

Department of Botany

About Department :

Department of Botany was established in the year 1963.

Three regular posts for teaching and four non-teaching posts have been sanctioned to the Department.

Department of Botany :



The particulars of present staff working in this Department are as follows.

Teaching faculty

S.No	Name of the faculty	Designation	Qualification	Experience
1	<b>Smt. P.A.S.S.Krishna Kumari</b>	<b>Lecturer in botany</b>	<b>M.Sc, B.Ed.</b>	5 years
2	<b>MS. G.Swapna</b>	<b>Lecturer in botany</b>	<b><u>Msc,SLET,PGDMISCA</u></b>	4 years 5 months

Non-Teaching faculty

S.No	Name of the faculty	Designation	Qualification	Experience
1		Record Assistant	vacant	
2	Smt. Kumari	Herbarium keeper	vacant	
3		Attender	vacant	
4		Gardener	vacant	

The Department Maintains a good botanical garden with various species of plants.

**Courses offering:**

The department offers two courses in U.G. level

1. CBZ with a combination of Chemistry, Botany Zoology.
2. CBMB with a combination of Chemistry, Botany, Microbiology

The present strength of the students is 150

Previously as the college is affiliated to Andhra University since its inception syllabus of Andhra University has been followed. This year i.e. 2013-2014 the college affiliation is shifted to Adi Kavi Nannaya University And Hence the syllabus of Adi Kavi Nannaya University was followed from 2013-14 to 2014-15. The Affiliating University Examination pattern is followed and internal evaluation have been introduced for 20 marks and the remaining 80 marks for the External evaluation in Annual system .

In 2015-16 College conferred with Autonomy and since then College is following Semester System and CBCS system . In 2016-17 Botany syllabus is modified upto 10-20% as per requirements .

Examination pattern is changed . Internal evaluation for 25 marks and External evaluation for 75 marks .

### **Infrastructure facilities:**

The department contains sufficient infrastructure for the class rooms and also the laboratory .

Usually Teaching done by using bio-visual charts, mounts, models, slides, OHP showing micro slides under projection and PPTs through LCD power point viewer.

Department of Botany is having spacious , comfortable , well furnished class rooms . Labs are well designed and equipped with latest equipment and facilities to enhance learning experience of the students .

Each lab possess all modern facilities and also required lab equipment which completely fulfills the needs of Students independently .

### **Class Rooms:**



## DEPARTMENT OF BOTANY

### LIBRARY BOOKS

S.no	Name of the book	Author Name	Quantity
1	Plant physiology	C.B.S Dellinwithan	1
2	Plant ecology	Bhatia & Sharma	3
3	Unified course in botany	Dr.Govind Prakash	1
4	Introductory botany vol-1	P.P.H.N.Sri vastava	1
5	Atratisation plant ecology	Bhati& Sharma	1
6	Plant physiology	H.N.Sri vastava	2
7	Plant anatomy	P.C.Vasishta	2
8	Economic botany	O.P.Sharma	1
9	Plant physiology	S.Mukhej&A.K.Ggosh	1
10	Microbiology	R.C.Dubey&Maheswari	1
11	Cytology Genetics & evolution	P.K.Gupta	1
12	Principals of plant breeding	Rwallord	1
13	Genetics & evolution	P.L.Kochhar	1
14	Angiosperms	G.L.Chopra	2
15	Plant ecology	P.L.Kochhar	1
16	Gymnosprsr	G.L.Chopra,Verma	1
17	Plant ecology	V.B.Mehra	1
18	Biotechnology in plant science	N.C.Kumari	1
19	Elements Ecology	P.D.Sharma	1
20	Cell biology ,Genetics ,Molecular biology evolution and ecology	P.S.Verma&V.K.Agarwal	1
21	Botany paper -1 Academy` T.M	K.Prasada&K.V.Mallayya	23
22	Botany paper -1 Academy` E.M	Prof.B.Raja kumara&K.V. Mallaiah	5
23	Botany paper-II Academy T.M	Y.Narasingarao <i>varm</i>	23
24	Botany paper-II Academy E.M	Dr.K.Remesh&Prpf.Y.N.R.Varma	5
25	Botany Paper –III Academy T.M	Dr.P.Siva Sharma&Dr.P.Vija lakshmi	23
26	Botany Paper –III Academy EM	Dr.K.Satya Mohan&Dr.Babu Rao	5
27	Botany Paper –IV Academy T.M	Dr.B.Sujatha&pK.Ratna Kumari	23
28	Botany Paper –IV Academy E.M	Dr.Usha Kumari&Dr.Ravi	5
29	Aucet Coaching books TM&EM		5
30	U.G.C Net/Set	Upakar publishers	5
31	Flower arranging	John claytoa of the royal	1`
32	Cactus and succulents manual		1
3	Magnolia	Graham rankin	1
34	Rhododen drons aszales manual	Kennthcox	1
35	Fucisia	David clark	1
36	Ecology	N.S.Subharamnaram	1

37	Plant molecular biology	Prathibha devi	1
38	Cell biology	Retgta aroro	1

40	Plant pathogens	R.S.Singh	1
41	Methods in plant tissue culture	u. kumara	1
42	All about house plant	William, Davidson	1
43	Flower craft		1
44	Huxleys house of plant	Alyson and anithory Huxley	1
45	Plant flowers home garden	Marshall	1
46	Skin care	Supernal trikha	1
47	Embryology langiosberms	Sp.bhatnagar	1
48	Ecology	Sonia,r.virdee	1
49	Plantantatomy and embryology		1
50	Cell biology	Sundra rajan	1
51	Material medica	Dr.sk.dubey	1
52	Plant animal interactions	H.d.Kumar	1
53	Plant biotechnology	Agro, s.S.purith	1
54	Orchid growing		1
55	Soilless culture of hort culture plants	cellis	1

### **INFRA STRUCTURE**

#### **List of Permanent Equipment:**

<b>S.NO</b>	<b>NAME OF THE ITEM</b>	<b>NUMBER</b>		
1	Tri molecurer Microscope with imported camera	1		
2	Compound Microscope	40		
3	Dissecting Microscope	30		
4	Electronic single pan balance Digital	1		
5	Electrical balance	1		
6	Digital camera	1		
7	L.C.D. Projecter	1		
8	Binocular microscope	1		
9	Autoclave	1		
10	Projecting microscope	1		
11	Dissicator plate	1		
12	Over head projector	1		
13	Stereoscopic binocular microscope	1		
14	Digital PH meter	1		
15	Ecological equipments	6		
16	Chromatography chamber	1		
17	Digital calorimeter	1		
18	Centrifuge	1		
19	Oven	1		



**WELL EQUIPPED LABS WITH ALL MODERN MICROSCOPES AND EQUIPMENT**



**SPACIOUS CLASS ROOMS**

### Career and Employment Opportunities:

Student can take up higher studies (Post-Graduation) in Botany, Biotechnology, Microbiology, Bio technology, Biochemistry, Genetics, Environmental science and some agriculture related courses like plant breeding , plant pathology , Horticulture etc .

### Employment Opportunities:

Botany students along with teaching profession can get the employment opportunities in dept of Agriculture, sericulture, Medical laboratories, plant science laboratories, Forest service, National park service. State Government hires Botany students in environmental organizations like Nature conservancy, drug companies, oil industry , chemical industry, Lumber & paper companies , seed and nursery companies , fruit growers , food companies , fermentation industries (breweries) , biological supply houses , manure factories , fertilizer companies , biotechnology firms all of these are providing several employment opportunities .

Self-Employment generation in terms of maintenance of plant nurseries, Medicinal plants, Medicinal plants , vegetable and fruit gardens , mushroom culture , SCp\P ( single cell protein ) , floriculture Botany offers many interesting and worthwhile career opportunities. Work is frequently varied and the surroundings pleasant. Students can find a satisfying career in Botany.

### RECENT ACTIVITIES

Every Academic year the department conducts various activities like Group discussion, debate ,student seminars, Guest Lecture, field trip, Study projects, extension activities, Career guidance and several student Initiated activities.

### Department of Botany 2013-14 Activities

#### Field trip:

Department of Botany staff and students went to visit the kadiyam nurseries on 15-2-2014 .

Students Observed thousands of different types of flowering Plants, fruit crops, Orchids Which were growing in serial plots in a systematic manner . The technical staff and the workers working in Nurseries explained to the students like how they are growing the plants, Which methods they are adopting , about different types of manures they are Using and their composition and different types of Pruning Techniques , Irrigation techniques Horticultural Techniques to students in a detailed manner.











### Extension activity: Fruit Ripening by Ethylene

On 11-3-2014 students have done Extension activity on fruit ripening by using ethylene (phytohormones )

I Bsc CBZ&CBMB students went to fruit market and interacted with the fruit sellers. They had given some suggestions for fruit ripening process using phytohormones like Ethylene and compare to calcium carbide and other pesticides. Mostly calcium carbide harmful chemical is used for ripening. Calcium carbide comes in contact with moisture It produces Acetylene gas which accelerates ripening. Some vendors also dip fruits in a solution of Ethephon or use acetylene gas to Ripen fruits faster vendors use there chemicals because this method is very easy. Acetylene affects neurological systems. The only safe and world wide accepted method is using ethylene, which is a natural hormone for ripening when done under controlled temperature and relative humidity condition.

**Guest Lecture:**

Botany Department organized Guest Lecture on 23.12.13. We invited Dr A.V. Purushottam Principal, M.S.N Degree College, Kakinada.

**Topic : Lipid Synthesis in Plant Metabolism.**

Production of lipid hormones and signal molecules, Genetic engineering of plants in lipid production Oxylipins as plant lipid hormones, sterol , isoprenol and sphingolipid biosynthesis were explained in detail to students .





**Students participated seminars in other colleges.**

State Level Inter Collegiate Conference Bio Diversity 2012 was Organised in PR Govt Degree College (Autonomous ) Kakinada on 04.10.12 . We have taken 16 Students for participating in State level competitions. One of our Student M. Sridevi ( I B.SC CBMB) Won II Prize in State level Power point Presentation on Bio Diversity .

Students Participated with so much enthusiasm in Essay Writing and Power Point Presentations. In present day students are facing cut throat competition world wide. So to enhance the competitive spirit in them and to motivate them , to develop confidence in them we made the students. Participating in the state level competitions

State Level Inter Collegiate Competetions were being held in P.R.College Kakinda on Bio Diversity . Several Colleges through out the state Participated in the Academic competitions .

On the behalf of ASD Government Degree College we encouraged the students and made them participate in the Competetions . Nearly Students Participated in Power Point Presentations and Essay Writing Competetions

Regarding Bio Divesity . Our Student M.Sridevi I B.Sc CBMB won the Second Prize in the Power Point Presentation on Bio Divesity .

Students Participated actively in the competitions with much competitive spirit And self confidence .

This State level Competetion helped a lot to students to observe the other Students from different colleges they actually come to know the competition outside world. Participation in State Level Competetion encouraged and enlightened the students in different Prospects .



### Group Discussion

On behalf of the department of botany we conducted Group Discussion on 7-11-2014.

**Topic: SEXUAL CRIMES AGAINST WOMEN IN THE CURRENT SOCIETY**

Students from I,II,III B.sc students participated with more interest and they expressed their opinions on sexual crimes. They discussed being a girl or women should behave what are the qualities woman should achieve to face this they wonderfully expressed. They quoted many real life examples in their houses, surrounding them and discussed about the resent Delhi Gang Rape and man more cases how woman are being Molested in different ways in Educational Institutions.IT WAS A VERY NEEDED AND Excellent Group Discussion for the girls of this age and very apt to face the current problems in the society.



## **DEBATE**

On behalf of the department of botany we are conducted Debate on 7-11-2013

Topic: STATE DIVISION –EFFECTS ON STUDENTS

Our principal sir. P. prabhakar rao garu addressed to our students about on state division students were realized to sir speech .students are very enthusiastically participated in Debate .They have given clear cut opinions on the state division and health arguments taken place on this issue.They Debated on this issue very clearly about various issues like water problems, Electricity, Hyderabad etc and how the are going to effect them if the state is divided and if state united how the issues should be addressed in their opinion.T his Debate was very informative and useful to the students.

### **Career Guidance**

**Career Guidance Programme was organized On behalf of Department of Botany in Seminar Hall for final year students on 4.2.14.Power Point Presentation given on Various Employment Opportunities in different sectors and the qualifications they should possess to acquire the jobs in our department .**

**Lots of Information given to students (60)about the Universities Nation wide and the courses they offering and the procedure to get admission into the reputed Universities and also about the Entrance tests they are Conducting .**

**This Programme was a huge success Students found the programme more useful to them and much informative and inspired them most positively to achieve their goals .**



**CAREER GUIDANCE**



### CAREER GUIDANCE

#### QUIZ

Quiz was conducted for the II & III years of CBZ & CBMB students on behalf of Department of Botany on 24.1.14 on Subject skills and current affairs. Students were made into two groups A&B of 10 each of II and III year students.

Students participated with more Enthusiasm and shown keen interest in answering. Students

Shown Positive competency.



### **QUIZ ACTIVITY**

#### **Study Project Tour :**

We the staff Of Department of Botany has taken 32 students from II & III B.sc (CBZ&CBMB) to V.S.M College , Ramachandrapuram, East Godavari District on 10-1-2014

Students were taken to Botany laboratory . Smt Hema Sundari M.sc, Ph.D Lecturer in Charge (PG centre Botany) explained the concept of tissue culture , benefits and risks of tissue culture . The Actual Procedure of Tissue culture was explained in detail step by step .

Then students have seen all the Equipment needed for tissue culture experiments like Laminar Air flow chamber, Autoclave , Orbital shaker, PCR etc and observed keenly the Research going on in tissue culture on Banana .

Students Interacted with the faculty actively and raised their doubts about the process and the usage of equipment . Faculty cleared all the doubts of students and explained them about different Researches going on in their PG centre.

The tour was indeed a very informative and beneficial to students for their project work . Students were very impressed and motivated by this Wonderful project tour













## **GENECLONING**

M.S.N.Degree college was organized a guest lecturer invited to k.usha sri ;lecturer in botany on gene cloning for botany students on 19.02.2014

**Gene cloning strategy in relation to recombinant D.N.A technology this is well developed in recent days and is miracle of this decade and it is the third mile stone in bio technology. A clone or cloning is an exact copies by a mother. Using R-D.NA,technique we can isolate and clone single copy of a gene or a D.N.A segment in to a Indefinite number of copies, all identical. This technique is called gene cloning. Gene cloning is a relation to recombinant D.N.A. Technology broadly involve the following four aspects**

- 1. Generation of desired D.N.A fragments**
- 2. Insertion of these fragments in to a cloning vector**
- 3. Introduction of the vectors in to host cells.**
- 4. Selection or screening of the recipient cells from the recombinant molecules.**

### Faculty Format

Name	Pullela A.S.S.Krishna kumari
Qualifications	M.sc Botany, BEd
Professional Experience	5.11.1983 to 8.04.1999 School assistant. 9-4-1999 to 26-11-2010 Junior Lecturer Degree Lecturer from 27-11-2010 to till to date.
Department	Botany
Designation	Lecturer In- Charge- Botany
Research information	Nil
Published Information (Articles/Journals/Books)	Nil
Professional Development	Nil
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