement	June		
Admission Process	By entrance exam & Interview		
Fees	1 <sup>st</sup> Semester 2 <sup>nd</sup> Semester		
	Rs. 15,500/-	Rs. 15,000/-	
Courses offered at	Department of Botany, University School of		
	Sciences, Gujarat University, Ahmedabad-		
	380009, Gujarat, India		
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching		
/ Placement Facility	and Research.		

# COURSE OFFERED: PG DIPLOMA IN BIODIVERSITY MANAGEMENT

### Course:1

Course Name	P.G. Diploma in Biodiversity Management	
Course Type	Self-financed	
Intake	15 students	
Eligibility	55 % or above in B.Sc.	
Subject offered / Specialization		
Duration	l year	
Course Commencement	June	
Admission Process	By entrance exam & Interview	
Fees	1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
	Rs. 15,500/-	Rs. 15,000/-
Courses offered at	Department of Botany, University School of	
	Sciences, Gujarat Unive	rsity, Ahmedabad-
	380009, Gujarat, India	
Future Career Opportunity	Govt. Sector, Private Sector, NGOs, Teaching	
/ Placement Facility	and Research.	

### **❖** FACULTY

Name	Dr. (Mrs.) Archana U. Mankad
Qualification	M.Sc., Ph.D.
Designation	Head & Associate Professor
Areas of	Botany (Plant physiology, Plant Physiology, Horticulture,
Specialization	Palynology, Phytoremediation, Seed technology, Fungal
	biology)
Contact No.	(O) 079 26302578 (R) 23211362 (M) 9898147297
e-mail	amankad@hotmail.com

Name	Dr. Hitesh A. Solanki
Qualification	M.Sc., M. Phil., B.Ed., Ph.D.
Designation	Associate Professor
Areas of	Botany (Ecology, Plant Biodiversity, Medicinal plants,
Specialization	Algae, Taxonomy, Environment Science)
Contact No.	(O) 079 26302578 (R) 26766711 (M) 9898119766
e-mail	husolanki@yahoo.com

Name	Dr. Himanshu A. Pandya	
Qualification	M.Sc., Ph.D.	
Designation	Associate Professor	
Areas of	Botany (Horticulture, Plant Biotechnology, Plant	
Specialization	physiology, Plant Biochemistry, Bioinformatics and	
	Climate Science)	
Contact No.	O) 079 26302578 (R) 26308808 (M) 9825555856	
e-mail	hapandya@gmail.com	