



VAAGDEVI DEGREE & P.G COLLEGE

Kishanpura, Hanamkonda, Warangal



Index

EXPERIENTIAL LEARNING

S.No	Department
1	BIOTECH
2	BOTANY
4	CHEMISTRY
5	FOOD SCIENCE
6	MICROBIOLOGY
7	PHYSICS & ELECTRONICS
8	NUTRITION
9	ZOOLOGY

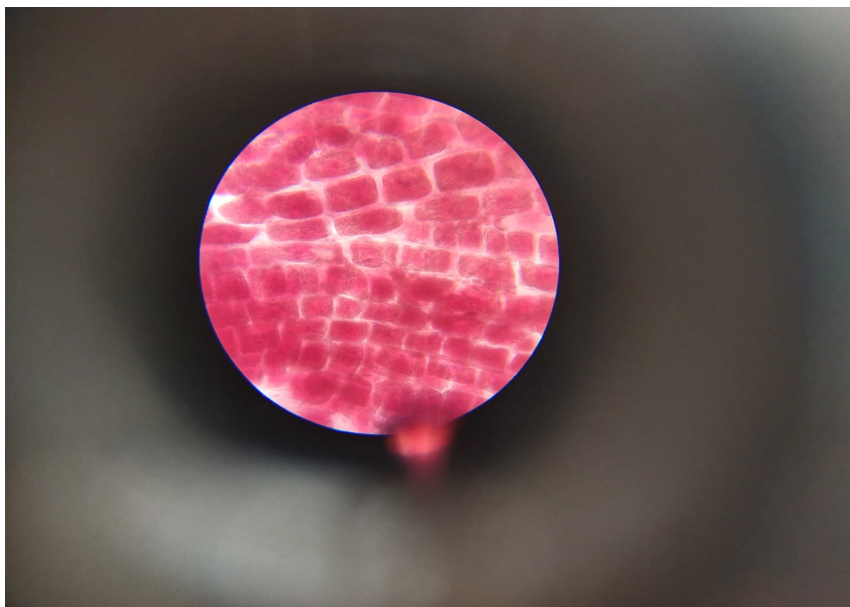
VAAGDEVI DEGREE AND PG COLLEGE
KISHANPURA, HANAMKONDA



DEPARTMENT OF BIOTECHNOLOGY
Report on-
EXPERIENTIAL LEARNING

TITLE: CELL BIOLOGY AND GENETICS/ BIOCHEMISTRY AND MICROBIOLOGY(I/II SEMESTERS)

EXPERIMENT: microscopic preparation of onion root tips to observe different stages of mitosis



EXPERIMENT: culturing of bacteria by streak plate method.



**TITLE: MOLECULAR BIOLOGY AND r-DNA TECHNOLOGY/ BIOSTATISTICS(III/
IV SEMESTERS)**

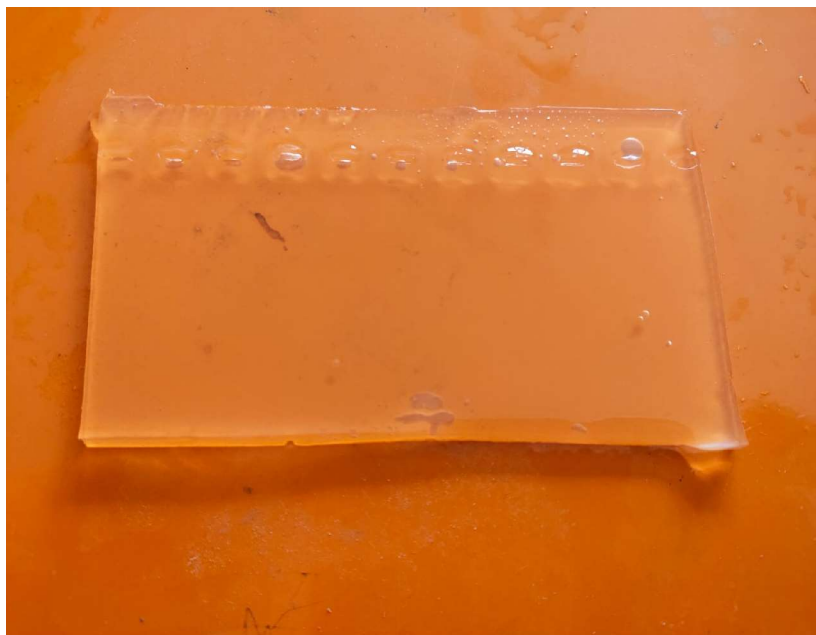
Experiment: Isolation of DNA from plant cells (leaf/ fruits/roots)





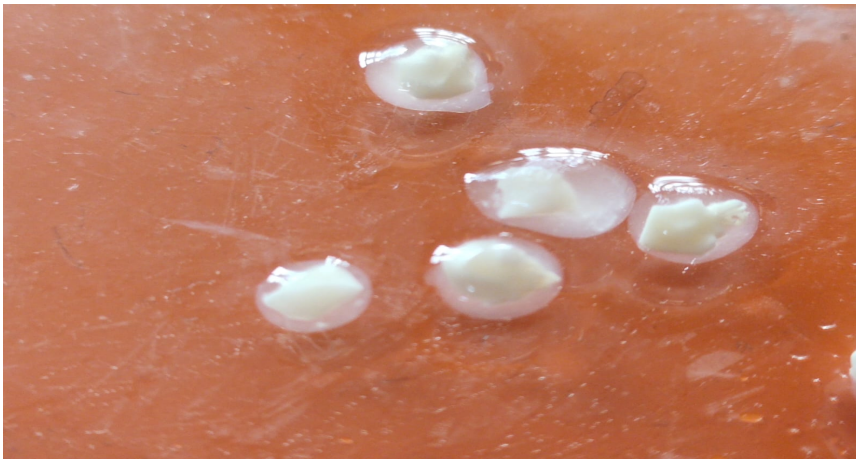
Experiment: Agarose gel preparation.





TITLE: PLANT BIOTECHNOLOGY/ ENVIRONMENTAL BIOTECHNOLOGY.(V/VI SEMESTERS)

Experiment: Artificial seed preparation from groundnut embryos



Experiment: estimation of biological oxygen demand in water





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KISHANPURA, HANAMKONDA-506001

(Affiliated to Kakatiya University)

DEPARTMENT OF BOTANY

EXPERIENTIAL LEARNING

BOTANY LABORATORY - I





BOTANY LABORATORY - II





Observation of slides under the microscope



HERBARIUM CABINET







MUSEUM STORAGE RACKS



Stock of Charts for the explanation of topics



VAAGDEVI DEGREE & PG COLLEGE

Hanumakonda, Telangana

Department of BOTANY FIELD TRIP

The Department of Botany, Vaagdevi Degree & PG College, Hanumakonda regularly conduct the field trip to the students as in the part of curriculum and it is mandatory; and the final year Students of B.Sc. Botany, Vaagdevi Degree & PG College, Kishanpura, Hanamkonda visited the Blackberry area (Pasra), Mallur-Medicinal Plant Conservation Area (MPCA) hill area and Tadvai forest area and Ramappa temple on 5th November, 2023, under the able guidance of our beloved teachers Dr Sateesh Suthari, Mrs. R. Bhargavi, Mrs. A. Kavitha, Mrs. K. Manisha, and lab assistants Mr G. Mogili, Mr Sadanandam from Department of Botany and other departments of the college.

We collected the plant specimens of timber yielding plants, fruit bearing plants, nuts, beverages and highly medicinal value plants from Mallur hill region and Eturnagaram wildlife sanctuary; and other visited places to make herbaria. The information is explained about the medicinal value and other important plants that are used for human as well veterinary purposes, food plants, fibre, vegetables, procurement of non-timber forest products (NTFPs), etc. by our beloved faculty.

Forest types of visited areas: It is tropical dry deciduous type dominated by *Terminalia alata*, *Diospyros melanoxylon*, *Chloroxylon swietenia*, *Hardwickia binata*, *Lannea coromandelica*, *Gitonia floribunda*, *Cleistanthus collinus*, *Madhuca longifolia* var. *latifolia*, *Combretum albidum* and *Terminalia arjuna* along the stream.

Principal

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Kishanpura, Hanamkonda

Observation: It is observed that on the name of development, the construction of guest house, stairs to temple, laying pathway to Chintamani jalapatam (waterfall) and Chenchulaxmi jalapatham made the core areas of the hill region disturbed in Mallur hills. And also observed that the intrusion of invasive alien species into the core areas of forest regions is destroying in all the sites, mainly by *Hyptis suaveolens*, *Chromolaena odorata*, *Parthenium hysterophorus*, *Lantana camara*, *Tridax procumbens*, *Cyanthillium cinerium*, *Acmella paniculata*, etc.

Inference: It is all of our primary responsibility to utilize the nature and natural resources in a sustainable way and conserve the native microbial, floral and faunal diversity (biodiversity) from various threats caused by anthropogenic pressures.

List of students participated in Project works

Group: BZC III Year

HALLTICKET_NO	Student Name	HALLTICKET_NO	Student Name
086223301	ADULA AKHIL	086223335	KARINGULA NITHIN
086223302	ADUNURI LOHITHA	086223336	KATTA SHALINI
086223303	AJMEERA SOUJANYA	086223337	KOLLU ASHWINI
086223306	AZMEERA HANMANTHU	086223340	LAKAVATH SHIREESHA
086223307	BANALA MADHUVANI	086223341	MADASI GRACY
086223308	BANDARI PRAVALIKA	086223342	MARAPALLY ASHWITHA
086223309	BHUKYA ANKITHA	086223343	MEDIDA RAMU
086223310	BONTHALA NAGARAJU	086223344	MEMMARI HARSHINI
086223311	BUSA RISHITHA	086223345	MOHAMMAD FAREEDPASHA
086223314	DHARAVATH GANESH	086223348	PALNATI AVINASH
086223315	DUBYALA SAKIRAN	086223349	PEDDAVENA ANUSHA
086223317	ERRA RANA PRATHAP	086223351	PUPPALA SAHITYA
086223318	GAYIREDDY RAMADEVI	086223352	RAYAPURAM PRATHYUSHA
086223319	GAJEELA PRASANNA	086223353	SAMUDRALA THARUN
086223320	GATTU VAMSHI	086223354	SHAIK AYESHA
086223322	GODDE ARJUN NIVAS	086223356	SIDDOJU POOJA
086223323	GUGULOTHU YOCHANA	086223357	SOUDOJU NIVAS
086223325	GUGULOTHU ROHITH KUMAR	086223358	SRIRAMOJU SINDHUJA
086223326	GUGULOTHU SATHISH	086223359	THATLA PRAVALIKA
086223327	GUMMADI AKHILA	086223360	THOTA ASHA
086223328	HAFIYA BANU	086223361	UPPU NAVEEN KUMAR

086223331	JARUPULA HARIKA	086223365	VEMULAPELLY SRAVAN
086223332	JERIPOTHULA JAHANAVI	086223334	KANUKUNTALA LAYA SRI

A. Subrahmanya
Principal

Group: BtBC III Year Vaagdevi Degree & P.G. College
Kishanpura, Hanamkonda

086213112	NALLA SAHAJA	086223109	JANAGANI PRASANNA
086223101	APPE NAGA HIMADWITHA	086223110	KANNOJU SHIREESHA
086223103	CHITYALA PRATHYUSHA	086223112	KATKURI AKASH REDDY
086223105	DOGGALA RANJITH OFIR	086223118	VAVILLA CHANDANA

Group: BtBZ III Year

HALLTICKET_NO	Student Name
086223701	AZMEERA KEERTHANA
086223702	BAVU AKHIL
086223703	BONAGANI VARDHAN
086223707	NAGABELLY SAI KRISHNA
086223708	ODELA VAMSHI
086223709	PADALA SATHWIK
086223710	PORANDLA BHOOMIKA
086223711	RAYIKANTI PRANAY
086223714	THALLA RUTHKIRAN
086223715	VISHNUBHAKTHULA RAKESH

Group: FBC III Year

086223202	BANDARI SAHITHI
086223203	GUMMADI SAIRAJ
086223206	SIRIKONDA ASRUTHA

Group: NDBC III Year

086223251	CHERUKURI JAHNAVI
086223252	DANAMPELLI NARENDRA
086223253	DEVAKARI SANTHOSHINI
086223254	FARHEEN
086223257	SUMAIYA ANAM

086223258	SURAM KAVYA
086223259	SYEDA NAUSHEEN FATIMA

A. Sheshadharan

Principal

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Kishanpura, Hanamkonda

Group: FSBZ & NDBZ III Year

086223651	AKARAPU POOJITHA	086223851	AKUTHOTA PAVANI
086223652	BOLLEPALLI SATHWIKA	086223852	GUDALA DEEPIKA
086223655	KALVAKUNTALA NAVYA BHAVANA	086223855	MAREPALLI SHIVAMANI
086223656	KAMPELA PRADEEP	086223856	PASVAN NEHA
086223657	KURRA SOUMYA	086223857	PERLA V S S ANURAAG
086223659	MANDHA PRATHYUSHA	086223859	VALLAJU RASHMI SREE
086223661	SILUVERU PRAVEEN KUMAR	086223663	MOHAMMED SUMAYA





A. Subashan
Principal
Vaagdevi Degree & P.G. College
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Introduction of new plant species into the garden in association with NCC students



Learning at field

A. Sheshachalam
Principal
 Vaagdevi Degree & P.G. College
 Kishanpura, Hanamkonda



Ploughing of the land for the sowing of seeds

A. Sheshachalam
Principal
Vaagdevi Degree & P.G. College
Kishanpura, Hanamkonda



Weed clearing & Swachh Bharath Program in the Garden

A. Subhadra
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Experiential learning PG Chemistry lab photos

PG - Organic lab



PG - Inorganic lab

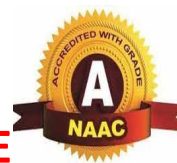


PG - Physical lab





VAAGDEVI DEGREE & PG COLLEGE



KISHANPURA, HANAMKONDA

DEPARTMENT OF CHEMISTRY

CHEMISTRY LAB

Experiential Learning







S.NO	SEM	PRACTICAL
1	I	Qualitative Analysis
2	II	Quantitative Analysis
3	III	Organic Synthesis
4	IV	Qualitative Analysis of Organic Compounds
5	V	Physical Chemistry - I
6	VI	Physical Chemistry - II



VAAGDEVI DEGREE & P.G. COLLEGE

Kishanpura, Hanamkonda



DEPARTMENT OF FOOD SCIENCE AND QUALITY CONTROL
AND
DEPARTMENT OF NUTRITION AND DIETETICS

(FOOD AND NUTRITION DEPARTMENT)

Experiential Learning:

FOOD SCIENCE-LAB



NUTRITION-LAB



FOOD AND NUTRITION DEPARTMENT :

All students in the classes Both (UG and PG) are In the group form of t arrangement perform the same work simultaneously the same work is conducted in small groups of 5 which will help the students to gain knowledge in food processing .

Students doing practicals in vegetable and fruit processing and preservation




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Viswambhara Educational Society's

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Warangal, Telangana.

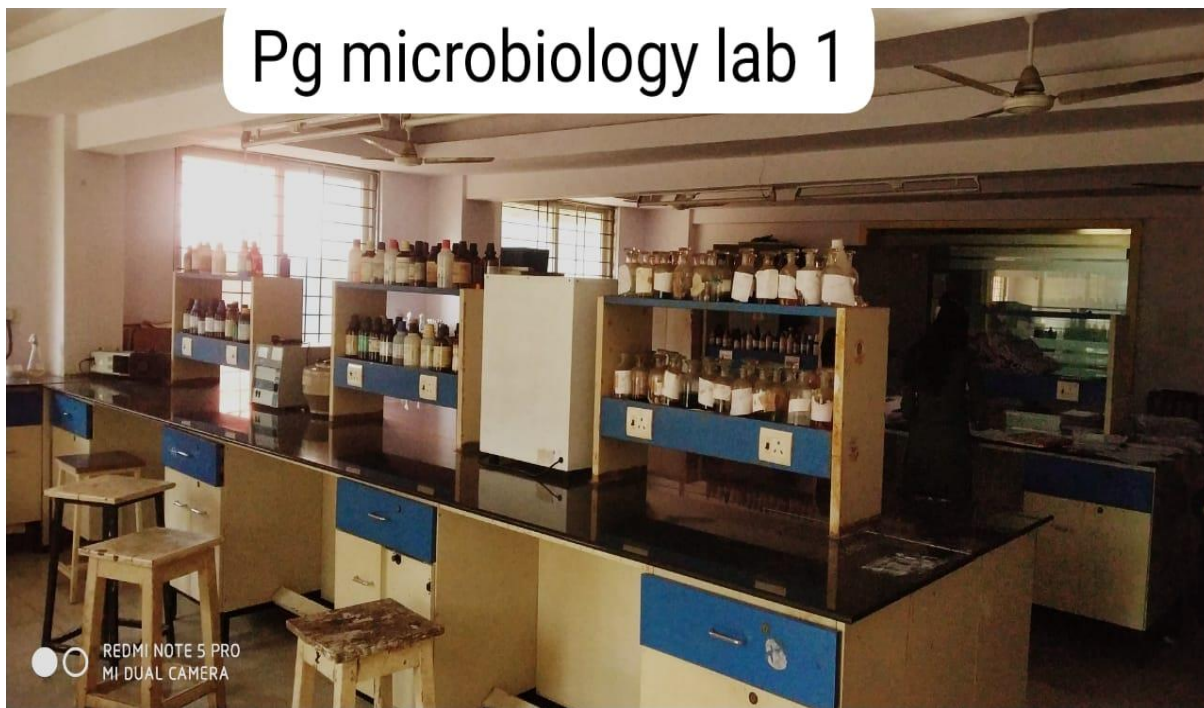
Department of Microbiology

Experiential Learning

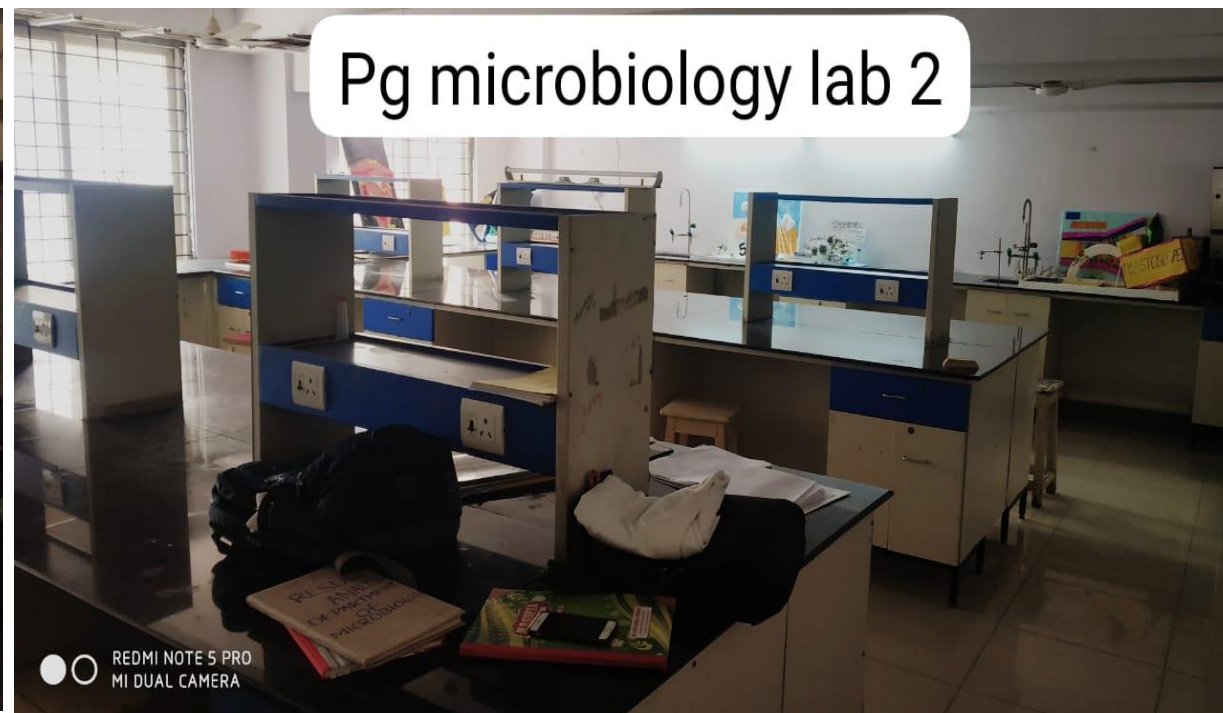
Microbiology lab



Pg microbiology lab 1



Pg microbiology lab 2



Ug microbiology lab



Department of Microbiology

All students in the classes (UG and PG) are In the group form of t arrangement and perform the same work simultaneously the same work is conducted in small batches which will help them

The Preparation of culture media for the Isolation of pure cultures of microorganisms





A. Subashan

Principal
Vaagdevi Degree & P.G. College
Kishanpura, Hanamkonda

DEPARTMENT OF PHYSICS & ELECTRONICS

LABORATORY METHOD FOR EXPERIENTIAL & PARTICIPATIVE LEARNING



ELECTRONICS LAB



GENERAL PHYSICS LAB



MECHANICS LAB



OPTICS LAB



VAAGDEVI DEGREE & P.G. COLLEGE

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DEPARTMENT OF FOOD SCIENCE AND QUALITY CONTROL
AND

DEPARTMENT OF NUTRITION AND DIETETICS

(FOOD AND NUTRITION DEPARTMENT)

Experiential learning 2023-24

Report on Practical Classes in Experiential Learning Criteria (2023-24)

Introduction The Department of Food and Nutrition conducted practical classes as part of the Experiential Learning criteria for the academic year 2023-24. These classes were designed to provide students with hands-on experience and a deeper understanding of theoretical concepts by applying them in practical scenarios.

Objective The objective of these practical classes was to enhance students' technical and analytical skills, fostering their ability to tackle real-world challenges in the field of food and nutrition effectively.

Details of the Program

- **Duration:** Conducted throughout the academic year 2023-24.
- **Participants:** Undergraduate and postgraduate students of the Department of Food and Nutrition.
- **Approach:** A blend of laboratory work, project-based learning, and collaborative exercises.

- ❖ The DEPARTMENT OF FOOD SCIENCE AND QUALITY CONTROL AND DEPARTMENT OF NUTRITION AND DIETETICS 2019 which offers a UG programme in Food Technology and Nutrition and Dietetics.
- ❖ The **FOOD AND NUTRITION DEPARTMENT** understands the importance of preparing students to the current needs in this competitive world through
- ❖ The department has a dedicated team of highly qualified members of having expertise in broad interdisciplinary research domains.

Practical knowledge being the most vital part of education and the department trains the students in the well-equipped laboratories like **Food Microbiology, Food Biochemistry, Food Analysis, Chemical engineering, Fruit and Vegetable processing, Food Fermentation, Dairy engineering, Food Process Engineering, Biochemical Engineering and Baking and confectionary** laboratory with state-of-the-art equipment for the accessibility of students.

○ **Food Biochemistry Laboratory**
Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Food Biochemistry	UV-VIS Spectrophotometer
2		pH Meter
3		Weighing Balance
4		Flame photometer
5		Muffle furnace
6		Soxhlet Extractor Apparatus

○ **Food Microbiology Laboratory**
Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Food Microbiology	Autoclave
2		Hot Air Oven
3		Laminar Air Flow chamber
4		Orbital shaker
5		Microscope
6		Refrigerator

○ **Fruit and Vegetable Processing Laboratory**

Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Fruit and Vegetable Processing	Juice Extractor (Screw type)
2		Fruit pulper
3		Freeze dryer
4		Hand Refractometer
5		Weighing balance

○ **Baking and Confectionary Laboratory**

Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Baking and Confectionary Laboratory	Bakery oven
2		Planetary mixer
3		Pastry set (Trays & Mould)

○ **Dairy Laboratory**

Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Dairy Engineering	Lactometer
2		Butyrometer
3		Butter Churner
4		Cream separator
5		Gerber Centrifuge
6		Refractometer
7		Milk Analyzer

○ **Food Process Laboratory**

Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Food Process Engineering	Paddy Dehusker
2		Ball Mill
3		Hammer mill
4		Fluidized bed dryer
5		Freezing Point apparatus
6		Angle of repose setup

○ **Food Packing Laboratory**

Name of the Equipment's:

S.No	Name of the Laboratory	Name of the Equipment's
1	Food Packing Laboratory	Cobb tester
2		Package Drop Tester
3		Tear Tester
4		Box Compression Strength tester
5		Burst Tester
6		Paper thickness Gauge
7		Hand operated sealing Machine
8		Hand operated crown Corking Machine

Practicals Covered The program included a variety of practical sessions, ensuring students gained comprehensive knowledge and skills. Below are some key practicals covered:

Practical	Description
Food Analysis	Estimation of macronutrients, vitamins, and minerals.
Sensory Evaluation of Food Products	Assessing taste, texture, aroma, and overall acceptability.
Diet Planning and Analysis	Creating balanced diet plans and analyzing nutritional adequacy.
Food Product Development	Designing and testing innovative food products.
Microbiological Testing of Food	Identifying microbial contamination and ensuring food safety.
Food Preservation Techniques	Practical application of methods like canning, freezing, and dehydration.
Community Nutrition Fieldwork	Conducting nutritional surveys and awareness programs.

Impact of the Practical Classes

- Improved practical knowledge and technical expertise in food and nutrition.
- Enhanced ability to analyze and interpret experimental data.
- Strengthened problem-solving skills and innovative thinking.
- Better preparedness for professional roles in the food industry, healthcare, and research.

Conclusion The practical classes conducted under the Experiential Learning criteria for the academic year 2023-24 significantly enriched the educational experience of food and nutrition students. These hands-on sessions bridged the gap between theory and practice, empowering students with the skills needed for academic and professional success. The department plans to continue and expand such initiatives to further enhance learning outcomes.

FOOD SCIENCE-LAB



NUTRITION-LAB



FOOD AND NUTRITION DEPARTMENT :

All students in the classes Both (UG and PG) are In the group form of t arrangement perform the same work simultaneously the same work is conducted in small groups of 5 which will help the students to gain knowledge in food processing .

Students doing practical's in Food Microbiology and food Biochemistry



Students doing practical's in Food Processing and food Preservation

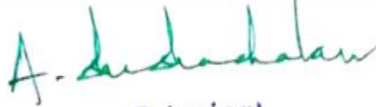


Students presented their food formulations to the Vice Principal and Principal for sensory evaluation and feedback.




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VAAGDEVI DEGREE & PG COLLEGE



Department of Zoology

EXPERIENTIAL LEARNING

Laboratory Pictures



Invertebrate & Vertebrate Laboratory



Animal Physiology, Biochemistry, Molecular Biology Laboratory



Genetics, Evolution Laboratory