



Audit Report (2020-2021)



ACKNOWLEDGMENT

I acknowledge my deepest gratitude to the Management of Maratha Vidya Prasarak Samaj. Hon.Sarchitnis Neelimatai Pawar, Hon. Dr. Tushar Shewale and Hon. Director Nanasaheb Mahale for their continuous encouragement and guidance. I express my special thanks to our Hon. Principal Dr. J.D. Sonkhaskar, Vice Principal Dr. S. K. Kushare, IQAC Co-ordinator Dr. D.N. Pawar for valuable suggestions and guidance from time to time for preparing Laboratory Audit of the KSKW Arts, Science and Commerce College, CIDCO, Nashik.

I also acknowledge my gratitude to the committee members Dr. Smt. Savita Thakare, Smt. Sonali Deore and Mr. D. B. Thete for helping me in collecting data and preparing report. I extend my gratitude towards all Head of the Departments for maintaining dead-stock register and cleaning laboratories with highest teamwork. I am thankful to the teaching and non-teaching staff of our college. Thanks to all for their direct and indirect help and motivational support.

Dr. Yogeshwar R. Baste
Coordinator



Audit Report (2020-2021)



FROM THE DESK OF HON. SARCHITNIS NEELIMATAI PAWAR



“Education is not preparation for life; Education is life itself.”

The beautiful and profound statement encapsulates the value of education. Nothing can quite uplift our spirit in quite the same manner as education does. Laboratory plays the role of a "catalyst" in experimental learning and research. Maratha Vidya Prasarak Samaj, Nashik is committed for the education and hence welfare of the masses. Laboratory is place where student learn the basic skill of science and hone their skills. This is the place where future science is conceived. For this certain norms regarding the laboratories for specific subjects should be complied. Laboratory audit is to know where the laboratory stands in these parameters. Apart from this safety measures are very important and stringent procedure should be followed. I wish you all the best for the same and hope you strive improve up to the highest levels.

Smt. Neelima Vasantrya Pawar



Audit Report (2020-2021)



FROM THE DESK OF HON. PRINCIPAL DR. J. D. SONKHASKAR



We at MVP'S KSKW Art's, Science & Commerce College CDIDCO, Nashik strive to give the best laboratory facilities to the students. Still there may be desiperencies which we are not able to spot. For this laboratory audit by experts is a best tool. I hope this would be an opportunity to know where we stand so that we will improve and give the best. Science education involves both classroom teaching as well as laboratory techniques. Laboratory techniques give the students first hand insight of the subject for this the laboratory should be well equipped and up to the best possible standards. I will be happy to listen from experts and their recommendation about facilities we are providing in the laboratory and for better performance to create educational culture among students.

Principal Dr. J. D Sonkhaskar



Audit Report (2020-2021)



PREFACE

Our college KSKW Arts, Science & Commerce College, CIDCO, Nashik recognizes the importance of Laboratory Audit for college development and has been taking different measures and intervention. For the mainstreaming process to be effective, it is necessary to conduct laboratory Audit and in order to find out gaps and to come up with appropriate actions accordingly. Laboratory audits are used to identify problems in laboratory in order to improve process and procedures. It is a process and a tool for identifying lacuna and suggests methods to make improvement and meet global standards.

Data generated by laboratories are used to make strategic decisions for all types of projects (investigation, remediation, compliance, etc.). Laboratory audit ensures that the laboratory has quality systems in place, follows good laboratory practices.

The audit process involved was collection of data, choosing the criteria's to be audited, analyzing, evaluating, writing down the findings and sharing the results with the Principal of the college for implementation of the recommendations.



Audit Report (2020-2021)



ABOUT INSTITUTE

Pioneers of Maratha Vidya Prasarak Samaj



Maratha Vidya Prasarak Samaj is one of the most prestigious centres of learning in the State of Maharashtra. It has been over 105 years that it has stood to the test of time and has become legend of unparalleled stature. History says that the credit for the birth of MVP Samaj goes to the young, enthusiastic and devoted team of social workers and educationists who were inspired by the lives of Mahatma Jyotiba Phule, Savitribai Phule and Rajashri Shahu Maharaj of Kolhapur. These young leading lights include Late. Karmaveer Raosaheb Thorat, Late Karmaveer Bhausaheb Hire, Late Karmaveer Kakasaheb Wagh, Late Karmaveer Annasaheb Murkute, Late Karmaveer Ganpat Dada More, Late Karmaveer D.R. Bhonsale, Late Karmaveer Kirtiwanrao Nimbalkar and Late Karmaveer Vithoba Patil Khandalaskar, who laid the foundation of the Samaj. They were the men who envisioned a culture and knowledge centric society. MVP is the institution with all the amenities of education, research and extra-curricular activities. The motto of MVP is “Bahujan Hitay Bahujan Sukhay”. It’s meaning is “Wellbeing and Welfare of the Masses”. To achieve this goal our college is banded to chalk out plans and procedure for the students.



Audit Report (2020-2021)



MOTHER INSTITUTE AT A GLANCE

Total No.of Branches : 451			
Preprimary and Primary Schools	160	I.T.I.	08
Secondary Schools	159	Printing Press	01
Higher Secondary Schools	54	Student Hostels	18
Diploma College of Education (D.Ed)	05	Ashram Shalas	05
Degree College of Education (B.Ed)	02	Agricultural Diploma & Degree Colleges	02
Arts, Science & Commerce Colleges	22	College of Fine Art	01
Medical College	01	Medical College Teaching Hospital	01
Pharmacy College (D.Pharm)	01	College of Physiotherapy	01
College of Pharmacy (B.Pharm)	01	Architecture College	01



Audit Report (2020-2021)



College of Paramedical Courses	01	Training College of Nursing (GNM)	01
Institute of Management Studies	01	Institute of Nursing Education (BSc)	01
Law College	01	College of Social Work	01
College of Engineering	01	Polytechnic College	01
Jan Shikshan Sansthan	01	Bachelor of Design College	0



Audit Report (2020-2021)



ABOUT COLLEGE



Karmaveer Shantarambapu Kondaji Wavare Arts, Science and Commerce College (popularly known as CIDCO College) is one of the leading college of MVP Samaj and was established in June 1993 and is affiliated to the Savitribai Phule Pune University, Pune. It is Located at Uttamnagar, CIDCO. The College is housed in two extensive buildings right in the heart of New Nashik. The College offers degree programs in Arts, Commerce, Science and Computer Science. It is one of the famous colleges in Nasik district. The college has earned a name and fame due to its academic excellence, regularity and punctuality of its rigorous routine, high standard of discipline, administrative control and a progressive outlook to serve the Society. The college offers education in 24 subjects at UG Level, 8 Subjects at Post Graduate Level.

The college was awarded as a Best College Award by S.P.P.University in 2013-14. and is accredited with “A” grade with CGPA 3.20 by NAAC, Bangalore.



Audit Report (2020-2021)



VISION

“To Empower Students with Innovative Life Skills and Social Values for Global Competency”

MISSION

Upholding the motto of MVP Samaj, '*Bahujan Hitaya, Bahujan Sukhaya*', i.e. welfare and happiness of the masses, the College is committed to provide higher educational opportunities to the socially under-privileged and financially weak sections of the society and create dignity of labour and importance of self-reliance.

OBJECTIVES OF THE INSTITUTION

1. To provide good academic education to students through a disciplined approach and better quality of teachers
2. To inculcate moral, ethical values & national spirit among students by involving them in activities such as NSS/NCC etc. for holistic development
3. To promote higher education, competency and enhancement among teaching fraternity through sensible approach towards environmental awareness and social values
4. To pay special attention to women education and to ensure the success of movement of empowerment and emancipation of women
5. To make the students computer literate and imbibe soft skills among them grooming their overall personality to cope up with the current challenges of the globalized life
6. To provide maximum facilities to minority and under privileged (reserve category) students



Audit Report (2020-2021)



LABORATORY

Science educators have believed that the laboratory is an important means of instruction in sciences. Laboratory experiences provides opportunities for students to interact directly with the material world, using the tools, data collection techniques, models, and theories of science. Laboratory instruction wasis considered essential because it provided training in observation, increases knowledge, and stimulates student's interest towards scientific principles and temperaments. In this era these same reasons are still accepted. Five groups of objectives that may be achieved through the use of the laboratory in science classes:

- **skills** - manipulative, inquiry, investigative, organizational, communicative
- **concepts** - for example, hypothesis, theoretical model, taxonomic category
- **cognitive abilities** - critical thinking, problem solving, application, analysis, synthesis
- **understanding the nature of science** - scientific enterprise, scientists and how they work, existence of a multiplicity of scientific methods, interrelationships between science and technology and among the various disciplines of science
- **attitudes** - for example, curiosity, interest, risk taking, objectivity, precision, confidence, perseverance, satisfaction, responsibility, consensus, collaboration, and liking science

Laboratory teaching assumes that first-hand experience in observation and manipulation of the materials of science is superior to other methods of developing understanding and appreciation. Laboratory training is also frequently used to develop skills necessary for more advanced study or research. From the standpoint of theory,



Audit Report (2020-2021)



the activity of the student, the sensorymotor nature of the experience, and the individualization of laboratory instruction should contribute positively to learning. Laboratory teaching have an advantage over other teaching methods in the amount of information retention, in ability to apply learning, or in actual skill in observation or manipulation of materials. Two misconceptions about the use of the laboratory in college science. One is that laboratories somehow "illustrate" lecture courses - a function that is not possible in a simple, one-afternoon exercise. Most scientific theories are based on a large number of very sophisticated experiments. If lecture topics are to be illustrated, this should be done through the use of audio-visual aids or demonstrations. The second misconception is that laboratories exist to teach manipulative skills. The majority of students in science laboratory classes do not have a career goal of becoming a professional scientist. Further, many of the skills that students learn in laboratories are obsolete in science careers. If these skills are worth teaching, then they should be is as tools to be mastered for basic scientific inquiry and not as ends in themselves. Science laboratories requires conduct of regular practical work and use of variety of equipment, instruments, gadgets, materials, chemicals, glassware etc. It is of utmost importance that in order to ensure safety of students, every essential precaution is taken well in advance.

Science educators frequently turn to the research literature for support of their requests for funds for supplies and equipment for laboratory activities. Science education researcher have examined the role of the laboratory on many variables, including achievement, attitudes, critical thinking, cognitive style, understanding



Audit Report (2020-2021)



science, the development of science process skills, manipulative skills, interests, retention in science courses, and the ability to do independent work.

Participating in laboratory experiments would help students learn methods of accurate observation and inductive reasoning. However, the focus on prescribing specific experiments and procedures, illustrated, limited the effectiveness of early laboratory education. In the rush to specify laboratory experiments, procedures, and equipment, little attention had been paid to how students might learn from these experiences.

Terms related in Lab inspection:

- A. **“Appropriate Hazard Warning”** – Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the health and physical hazards, including the target organ effects of the chemical(s) in the container(s).
- B. **“Categories of Hazardous Chemicals”** – A grouping of hazardous chemicals with similar properties.
- C. **“Expose”** – Subjecting an employee to a hazardous chemical in the course of employment through any route of entry, including inhalation, ingestion, skin contact, or absorption. The term includes potential, possible, or accidental exposure under normal conditions of use or in a reasonably foreseeable emergency.
- D. **“Hazardous Chemical” or “Chemical”** – An element, compound, or mixture of elements or compounds that is a physical hazard or a health hazard.
- E. **“Health Hazard”** – A chemical for which acute or chronic health effects may occur in exposed employees and which is a toxic agent, irritant, corrosive, or sensitizer.



Audit Report (2020-2021)



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- f. **“Label”** – Any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals, and which includes the same name as on the Safety Data Sheet (SDS) or Material Safety Data Sheet (MSDS).
- G. **“Material Safety Data Sheet” (“MSDS”)** – A document containing chemical hazard and safe handling information for the hazardous chemical as determined by the chemical’s manufacturer.
- H. **“Physical Hazard”** – A chemical which is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or water-reactive.
- I. **“Personal Protective Equipment”** – Protective equipment provided to an employee by the employer which provides a level of protection to chemicals to which an employee may be exposed that will be adequate to ensure their health and safety based on current industry standards.
- J. **“Safety Data Sheet” (“SDS”)** – The Hazard Communication Standard (HCS) requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets (SDSs) for each hazardous chemical to downstream users to communicate information on these hazards. Safety Data Sheets were formerly called Material Safety Data Sheets, or MSDSs. The information contained in the SDS is largely the same as the MSDS.
- K. **“Stationary Process Container”** – A tank, vat, or other such container which holds different hazardous chemicals at different times.



Audit Report (2020-2021)



CONCEPT OF LABORATORY AUDIT

The concept of quality is central to the delivery of laboratory services and this is achieved through the incorporation of quality systems, quality control and quality assurance in all aspects of laboratory practice. Essential to all aspects of laboratory results is to ensure that they are accurate, reliable and delivered in a timely fashion. To ensure that these requirements are in place and that they are consistently being met, audits should be regularly undertaken. Quality audits play an essential role in the Quality Management System. Laboratories tend to be organized along specific disciplines. Audits of the laboratory will be performed at predefined time intervals, assessing whether the laboratory complies with the defined quality system processes and this can involve procedural or results-based assessment criteria.

During audits of a laboratory function, information is gathered about

- Suitability of processes and operating procedures
- Staff competence and training
- Reliability and accuracy of equipment
- Suitability of the laboratory environment
- The handling of chemicals and equipment

Audits therefore enable the laboratory to understand how well it is performing when compared to a benchmark or standard. To be effective, laboratory auditing should report both non-conformances and corrective actions, and also to highlight areas of good practice so that other laboratories or departments can exchange information and review working practices.



Audit Report (2020-2021)



The science laboratory inspection checklist has been developed to support each laboratory in building and maintaining a safety program that meets the expectations outlined in the Laboratory Safety Manual.

The checklist has these sections:

- Good Laboratory Design
- Laboratory Personnel
- Instrumentation
- Staff Competency Lab Training

Audit in college laboratory is a process of review and assessment of laboratory performance, and its purpose should be to improve practical activity by enhancing laboratory performance and making better use of resources. The suggested conduct for an audit and the involvement of personnel are also reviewed. The concept of laboratory audit is central to the delivery of laboratory services and this is achieved through the incorporation of quality systems, quality control and quality assurance in all aspects of laboratory practice. The Laboratory standard consists of five major elements such as hazard identification, chemical hygiene plan, information and training, exposure monitoring and medical consultation and examinations. To ensure that these requirements are in place and that they are consistently being met, audits should be regularly undertaken. A laboratory audit verifies that the laboratory has quality systems in place, follows good laboratory practices and generates data of integrity and quality. Audits of the laboratory will be performed at predefined time intervals, assessing whether the laboratory complies with the defined quality system processes and this can involve procedural or results-based assessment criteria. The success of the audit is



Audit Report (2020-2021)



based on adequate preparation, precise performance, well documented and insightful reporting and productive follow-up. Audits are used to identify problems in the laboratory, in order to improve processes and procedures. An outcome of assessment is finding root causes of problems and taking corrective actions. Quality audits play an essential role in the quality management system. Laboratories tend to be organized along specific disciplines.

OBJECTIVES OF LABORATORY AUDIT

The primary objective of the audit was to determine controls over tracking of chemical inventory and disposing of chemical waste are adequate, effective, and in accordance with government policies and procedures. Laboratory audit ensures that the laboratory has quality systems in place, follows good laboratory practices. In addition to this objective of the audit was to review the Science Laboratory inspection process for the available physical facilities, maintenance of equipment, safety measures, waste disposal, record keeping procedure and training laboratory support staff.

The audit focused on the following areas:

- 1 Effectively manages the handling of toxic chemicals, glassware and other precious instruments.
- 2 Manages the waste disposals properly
- 3 Implements all of safety controls
- 4 Proper training to laboratory support staff



Audit Report (2020-2021)



METHODOLOGY

To accomplish the audit objective,

1. Held discussions with key Department and laboratory personnel
2. Review applicable laws, regulations, and Department policies related to Chemical materials safety.
3. Review best practices and government standards related to hygiene.
4. Review safety policies and procedures in effect at the Department laboratories where materials were handled.
5. Observing laboratory inspections performing limited evaluating of supporting documents.
6. Appropriate training is provided to all covered employees.

LABORATORY INSPECTION CRITERIA

Laboratory Door Signs:

1. Do all entrances to the laboratory space have an appropriate caution sign indicating the hazards present in the area?
2. Are appropriate hazard labels on the laboratory door sign?

Documentation:

1. Does the laboratory have a current Chemical Hygiene Plan (CHP)?
2. Have all members of the laboratory received necessary training and is this documented in the CHP?



Audit Report (2020-2021)



3. Does the laboratory use Bloodborne pathogens, other than biohazardous sharps, pathogens? If the answer is "yes", does the laboratory have a current Exposure Control Plan (ECP)?

Chemical Safety:

1. Are any chemicals stored on the floor?
2. Are there any liquid chemicals stored above eye level?
3. Are there expired or old chemicals in the laboratory?
4. Does each container of chemistry have an appropriate label?

Chemical Waste:

1. Is the chemical waste stored properly?

Biological Safety:

1. Are biological sharps used in the laboratory and if so, are they disposed of properly?
2. Are the all sharps waste containers being stored properly?
3. Is the biological waste properly stored?

Personal Protective Equipment:

1. Is appropriate eye protection being used when necessary?
2. Are laboratory staff wearing appropriate clothing?

Fire Extinguisher:

1. Is an appropriate fire extinguisher available and easy to access?
2. Has the extinguisher been inspected and certified time to time?



Audit Report
(2020-2021)



DEPARTMENT OF MICROBIOLOGY
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF MICROBIOLOGY LABORATORY AUDIT: (2020-21)

❖ **History-**

- **Year of Establishments:** UG: June 1994 PG: --
- **Names of Programmes Offered:** UG: B.Sc. DMLT PG:---
- **Pattern :**UG-Semester & CBCS PG---

❖ **Vision:** -To produce globally competent students for the Betterment of Human being and Environment.

❖ **Mission:** - To inculcate sense of Academic Goals.

To enable students for facing challenges.

To ensure values and ethics among students.

❖ **Scope and Importance**

There is vast scope in the field of Microbiology due to the advancement in the field of science and technology. The scope in this field is immense due to the involvement of Microbiology in many fields like medicine, pharmacy, dairy, industry, clinical research, water industry, agriculture, chemical technology and nanotechnology.

The study of Microbiology contributes greatly to the understanding of life through enhancements and intervention of microorganisms. There is an increase in demand for microbiologists in India and globally. A microbiologist can innovate new diagnostic kits, discover new drugs, teach, research, etc

Graduate degree in Microbiology gives you the opportunity to work at science laboratories and pathology laboratories as well.

- If you have a PG in microbiology, you can work in microbiology based industries like pharmaceutical, dairy, breweries, distilleries, enzyme, etc. and you also can pursue Ph.D. if interested in research.
- Students who complete PhD can take up teaching at universities and PG colleges. They can also take up a post-doctoral research.
- Microbiologists can work in the area of food, pharmacy, agro-chemistry biotechnology, bio-refinery, environment, pollution control and bioremediation.



Audit Report (2020-2021)



- In the field of agriculture, microbiologists act as environmental and health specialists to study the role of microbes in plant disease, pest control, nutrition and soil fertility.
- In the field of medicine and health care, the work is usually associated with diagnosis, prevention and treatment of illnesses associated with microbes.
- Universities and colleges employ microbiologists as researchers and teachers.

❖ **Infrastructure and IT facility-**

- Practical Laboratory – 01
- Staff room- 01
- LCD Projector -01
- Computer - 02
- Printer-01
- Internet facility

❖ **Faculty Members:**

Sr. No.	Name of the Teacher	Designation	Qualification	Teaching Experience (Years)
1	Dr. Smt. M. S. Girase	Head, Associate Professor	M. Sc., M. Phil., Ph.D., GATE, SET	27
2	Smt. J. P. Dhokane	Assistant Professor	M. Sc., M. Phil., NET, DMLT	15
3	Smt. S. Y. More	Assistant Professor	M. Sc., M. Phil., SET	08



Audit Report (2020-2021)



❖ Laboratory Equipments-

Sr. No.	Name of Equipment	Quantity	Make
1.	Digital Weighing Balance	2	Contech ,Wensar
2.	Digital pH Meter	1	Equiptronics
3.	Water Bath 6 Hole	1	Shital
4.	Hot Plate	1	Modern industries
5.	Hot Air Oven	1	Kumar
6.	Heating mantel	1	Labline
7.	Mixer grinder	1	Winner
8.	Cylinder	2	HP
9.	Refrigerators	2	Godrej, Samsung
10.	Vertical Autoclave	1	UTC
11.	Portable autoclave	1	Kumar
12.	Spectrophotometer visible	1	Equiptronics
13.	Colori meter	1	Equiptronics
14.	Oven	1	LG
15.	Magnetic Stirrer	1	MI
16.	Gerber Centrifuge	1	Jupiter Seals
17.	Micro centrifuge	1	Spinwin
18.	Clinical centrifuge	1	Remi
19.	Cooling centrifuge	1	Remi
20.	Bacteriological Incubator	1	Kumar
21.	Distillation Plants	2	Bioera
22.	Rotary shaker	1	Besto
23.	Laminar Air Flow	1	Rescholor
24.	Vortex mixture	1	Remi
25.	Colony counter	1	Besto
26.	Electrophoresis unit	1	Bioera
27.	Inoculation chamber	1	Assembled
28.	Shaker incubator	1	Neolab, MI
29.	Vacuum pump	1	Bioera
30.	Ultra scope	1	Areche Bio Logics
31.	Anaerobic jar	1	Besto
32.	Laboratory dryer	1	Borosil



Audit Report (2020-2021)



Sr. No.	Name of Equipment	Quantity	Make
33.	Binocular Microscope	8	Coslab
34.	Monocular Microscope	9	Besto ,Coslab
35.	Dissecting microscope	2	Coslab
36.	BP Apparatus	1	Omeron
37.	Glucometer	1	Accu-check
38.	Electronic personal scale	1	Live care
39.	Solvent filtration apparatus	1	Bioera

Photo gallery:

		
Laminar Air Flow	Cooling Centrifuge	UV-Visible Spectrophotometer
		
Incubator shaker	Micro centrifuge	Microscope



Audit Report (2020-2021)



❖ Laboratory audit and check list :

Sr. No	Topic	Yes	No	NA	Findings /Comments
A	General Work Environment				
1	Work area and Design	Yes			Sufficient work area & properly designed Laboratory
2	Lab Manual	Yes			SOP of all instruments is available
3	Means available to reach items stored at shoulder level.	Yes			Regular items are at reachable height
4	Emergency Action Plan	Yes			Fire extinguisher and first aid box available.
5	Material Safety Data Sheets (MSDS) Readily accessible	Yes			
6	Chemical Hygiene Plan available in lab	Yes			
7	Aprons / protective measures available	Yes			Available with all.
B	Exit				
1	Required visible Signs	Yes			
2	Path free from obstacle	Yes			
3	AlterNet Exit available	Yes			
C	Emergency planning				
1	Fire extinguisher mounted near doorway	Yes			
2	Fire extinguisher fully charged	Yes			
3	Fire extinguisher tamper indicator in place	Yes			
4	Fire extinguisher inspected	Yes			
5	shower			NA	
6	first aid box	Yes			
7	Emergency gas and Electricity shut-off	Yes			
C	Chemical Storage				
1	Refrigeration units for chemical storage labelled No Food	Yes			
2	Refrigeration units for food labelled Food Only			NA	
3	Chemical storage cabinets properly labelled	Yes			
4	No volatile chemical storage in unventilated environmental chambers			NA	
5	Containers clearly labelled with chemical name.	Yes			
6	Storage strictly limited in actively used fume hoods			NA	
7	Materials with shelf lives dated and disposed of per supplier's recommendations	Yes			
8	Refrigeration units approved for flammables storage			NA	



Audit Report (2020-2021)






Sr. No	Topic	Yes	No	NA	Findings /Comments
9	Flammable liquids not stored near hot plates or other ignition sources	Yes			
D	Waste Disposal				
1	Containers kept sealed except during transfer	Yes			
2	Containers labelled with the words Hazardous Waste	Yes			
3	Separate disposal containers available for broken glass	Yes			
4	Biological Waste disposal after sterilization	Yes			
E	Ventilation				
1	Fume hoods used			NA	
2	local exhaust devices			NA	
F	Security				
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
G	Training/Awareness				
1	Workers have attended Laboratory Safety Training	Yes			Instructions of Laboratory Safety are given.
2	Workers have attended Emergency Action Plan Training	Yes			Instructions of emergency action plan are given.
3	Workers have attended Laboratory Security Training	Yes			Instructions of laboratory security are given.
H	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	Yes			
2	How to clean up chemical spills	Yes			
3	What an MSDS is and where to find them and other safety information	Yes			
4	What type of personal protective equipment to use and when to use it	Yes			Apron, Gloves, Mask, Fire extinguisher and first aid box
5	what to do with chemical waste				
6	What are the most hazardous materials you use and what precautions to take	Yes			Acid added with micropipette
	E. COMPUTERS, EQUIPMENT & INSTRUMENTATION	Yes			2 computers



Audit Report (2020-2021)



The lab audit of Department of Microbiology was scheduled on 8/10/2021. The following committee members were present for conducting the lab audits.

1	Dr. B. S. Jagdale Principal L. V. H. College, Panchavati, Nashik	Chairman	
2	Prof. Dr. V. D. Bobade HPT Arts & RYK Science College, Nashik	Member	
3	Mr. A. L. Bhagat Principal Arts, Commerce & Science , College, Vadner-Bhairav	Member	

The compiled detailed report of lab audit is as under:

A laboratory audit was conducted on 08/10/2021. The Laboratory is having sufficient instruments, glassware's and chemicals necessary for UG practicals. All the chemicals are neatly labelled and properly maintained. In the laboratory all standard operating procedures of the instrument are followed. All safety measures are well observed and waste is properly disposed.

Recommendations:

1. Maintain a current Safety Data Sheet or for each hazardous chemical present
2. Use safety glasses while handling hazardous chemical and pathogens.
3. Use Auto dispenser for transfer of hazardous chemicals.
4. Record Incidents/accidents in the laboratory.





Audit Report
(2020-2021)



DEPARTMENT OF ZOOLOGY
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF ZOOLOGY LABORATORY AUDIT: (2020-2021)

- ❖ **History-**
 - Year of Establishments:** UG: June 1993,
 - Names of Programmes Offered:** UG: B.Sc.
 - System:** UG-Semester & CBCS
- ❖ **Vision:** -“Zoology department is committed to meet need base life science discipline”.
- ❖ **Mission:** - “To develop innovation and extension attitude among the students and farmers.
- ❖ **Objective:** -
 - ✓ To make efforts for the spread of education in zoology & its applications in the public sector & agriculture sector.
 - ✓ To promote the study and research of the Zoology by using recent teaching aids.
 - ✓ To provide opportunities to the Zoology student to reach their highest personnel and professional capability.
 - ✓ To develop the personality and character of students by value education.
- ❖ **Scope and Importance**

Zoology is that branch of science which deals with the study of the **animal kingdom**. The branch deals with the structure, embryology, evolution, classification, habits, and distribution of all animals, both living and extinct. For someone who is interested in making a career in Zoology will be required to deal with both the existing, dead and quite possible the extinct species of the animal kingdom.

This a great **career** interest for people who are fascinated with nature and would not mind spending time understanding it. There are several specializations that the students pursuing the field can venture into. There are physiologists that study the metabolic processes of animals, then there are taxonomists who deal with the naming and the classification of the animal **species**, one can think of becoming embryologist whose only job is to study and focus on the early stages of the animal life. So similarly there are many such options that one can venture into depending on his / her capabilities and interests.

On choosing this career, the person specializing in the field will be referred to as a **zoologist**. On being a part of this field, one will be carefully have to study the *behavior, characteristics, evolutionary trends* of the different species of animals and those factors having a direct impact on them.



Audit Report (2020-2021)



Facility :

- Practical Laboratory – 01
- Computer - 02
- Internet facility - Available

ZOOLOGY LABORATORY – MAJOR EQUIPMENTS



Egg Incubator



Centrifuge
Machine



Hot Air Oven



Microtome



Glucometer

24

Animal Specimens, Microscopes & Charts





Audit Report (2020-2021)



❖ LABORATORY AUDIT AND CHECK LIST

Sr. No.	Topic	Yes	No	NA	Findings / Comments
A	General Work Environment				
1	Work area and Design	Yes			
2	Lab Manual	Yes			
3	Means available to reach items stored at shoulder level.	Yes			
4	Emergency Action Plan	Yes			
5	Material Safety Data Sheets (MSDS) Readily accessible	Yes			
6	Chemical Hygiene Plan available in lab	Yes			
7	Ice making machines posted Not for Human Consumption	-			
8	Aprons / protective measures available	Yes			
B	Exit				
1	Required visible Signs	Yes			
2	Path free from obstacle	Yes			
3	AlterNet Exit available	Yes			
C	Emergency planning	Yes			
1	Fire extinguisher mounted near doorway	Yes			
2	Fire extinguisher fully charged	Yes			
3	Fire extinguisher tamper indicator in place	Yes			
4	Fire extinguisher inspected	-			
5	Shower	-			
6	first aid box	Yes			
7	Emergency gas and Electricity shut-off				
C	Chemical Storage	Yes			
1	Refrigeration units for chemical storage labelled No Food	Yes			
2	Refrigeration units for food labelled Food Only	-			
3	Chemical storage cabinets properly labelled	Yes			
4	No volatile chemical storage in unventilated environmental chambers	-			
5	Containers clearly labelled with chemical name.	Yes			
6	Storage strictly limited in actively used fume hoods	-			
7	Materials with shelf lives dated and disposed of	Yes			



Audit Report (2020-2021)






Sr. No.	Topic	Yes	No	NA	Findings / Comments
	per supplier's recommendations				
8	Refrigeration units approved for flammables storage	-			
9	Flammable liquids not stored near hot plates or other ignition sources	Yes			
D	Waste Disposal				
1	Containers kept sealed except during transfer	-			
2	Containers labelled with the words Hazardous Waste	-			
3	Separate disposal containers available for broken glass	Yes			
4	Biological Waste disposal after sterilization	-			
E	Ventilation				
1	Fume hoods used	-			
2	local exhaust	Yes			
F	Security				
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
G	Training/Awareness				
1	Workers have attended Laboratory Safety Training	-			
2	Workers have attended Emergency Action Plan Training	-			
3	Workers have attended Laboratory Security Training	-			
H	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	-			
2	How to clean up chemical spills	-			
3	What an MSDS is and where to find them and other safety information	-			
4	What type of personal protective equipment to use and when to use it	-			
5	what to do with chemical waste	-			
6	What are the most hazardous materials you use and what precautions to take	-			



Audit Report (2020-2021)



The lab audit of Department of Zoology was scheduled on 08/10/2021. The following committee Members were present for conducting the lab audits.

1	Prin. Dr. B. S. Jagdale MGV'S LVH College, Panchavati- Nashik	Chairman	
2	Prof. (Dr.) V. D. Bobade RYK College, Nashik	Member	
3	Prin. Mr. A. L. Bhagat MVP'S Arts & Commerce College, Vadner Bhairav	Member	

The compiled detailed report of lab audit is as under:

Department of Zoology

Overall zoology department have laboratory activities are aligned with the department's objectives and priorities. All the essential major equipments are present in the department.

Recommendations:

- 1) Required few additional computer for laboratory and projector
- 2) Gas connection with Burner.
- 3) Smart board for practical and instrumental techniques
- 4) Aquarium for Fish culture





Audit Report
(2020-2021)



DEPARTMENT OF BOTONY
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



**M.V.P. Samaj's
K.S.K.W. Arts, Science & Commerce College, CIDCO, Nashik
DEPARTMENT OF BOTANY**

LABORATORY AUDIT: (2020-2021)

❖ **History-**

- **Year of Establishments:** UG: June 1993, PG: June 2021
- **Names of Programmes Offered :** UG: B.Sc. PG: M.Sc.
- **System:** UG-Semester & CBCS PG-Semester & CBCS

❖ **Vision:** -Let us utilize botanical knowledge for vocation.

❖ **Mission:** - We Aspire to be an excellent Department for higher education, ensuring a conducive environment for teaching learning and research by supporting the efforts, quality and skill of students grooming them in to socially responsible , globally competent and excellent human resource

❖ **Facility –**

- Practical Laboratory – 01
- Staff room - 01
- LCD Projector -01
- Computer - 02
- Printer - 01
- Internet facility

❖ **Teaching Methods**

- Lecture method
- Interactive method
- Experimental learning
- Seminars, Group discussions.
- ICT Enable Teaching
- Computer-assisted learning
- Internet available for students .



Audit Report (2020-2021)



Photo gallery





Audit Report (2020-2021)



Faculty Members:

Sr. No.	Name of the teacher	Designation	Qualification	Experience	Specialization
1	Dr. D. F. Nikumbh	Associate Professor	M.Sc. Ph.D.	36 Years	Mycology
2	Mr. D. M. Kokate	Assistant Professor	M Sc.	22 Years	Texonomy
3	Mrs. S. V. Deore	Assistant Professor	M.Sc., B.Ed., M.Phil. NET.-JRF	6 Years	Taxonomy

Laboratory Audit and Check list

Name of the Department: **Botany**

Sr. No	Topic	Yes	No	NA	Findings /Comments
A	General Work Environment				
1	Work area and Design	✓			
2	Means available to reach items stored at shoulder level	✓			
3	Adequate free space	✓			
B	Exit				
1	Required visible Signs	✓			
2	Path free from obstacle	✓			
3	AlterNet Exit available		✓		
C	Emergency planning				
1	Fire extinguisher mounted near doorway		✓		
2	Fire extinguisher fully charged		✓		
3	First aid box	✓			
4	Emergency Electricity shut-off	✓			
C	Chemical Storage				
1	Refrigeration units	✓			
2	Chemical storage cabinets properly labelled	✓			
3	No volatile chemical storage in unventilated environmental chambers	✓			
4	Containers clearly labelled with chemical name.	✓			
D	Waste Disposal				
1	Containers kept sealed except during transfer	✓			
2	Separate disposal containers available for broken glass	✓			



Audit Report (2020-2021)



3	Biological Waste disposal after	✓			
E	Ventilation and Illumination				
1	Proper ventilation	✓			
2	Working area properly Illuminated	✓			
F	Security				
1	Doors to the lab operate, close and lock properly	✓			
2	Windows operate, close and lock properly	✓			
G	Training/Awareness				
1	Workers have attended Laboratory Safety Training		✓		
H	Do laboratory workers know				
1	What to do in the event of an injury,	✓			
2	How to clean up chemical spills		✓		
I	COMPUTERS, EQUIPMENT & INSTRUMENTATION				
	Computer	✓			
	Internet facility	✓			
	Printer	✓			
	LCD Projector	✓			

for
(Dr. D. F. Nikumbh)
HOD
Department of Botany



J
(Dr. J. D. Sonkhaskar)
Principal



Audit Report (2020-2021)



Maratha Vidya Prasarak Samaj's
KARMAVEER SHANTARAMBAPU KONDAJI WAVARE
ARTS, SCIENCE AND COMMERCE COLLEGE
Uttamnagar, Cidco, Nashik- 422 008 (Maharashtra)

The Laboratory Audit of Department of Botany was scheduled on 2.10.21. The following committee members were present.

	Name		Signature
1	Prin B.S Jagdale, L.V.H.College Panchvati	Chairman	
2	Prof.V.D.Bobade H.P.T.&R. Y.K.College Nasik	Member	
3	Principal..A.L.Bhagat Arts Com &Sci College Vadnerbhairav	Member	

The compiled detailed report of lab audit is as under:

Report :-

- The Laboratory is of adequet size.
- Sufficient Ventilation, illumination is there.
- All necessary equipments, instruments, Glasswares etc. are Present.
- Sufficient for admitted number of students.



Audit Report (2020-2021)



Recommendations :-

1. You have planned to start P.G. classes, there
2. should be separate Laboratory.
3. Required instruments and equipments should be purchased for P.G.

Prin B.S. Jagdale.

Prof. V.D. Bobade

Principal..A.L.Bhagat





Audit Report
(2020-2021)



DEPARTMENT OF CHEMISTRY
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF CHEMISTRY

LABORATORY AUDIT: (2020-2021)

❖ **History-**

- **Year of Establishments:** UG: June 1993, PG: June 2009
- **Names of Programmes Offered:** UG: B.Sc. PG: M.Sc.
- **System:** UG-Semester & CBCS PG- CBCS

❖ **Vision:** -“To be one of the best in country by growing encouraged team of scientist, researcher, academician and entrepreneurs. ”

❖ **Mission:** - “To reward superiority in all areas of Chemistry keeping swiftness with the most up-to-date development”

“To encourage the spirit of inquiry, teamwork, modernisation and professionalism in the student”

❖ **Scope and Importance**

Studying chemistry is lucrative from many perspectives and there are numerous benefits of studying it. Being a central science, chemistry is used in every aspect of a person's life from the food consumed to the products used. The improvement of chemical science has altered the premise of current medication. With ever-increasing research in chemistry, marvel drugs like penicillin and streptomycin have been developed. Enlisted below are the manifold reasons for pursuing a degree in chemistry and establishing a career in the field of chemical science.

It teaches useful skills that can be used in practical life when dealing with chemicals.

With more number of students pursuing chemistry, there has been unprecedented progress in the production of new medicines for treating fatal diseases

A student gets acquainted with the various chemicals present in the environment and thus has a better understanding of how natural processes occur.

A command over chemistry helps in distinguishing between chemicals and using them for the appropriate reason.

Chemistry is a popular course and there exists a large number of professions that a person with a degree in chemistry can work in.

Facility –

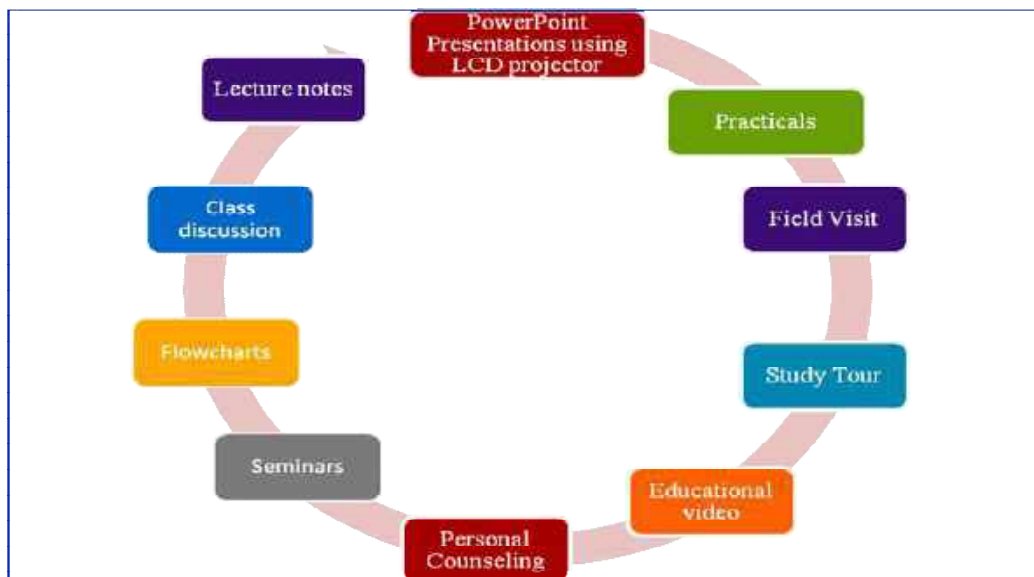
- Practical Laboratory – 02
- Computer - 02
- Internet facility







Audit Report (2020-2021)



Teaching Methods









FACULTY MEMBERS:

Sr. No	Name of the teacher	Designation	Qualification	Experience	Photo
1	Dr. S. K. Kushare	Asso. Professor	M.Sc, Ph. D	32	
2	Dr. Y. R. Baste	Assi. Professor	M.Sc, Ph. D	22	
3	Dr. N. P. Nikam	Asso. Professor	M.Sc, Ph. D	20	
4	Dr. S.V. Thakare	Assi. Professor	M.Sc, B.Ed, SET, Ph. D	11	



Audit Report (2020-2021)



Sr. No	Name of the teacher	Designation	Qualification	Experience	Photo
5	Dr. A. H. Kategaonkar	Assi. Professor	M.Sc, Ph. D	09	
6	Dr. R. B. Patil	Assi. Professor	M.Sc, M. Phil, Ph. D	14	
7	Mrs. R.D. Deshmukh	Assi. Professor	M.Sc, B. Ed, NET, SET	13	
8	Mrs. S. M. Thakur	Assi. Professor	M.Sc, B. Ed	11	
9	Mr. M. K. Mahale	Assi. Professor	M.Sc, SET	02	
10	Miss. P. N. Shinde	Assi. Professor	M.Sc, SET	02	

STUDENT'S STRENGTH

SR. NO.	NAME OF THE PROGRAMME	NUMBER OF SEATS AVAILABLE	NUMBER OF APPLICATIONS RECEIVED	STUDENTS ENROLLED
1.	F.Y.B.Sc.	120	250	118
2.	S.Y.B.Sc.	120	90	67
3.	T.Y.B.Sc.	120	65	47
4.	M.Sc.-I (Organic Chem.)	24	97	24
5.	M.Sc.-II (Organic Chem.)	24	23	23



Audit Report (2020-2021)



Department of Chemistry

Safety Measures

" You are responsible for the safety of yourself as well as others"

1. Always wear protective apron.
2. Follow the instructions **strictly** given by the teacher.
3. **Handle** the **corrosive & toxic** chemical carefully. Always **use hand gloves**.
4. **Avoid contamination** of chemicals on your skin and body.
5. **Do not smell** any chemical directly.
6. Ladies should tie their long hairs to avoid any danger.
7. Utmost care must be taken while handling all **concentrated acids**.
8. Dilute the Conc. acid by **adding acid into water** and not water into acid
9. To meet any sudden fire, remove the burning cloths and wrap the affected part with blanket.
10. In case of fire, remove the burning cloths and wrap the affected part with blanket.
11. If acid / base comes in contact with eyes, wash eyes immediately with water.
12. If H_2SO_4 comes in contact with body part do not wash it with water, Soak with cotton / clean cloth. The victim must be hospitalized.
13. During heating mouth of test tube should not be in the direction of any person.
14. After handling chemicals, always wash your hand with soap.

" **Precautions and Common Sense can keep disasters away in laboratory**"



Ice Bath



IR lamp & UV Chamber



Audit Report (2020-2021)



Oil bath



Colorimeter



Conductivity meter



Suction Pump



Rota Evaporator



Audit Report (2020-2021)



LABORATORY AUDIT AND CHECK LIST

Sr. No	Topic	Yes	No	NA	Findings /Comments
A	General Work Environment				
1	Work area and Design	Yes			
2	Lab Manual	Yes			
3	Means available to reach items stored at shoulder level.	Yes			
4	Emergency Action Plan	Yes			
5	Material Safety Data Sheets (MSDS) Readily accessible	Yes			
6	Chemical Hygiene Plan available in lab	Yes			
7	Ice making machines posted Not for Human Consumption	Yes			
8	Aprons / protective measures available	Yes			
B	Exit	Yes			
1	Required visible Signs	Yes			
2	Path free from obstacle	Yes			
3	AlterNet Exit available	Yes			
C	Emergency planning	Yes			
1	Fire extinguisher mounted near doorway	Yes			
2	Fire extinguisher fully charged	Yes			
3	Fire extinguisher tamper indicator in place	Yes			
4	Fire extinguisher inspected	Yes			
5	Shower	Yes			
6	first aid box	Yes			
7	Emergency gas and Electricity shut-off	Yes			
C	Chemical Storage	Yes			
1	Refrigeration units for chemical storage labelled No Food	Yes			
2	Refrigeration units for food labelled Food Only		No		
3	Chemical storage cabinets properly labelled	Yes			
4	No volatile chemical storage in unventilated environmental chambers		No		
5	Containers clearly labelled with chemical name.	Yes			
6	Storage strictly limited in actively used fume hoods		No		
7	Storage strictly limited in actively used fume hoods		No		
8	Materials with shelf lives dated and disposed of per supplier's	Yes			



Audit Report (2020-2021)






Sr. No	Topic	Yes	No	NA	Findings /Comments
	recommendations				
9	Refrigeration units approved for flammables storage	Yes			
10	Flammable liquids not stored near hot plates or other ignition sources	Yes			
D	Waste Disposal	Yes			
1	Containers kept sealed except during transfer	Yes			
2	Containers labelled with the words Hazardous Waste	Yes			
3	Separate disposal containers available for broken glass	Yes			
4	Biological Waste disposal after sterilization		No		
E	Ventilation	Yes			
1	Fume hoods used		No		
2	local exhaust devices		No		
F	Security	Yes			
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
G	Training/Awareness	Yes			
1	Workers have attended Laboratory Safety Training		No		
2	Workers have attended Emergency Action Plan Training		No		
3	Workers have attended Laboratory Security Training		No		
H	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	Yes			
2	How to clean up chemical spills	Yes			
3	What an MSDS is and where to find them and other safety information	Yes			
4	What type of personal protective equipment to use and when to use it	Yes			
5	what to do with chemical waste	Yes			
6	What are the most hazardous materials you use and what precautions to take	Yes			
	E. COMPUTERS, EQUIPMENT & INSTRUMENTATION	Yes			



Audit Report (2020-2021)



The lab audit of the department of chemistry Science faculty was scheduled on 8/10/2021. Following committee members were present for conducting the lab audits.

1	Dr. B. S. Jagdale Principal L.V.H. College Panchvati, Nashik	Chairman	
2	Prof. Dr. V. D. Bobade H.P.T. Arts and R.Y.K Science Nashik	Member	
3	Shri A. L. Bhagat Principal Arts Commerce and Science College Vadner Bhairav Tal, Chandwad Nashik	Member	

The compiled detailed report of lab audit is as under:

Report

Department of Chemistry was established in 1993. Laboratory was fulfilled with minimum equipment and requirements like waste containers are to be appropriately labelled. Practices of not taking food and drink is to be followed in the lab. Incidents/accidents are to be recorded. Ensure all hazardous chemicals are labelled and stored appropriately.

Recommendation

- 1) Students setting arrangement (table-chair) for minimum 1 practical batch (15) need to purchased
- 2) Fuming Chamber , Uv-Visible Spectrophotometer required
- 3) Required few additional computer for laboratory and projector
- 4) Ball and stick 3D models.
- 5) Smart board for practical and instrumental techniques





Audit Report
(2020-2021)



DEPARTMENT OF PHYSICS
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



Department of Physics & Electronics

Laboratory Audit : (2020-21)

❖ Scope and Importance

Acquired skills can be used in higher education, research work, teaching and industry jobs.

❖ Vision :

“Quality Education through disciplined approach”

❖ Mission :

- ✓ To provide quality education to the economically weaker sections of the society.
- ✓ To bring awareness about recent technologies.

About Department

Department of Physics and Electronics was established in 1993 and has facility for post-graduation. Department has started B.Voc. (Electrical) course from 2018-19.

During this academic year all faculty members were involved in curricular, co-curricular, extra-curricular and extension activities. Third year B.Voc. (Electrical) skill based course under NSQF syllabus designed of the department. Online teaching plays a vital role during covid-19 pandemic, hence department has organized workshop on OBS (open Broadcast Software) for video recording and live streaming to fulfil the need of online education. Faculties from B.Voc. (Electrical), B.Voc. (Food Processing) also participated in this workshop alongwith physics teachers. Dr. P. G. Loke, Smt. S. A. Mogal, Mr. S. V. Gosavi and Mr. M. D. Shinde attended National Webinar on Intellectual Property Rights (IPR). Smt. S.A.Mogal and Mr.S.V.Gosavi organized online quiz on International Women's Day and International Transgender day. Also both of them were involved in conducting online parents meet. Dr. P.G. Loke worked as resource person for Student Induction Program (SIP) for teachers. All faculty members were involved in organization of International Webinar on "Science for Human Welfare and Development".

Students of the department were actively involved in co-curricular and extra-curricular activities. Ms. Akansha Deore from T.Y.B.Sc. completed NCC Camp and in sports activity received Gold medal in running competition, Mr. Mandar Nagrale from T.Y.B.Sc. Cleared JAM (Joint admission test for M.Sc.) examination which is all India level online entrance examination conducted by IIT.

Science educators have believed that the laboratory is an important means of instruction in sciences. Laboratory experiences provide opportunities for students to interact directly with the material world, using the tools, data collection techniques,



Audit Report (2020-2021)



models, and theories of science. Laboratory instruction was considered essential because it provided training in observation, increases knowledge, and stimulates student's interest towards scientific principles and temperaments. In this era these same reasons are still accepted.

List of Equipment available in the department of Physics & Electronics

SR.No.	Name of Instrument
1	Newtons ring
2	Quinks surface tension
3	Spectrometer
4	E/M Thomson method (bar magnet)
5	Plank's Constant
6	Polarimeter
7	Diode Laser
8	Andersion Bridge with digital multimeter
9	Maxwell bridge with digital multimeter
10	Four Probe Apparatus.
11	G.M. COUNTER. (Geiger Counting System).
12	Michelson Interferometer.
13	Febry Perot Interferometer.
14	Absorption Spectrum of Iodine Vapours.
15	Stefans Constant Apparatus.
16	Thermionic Emission
17	Digital Gauss Meter.
18	Magnetic Stirrer.
19	Frank Hertz Experiment.
20	Millikan's Oil Drop Apparatus
21	Biquart Polarimeter.
22	Voltage Controlled Oscillator Using IC-566
23	Frequency Multiplier using PLL-565
24	Precision Rectifier



Audit Report (2020-2021)



SR.No.	Name of Instrument
25	Crystal Oscillator Miller Type & Digital Clock
26	DAC (R-2R & Binary Type For 4-Bit)
27	SMPS Power Supply
28	Function Generator Using OP-Amp (IC 8038)
29	Opto coupler MCTE2E
30	Constant current source using OP-AMP
31	Varactor diode



Lab Chemical



Spin Coater



3D Printer



GM Counter



Audit Report (2020-2021)



Weighting Machine



Practical Laboratory

Laboratory Audit and Check list

Sr. No	Topic	Yes	No	NA	Findings / Comments
A	General Work Environment				
1	Work area and Design	Yes			
2	Lab Manual	Yes			
3	Means available to reach items stored at shoulder level.	Yes			
4	Emergency Action Plan	Yes			
5	Material Safety Data Sheets (MSDS) Readily accessible	Yes			
6	Chemical Hygiene Plan available in lab	Yes			
7	Aprons / protective measures available	Yes			
B	Exit				
1	Required visible Signs	Yes			
2	Path free from obstacle	Yes			
C	Emergency planning				
1	Fire extinguisher mounted near doorway	Yes			
2	first aid box	Yes			
3	Emergency gas and Electricity shut-off	Yes			
C	Chemical Storage				
1	Chemical storage cabinets properly labelled	Yes			



Audit Report (2020-2021)



Sr. No	Topic	Yes	No	NA	Findings / Comments
2	Containers clearly labelled with chemical name.	Yes			
3	Materials with shelf lives dated and disposed of per supplier's recommendations	Yes			
4	Flammable liquids not stored near hot plates or other ignition sources	Yes			
D	Waste Disposal				
1	Containers kept sealed except during transfer				
2	Containers labelled with the words Hazardous Waste				
3	Separate disposal containers available for broken glass	Yes			
E	Ventilation				
2	local exhaust	Yes			
F	Security				
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
G	Training/Awareness				
1	Workers have attended Laboratory Safety Training	Yes			
2	Workers have attended Emergency Action Plan Training	Yes			
3	Workers have attended Laboratory Security Training	Yes			
H	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	Yes			
2	How to clean up chemical spills	Yes			
3	What an MSDS is and where to find them and	Yes			



Audit Report (2020-2021)



Sr. No	Topic	Yes	No	NA	Findings / Comments
	other safety information				
4	What type of personal protective equipment to use and when to use it	Yes			
5	what to do with chemical waste	Yes			
6	What are the most hazardous materials you use and what precautions to take	Yes			
	E. COMPUTERS, EQUIPMENT & INSTRUMENTATION				






Audit Report (2020-2021)



Department of Physics

The lab audit of the Physics Department was scheduled on 08/10/2021. Following committee members were present for conducting the lab audit.

1	Dr. B. S. Jagadale Principal, LVH College, Panchavati Nashik	Chairman	
2	Prof. V.D. Bobade HPT Arts & RYK Science College, Nashik	Member	
3	Mr. A.L. Bhagat Principal, Arts, Comm. & Science College, Vadner Bhairav	Member	

The compiled detailed report of lab audit is as under:

Report: The report of the Physics Department is as follows:

1. Department conduct UG and PG courses
2. Sufficient laboratory space for admitted students
3. Qualified faculty.
4. Good experimental facility for UG and PG programme.
5. Have research facility for UG & PG Final year project completion.

Recommendations:

1. Space for Laboratory should be as per UGC norms.
2. Care should be taken for disposal of E-waste.
3. MSDS for student handling chemicals
4. Exhaust fans in each lab.





Audit Report
(2020-2021)



DEPARTMENT OF COMPUTER SCIENCE
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF COMPUTER SCIENCE

LABORATORY AUDIT : (2020-2021)

Sr. No	Name of Faculty	Designation	Qualification
1	Smt. S. S. Bonde	Asst. Prof.	M.Sc. (Comp. Sci.), SET
2	Smt. A. S. Bachhav	Asst. Prof.	M.C.S. , M. Phil.(Comp. Sci.), SET, NET
3	Smt. A. D. Bhandare	Asst. Prof.	M.Sc. (Comp. Sci.), B.Ed
4	Smt. V. S. Shirore	Asst. Prof.	M.Sc. (Comp. Sci.)
5	Smt. S. G. Patil	Asst. Prof.	M.Sc. 56(Comp. Sci.), SET
6	Mr. K. R. Wagh	Peon	H. S. C.

Information Required About I.T. Infrastructure Available At Department

Total No. of PC in Working Condition (C.P.U., Monitor, Keyboard, Moues)	Printer No. & Information	Scanner No. & Information	L.C.D. Projector No. & Information
OLD 31	02 Cannon LBP 2900, HP Laser Jet 1020 plus	01 HP Scanjet G3110	01 Hitachi CP-AW 2519N
New 15	--	--	--





Audit Report (2020-2021)



❖ Configuration of New PC's:

- Processor: Intel Core 3- 8th generation.
- RAM: 4GB
- HDD: 1 TB
- Motherboard: Intel Chipset
- Keyboard & Mouse: USB
- Monitor: 19.5 inch LED
- Operating System: Ubuntu

Laboratory Audit and Check list

Name of the Department: **Computer Science**

Sr. No	Topic	Yes	No	NA	Findings / Comments
A	Space and Layout				
1	Is there enough space to move around safely?	Yes			
2	Can everyone sit at their place comfortably?	Yes			
3	Is there enough desk/bench space for the work & equipment in routine use?	Yes			
4	Is there enough space for storage?	Yes			
5	Is the area clean & free of clutter?	Yes			
B	General Work Environment				
1	Is the room temperature comfortable?	Yes			
2	Is there enough fresh air, without draughts?	Yes			
3	Can the windows be opened easily?	Yes			
4	Are windows in clean & safe condition?	Yes			
5	Is lighting adequate in all areas?	Yes			
C	Slips, Trips and Manual Handling				
1	Are floor surfaces, carpets etc. in a safe condition? (<i>no cracks, tears, fraying, slippery or uneven spots etc.</i>)	Yes			



Audit Report (2020-2021)



Sr. No	Topic	Yes	No	NA	Findings / Comments
2	Are floors free of trailing cables, boxes & other trip hazards?	Yes			
3	Furniture, Fittings & Equipment	Yes			
4	Does the fabric of the room appear sound? (e.g free from significant cracks, damp or other damage)	Yes			
5	Are furniture & fittings in good condition? (e.g. chairs, desks, shelving etc.)	Yes			
6	Are height adjustable chairs provided for working at desk/bench?		No		
7	Is all equipment working properly?	Yes			
8	Are hot, sharp or dangerous moving parts guarded?	Yes			
9	Are there enough accessible power points to avoid overloading sockets?	Yes			
10	Do all electrical equipment & cables pass visual inspection?	Yes			
D	Software				
1	Appropriate OS	Yes			
2	MS-Office	Yes			
3	C and C++ Compilers	Yes			
4	SQL Database	Yes			
5	Softwares required for all class students?	Yes			
6	Antivirus Software	Yes			
E	Security				
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
F	Do laboratory workers know				
1	What to do in the event of an emergency, such as short-circuit	Yes			
2	How to clean computer parts?	Yes			



Audit Report (2020-2021)



MARATHA VIDYA PRASARAK SAMAJ'S
KSKW ARTS, SCIENCE & COMMERCE COLLEGE,
CIDCO, NASHIK-422008
Department of Computer Science
Year 2020-21

The lab audit of Department of Computer Science was scheduled on 8th Oct. 2021-10-08

The following committee were present for conducting the lab audits.

1	Dr. B. S. Jagdale, Principal, Loknete Vyankatrao Hiray Arts, Science and Commerce College Panchavati, Nashik - 422003	Chairman	
2	Dr. V. D. Bobade, Prof. & HOD, Dept. of Chemistry, Coordinator, IQAC, Gokhale Education Society's H.P.T. Arts and R.Y.K. Science College, Prin. T. A. Kulkarni, Vidya Nagar, Nashik - 422005	Member	
3	Mr. A. L. Bhagat, I/C Principal, Maratha Vidya Prasarak Samaj, Arts, Commerce College, Vadner Bhairav Nashik, 423111,	Member	

The compiled detailed report of lab audit is as under:

The Lab has totalled 46 Computer systems with proper and required hardware configuration. The systems are also installed with Ubuntu Operating System with all softwares required to students of all classes.

All the cables are also guarded properly. All the electric equipments and cables pass the visual inspection. The lab is also provided with Proper space and layout. General work Environment is also good. The proper security is provided by locking the doors, windows.

Recommendations:

1. To all systems proper labelling or numbering should be given.
2. Proper place should be provided to students for keeping bags.
3. Raise the lab to fit all the Students.





Audit Report
(2020-2021)



DEPARTMENT OF GEOGRAPHY
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF GEOGRAPHY

LABORATORY AUDIT: (2020-2021)

❖ **History-**

- **Year of Establishments** : UG: June 1993, PG: June 2008
- **Names of Programmes Offered** : UG: B.A.& F.Y. B.Sc. PG: M.A./M.Sc
- **System:** UG-Semester & CBCS PG-Semester & CBCS

❖ **Vision:** -“To sharpen the techniques, skills and knowledge about Geography among the students for global competency and sustainable development”

❖ **Mission:** - “To make every individual responsible for sustain and save the Earth”

❖ **Scope and Importance**

The subject has interdisciplinary, dynamic and scientific nature. Physical Geography and Human Geography are major branches of this subject. Presently the subject has wide scope in the field of planning and spatial analysis. Geoinformatics (Geographical Information System, Remote Sensing and GPS) technology and its application is a new stream of the study of geography.

It also creates job opportunities for the students of Geography. Applied Geomorphology, Coastal and fluvial Geomorphology, Environmental Modelling, Climatology and Hydrology, Soil Geography, Human Geography, Statistics Geography, Tourism Geography, Regional Planning, Cartography, Surveying, Regional Geography, Environmental Geography, Resources and its management, Agriculture, Settlements, Economic Geography, Geopolitics, etc are major sub-branches of the geography which focus in understanding and resolving about the issues of the environment, culture, and sustainable development.

❖ **Facility –**

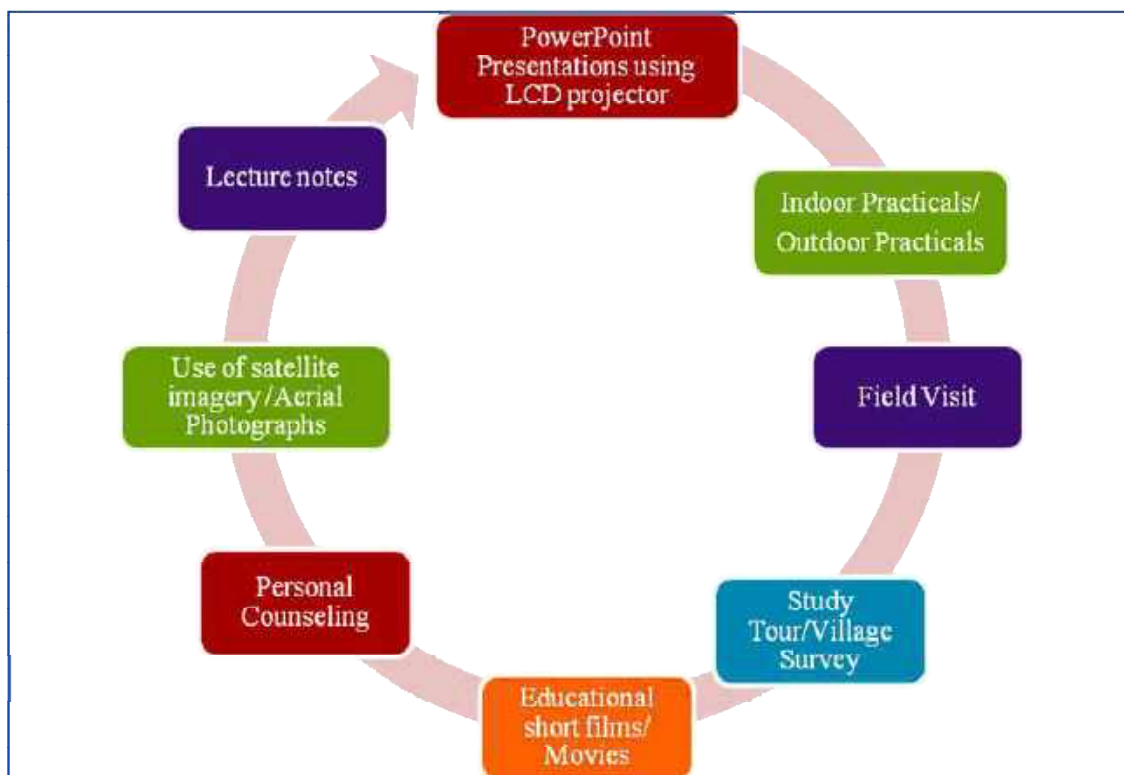
- Practical Laboratory – 01
- Surveying Laboratory - 01
- Geoinformatics Laboratory -01
- Precision Weather Station -01
- LCD Projector -01
- Computer - 04
- Internet facility
- Survey Instrument



Audit Report (2020-2021)



Teaching Methods :



Faculty Members:

Sr. No	Name of the teacher	Designation	Qualification	Experience	Specilization
1	Mr. Sitram Ramchandra Nikam	Assistant Professor	M.A., M.Ed.	28 Years	Economic Geography
2	Dr.Dnyaneshwar Narayan Pawar	Assistant Professor	M.A., NET., Ph.D.	14 Years	Geomorphology
3	Ms. Pratima Vitthal Sonawane	Assistant Professor	M.A., B.Ed NET.	13 Years	Economic Geography
4	Ms. Yogita Atmaram Karanjkar	Assistant Professor	M.A., NET.	13 Years	Population and Settlements Geography
5	Mr. Bhagwan Kumardas Bairagi	Assistant Professor	MA SET	3 Years	Economic Geography



Audit Report (2020-2021)



❖ LABORATORY AUDIT AND CHECK LIST

Sr. No	Topic	Yes	No	NA	Findings / Comments
A	General Work Environment				
1	Work area and Design	Yes			
2	Lab Manual	Yes			
3	Means available to reach items stored at shoulder level.		No		Partially
4	Emergency Action Plan		No		
5	Material Safety Data Sheets (MSDS) Readily accessible		No		
B	Emergency planning				
1	Fire extinguisher mounted near doorway		No		
2	Fire extinguisher fully charged		No		
3	Fire extinguisher tamper indicator in place		No		
4	Fire extinguisher inspected		No		
5	shower		No		
6	first aid box		No		Required
7	Emergency gas and Electricity shut-off		No		
C	Laboratories Instrument Storage				
1	Surveying Instrument	Yes			
2	Plan table Set-04	Yes			Additional setsrequired
3	Prismatic Compass-04	Yes			Additional setsrequired
4	Dumpy level-02	Yes			
5	Toposheet stand	Yes			
D	Weather Instrument –	Yes			
1	Precision Weather Stations-01	Yes			
2	Rain gauge -01	Yes			



Audit Report (2020-2021)



Sr. No	Topic	Yes	No	NA	Findings / Comments
3	Thermometer(Max&Min)-01	Yes			
4	Thermometer(Dry&Dry)-01	Yes			
5	Wind Vane-01	Yes			
6	Cup Aneometer-01	Yes			
7	Sony Handy Cam-01	Yes			
8	Stereoscope-05	Yes			
9	Barograph-01	Yes			
10	Themograph-01	Yes			
E	Maps/Toposheets	Yes			
	Earth Globe -02/				
2	World(Political& Physical)	Yes			Additional sets required
3	India (Political& Physical)-10	Yes			Additional sets required
4	Maharashtra(Political Physical)-06	Yes			Additional sets required
5	Nashik District Maps-15	Yes			Additional sets required
6	Geographical Models & Chart-06	Yes			Additional sets required
7	I.M.D.Wall Map-02	Yes			Additional sets required
8	SOIToposheet--141	Yes			Additional sets required
10	O.S.Toposheet -10	Yes			Additional sets required
11	Geological Topo-Map-07	Yes			
12	Tracing Tables-01	Yes			
F	Geoinformatics lab/	Yes			
1	Aerial Photograph-20	Yes			Additional sets required
2	Satellite imageries				
	Landsat Image-15	Yes			Additional sets required
3	Global Mapper GIS licence Software-01	Yes			
3	G.P.S. Receiver-02	Yes			



Audit Report (2020-2021)






Sr. No	Topic	Yes	No	NA	Findings / Comments
G	Ventilation	YES			
1	Fume hoods used		No		
2	local exhaust devices		No		
H	Security				
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
I	Training/Awareness				
1	Workers have attended Laboratory Safety Training	Yes			
2	Workers have attended Emergency Action Plan Training	Yes			
3	Workers have attended Laboratory Security Training		No		
J	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	Yes			
2	What type of personal protective equipment to use and when to use it	Yes			GPS
3	What are the most hazardous materials you use and what precautions to take		N.A		
K	Computers, Equipment & Instrumentation				
1	Computers-04	Yes			Additional computes required
2	Printer-01	Yes			
3	LCD Projector-01	Yes			



Audit Report (2020-2021)



1	Dr. B. S. Jagdale Prin. L. V. H. College, Panchavati, Nashik	Chairman	
2	Prof. Dr. V. D. Bobade HPT Arts & RYK Science College, Nashik	Member	
3	Mr. A. L. Bhagat Arts, Commerce & Science, College, Vadner-Bhairav	Member	

Recommendations:

- 1) Students setting arrangement (table-chair) for minimum 1 practical batch (15) need to purchased
- 2) Additiona ISOI topographical sheet (map) (Digital and Hard copy) with 1:50000, 1:25000, 1:10000 required
- 3) Latest IMD weather sheets/map of different seasons (Digital and Hard copy)
- 4) Required few additional computer for Geoinformatics laboratory
- 5) Geographical models and charts and latest maps of India & world need to purchased
- 6) Increase the number of Arial photography & satellite imaginary
- 7) Update and precise survey instrument at least 2 set each
- 8) Smart board for practical and statistical techniques
- 9) To provide water filter for the students as dept is on the top floor





Audit Report
(2020-2021)



DEPARTMENT OF B.Voc.
Electrical Maintenance And Repairing (EMAR)
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF B.Voc. Electrical Maintenance And Repairing (EMAR)

LABORATORY AUDIT : (2020-2021)

❖ History-

- **Year of Establishments:** UG: June 2018
- **Names of Programmes Offered:** UG: Diploma, Advance Diploma, Degree
- **Pattern :**UG-Semester

❖ Vision: -Imparting skills and Improving Lives.

- ❖ **Mission:** - To encourage and develop students to be responsible and empowered learners. To create academic confidence, pride, knowledge of self and their cultural heritage through various practical skills.

❖ Scope and Importance

- Technically independent
- Common knowledge of equipment maintenance.
- Ability to perform routine maintenance on equipment.
- Strong decision-making skills.
- Developing solutions to important problems
- The department will implement a program of continuous improvement to ensure that our degree programs are of high quality.
- The department will maintain appropriate accreditations for our programs, and encourage participation in college and university accreditation activities.
- The department will pursue and maintain ties to industry and other institutions.
- The department will create an environment that values teaching effectiveness, scholarship, research, professional service and study in order to meet the above goals.



Audit Report (2020-2021)



Infrastructure and IT facility-

- Practical Laboratory – 01
- Staff room- 01
- LCD Projector -01
- Computer - 01
- Printer-01
- Internet facility

❖ Faculty Members:

Sr. No.	Name of the Teacher	Designation	Qualification	Qualification acquired during the year	Teaching Experience (Years)
1	Miss J.G.Wagh	Head, Assistant Professor	M.E Electrical Power System	-	6
2	Mr S.D.Pagare	Assistant Professor	M.Tech Power Systems	-	5

❖ Laboratory equipments-

Sr. No	Equipment name	Quantity
1	DELL OPTIPLEX 3060 DESKTOP	03
2	EPSON LCD PROJECTOR	02
3	HP LASER ALL IN ONE 1005 PRINTER	03
4	KVA UPS	03
5	HIKVISION 2MP-2CD2121GO-1 CCTV CAMERA (DOME)	03
6	MORPHY SANDWICH TOASTER Sm3006	01
7	PHILIPS HD4815/012-SLICE 800-WALT POP-UP TOASTER	01
8	PREETHI TEA COFFEE MAKER CM210	01
9	BAJAJ OTG 1603T	01



Audit Report (2020-2021)



Sr. No	Equipment name	Quantity
10	BAJAJ ELECTRIC IRON MX20	01
11	MAHARAJA WHITELINE NEO (MX-147) 500W MIXER G	01
12	KENSTOR KKBLOC3P-DBH ELECTRIC KETTLE	01
13	PHILIPPE HP 8100146 HAIR DRYER	02
14	BAJAJ POPULAR INDUCTION COOK TOP	02
15	INDOTECH ENERGY METER ITE 107	02
16	ACCESS AUTO TRANSFORMER V2P1	01
17	BAJAJ ELECT HEATER CONVECTOR BLOWER TYPE	02
18	BOSCH ELECT CUTTER 100MM GW56-100/4	02
19	NATRAJ DOMESTIC FLOOR MILL	01
20	ORIENT ROOM COOLER CW5002B	01
21	USHA ROOM HEATER QH3002	01
22	ACURREX HOME PROTECTOR DPM 3000	02
23	SMILE DRIVE CCTV CAMERA	01
24	LUMINOUS INVERTER ZELIC 1100	01
25	V-GUARD VOLTEGE STABILISER 90V-390V	01
26	POWER INDIA ENERGY METER TF ECS	02
27	BEEFET AC VOLTMETER ANALOGUE 300V	06
28	MASTECH DIGITEL MULTIMETER	02
29	FARM ELECTRONICS TRANSFORMER FET	03
30	HAIER RET HR625VS	01
31	BAJAJ IMMERSION HEATER 2000W	01
32	BAJAJ WIRE STRIPPER ELX 16LED	02
33	DC AMMETER 0-500Ma-1A	02
34	DC VOLTMETER 0-50-100-150V	02
35	DC POWER SUPPLY	02
36	DRILL MACHINE	02
37	WASHING MACHINE	01
38	MICROWAVE OVEN 25 lit	01
39	FOOD PROCESSOR	01
40	FAN-TABLE FAN 750WT	01
41	CETLING FAN	01
42	PEDASTAL FAN	01



Audit Report (2020-2021)



Sr. No	Equipment name	Quantity
43	EXAUST FAN	01
44	WALL BRACKET FAN	01
45	BLENDER	01
46	AIR COOLER	01
47	WATER COOLER	01
48	WATER PURIFIER	01
49	SET TOP BOX	02
50	LEAD ACID BATTERY DRY BATTERY	02

Laboratory audit and check list :

Sr. No.	Topic	Yes	No	NA	Findings / Comments
A	General Work Environment				
1	Work area and Design	Yes			Sufficient work area & properly designed Laboratory
2	Lab Manual	Yes			SOP of all instruments is available
3	Means available to reach items stored at shoulder level.	Yes			Regular items are at reachable height
4	Emergency Action Plan	Yes			Fire extinguisher and first aid box available.
5	Material Safety Data Sheets (MSDS) Readily accessible	Yes			
6	Chemical Hygiene Plan available in lab		No		
7	Aprons / protective measures available	Yes			Available with all.
B	Exit				
1	Required visible Signs	Yes			
2	Path free from obstacle	Yes			
3	AlterNet Exit available	Yes			
C	Emergency planning				
1	Fire extinguisher mounted near doorway	Yes			
2	Fire extinguisher fully charged	Yes			
3	Fire extinguisher tamper indicator in place	Yes			



Audit Report (2020-2021)



Sr. No.	Topic	Yes	No	NA	Findings / Comments
4	Fire extinguisher inspected	Yes			
5	shower			NA	
6	first aid box	Yes			
7	Emergency gas and Electricity shut-off	Yes			
C	Chemical Storage				
1	Refrigeration units for chemical storage labelled No Food			NA	
2	Refrigeration units for food labelled Food Only			NA	
3	Chemical storage cabinets properly labelled			NA	
4	No volatile chemical storage in unventilated environmental chambers			NA	
5	Containers clearly labelled with chemical name.			NA	
6	Storage strictly limited in actively used fume hoods			NA	
7	Materials with shelf lives dated and disposed of per supplier's recommendations			NA	
8	Refrigeration units approved for flammables storage			NA	
9	Flammable liquids not stored near hot plates or other ignition sources			NA	
D	Waste Disposal				
1	Containers kept sealed except during transfer			NA	
2	Containers labelled with the words Hazardous Waste			NA	
3	Separate disposal containers available for broken glass			NA	
4	Biological Waste disposal after sterilization			NA	
E	Ventilation				
1	Fume hoods used			NA	
2	local exhaust devices			NA	



Audit Report (2020-2021)






Sr. No.	Topic	Yes	No	NA	Findings / Comments
F	Security	Yes			
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
G	Training/Awareness				
1	Workers have attended Laboratory Safety Training	Yes			Instructions of Laboratory Safety are given.
2	Workers have attended Emergency Action Plan Training	Yes			Instructions of emergency action plan are given.
3	Workers have attended Laboratory Security Training	Yes			Instructions of laboratory security are given.
H	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	Yes			
2	How to clean up chemical spills	Yes			
3	What an MSDS is and where to find them and other safety information	Yes			
4	What type of personal protective equipment to use and when to use it	Yes			Apron, Gloves, Mask, Fire extinguisher and first aid box
5	what to do with chemical waste				
6	What are the most hazardous materials you use and what precautions to take	Yes			
	E. COMPUTERS, EQUIPMENT & INSTRUMENTATION	Yes			1 computers



Audit Report (2020-2021)



1	Dr. B. S. Jagdale Prin. L. V. H. College, Panchavati, Nashik	Chairman	
2	Prof. Dr. V. D. Bobade HPT Arts & RYK Science College, Nashik	Member	
3	Mr. A. L. Bhagat Arts, Commerce & Science, College, Vadner-Bhairav	Member	

Recommendation :->

1) Purchase required equipments as per syllabus





Audit Report (2020-2021)



B.Voc. Electrical Maintenance and Repairing Laboratory



Audit Report
(2020-2021)



DEPARTMENT OF B.Voc.
Food Processing Technology (FPT)
LABORATORY AUDIT
(2020-2021)



Audit Report (2020-2021)



DEPARTMENT OF B. VOC. FOOD PROCESSING TECHNOLOGY LABORATORY AUDIT: (2020-21)

❖ **History-**

- **Year of Establishments:** UG: June 2018 PG: --
- **Names of Programmes Offered:** UG: Diploma in FPT
Adv. Diploma in FPT
B. Voc. FPT
PG:---
- **Pattern:** UG-Semester & CBCS PG---

- ❖ **Vision:** -To be a center of excellence for education and research that can catalyzed the growth of the food processing industries in Indian with respect to global scenario.

❖ **Mission:** -

- To develop skilled manpower that can cater the need of growing food processing industry.
- To develop technology and technical services that can assist and promote the growth of food industry
- To add value and utility to agro-resources through research and development

❖ **Scope and Importance**

Bachelor of Vocation (B. Voc.) is launched under the scheme of University Grants Commission for skill development based on higher education leading to B. Voc. degree with multiple exists as Diploma/Advanced Diploma/Degree under the National Skill Qualification Framework (NSQF). The B. Voc. programme incorporates specific job roles and their national occupational standards along with broad based general education.



Audit Report (2020-2021)



Across the world, food-processing sector has a large potential for growth and socio-economic impact as it leads to income generation by creating jobs for rural poor and thus reduces the burden on agricultural sector. It also helps in reduction of wastage, value addition, foreign exchange earnings and enhancing manufacturing competitiveness.

This sector serves as a vital link between the agriculture and industrial segments of the economy. Adequate focus on this could greatly alleviate our concerns on food security and food inflation.

Food processing is multidisciplinary field. It consists of element of chemistry, technology, dairy technology and biology. It deals with activities such as sourcing and acquiring agro-based raw materials, food processing system, processes, relevant equipment, dairy products, bakery products, beverage technology, fruits and vegetable processing, agro-products, packaging, marketing, storage and transportation techniques etc.

After completing this course, one will have access to multiple job opportunities. Food is one of our basic necessities. Demand for food won't stop. Food processing industry is poised to remain strong in the future. This sector will generate ample amount of job opportunities each year.

If you have a UG in B. Voc. (Food Processing Technology), you can work as Research Scientists, Food technologists, Engineers, Organic Chemists, Biochemists, Analytical Chemists, Home Economists, Managers and Accountants as well as in Food Processing based industries like Amul, Godrej Industrial Limited, Dabur India Ltd., PepsiCo India Holdings, Nestle India Pvt. Ltd., Britannia Industries Ltd., Parle Products Pvt Ltd and many more with various MNC's.

B. Voc. Food Processing Technology graduate can also apply for the government vacancies in the departments like FSSAI, FCI, Coffee Board of India, Spice Board of India, Coconut Board of India, Tea Board of India, NDRI, ICAR, etc. and other eligible jobs also.

You also can pursue M. Voc. And Ph.D. (Food processing Technology) if interested in research.

Universities and colleges employ food technologists as researchers and teachers.



Audit Report (2020-2021)



❖ Infrastructure and IT facility-

- Practical Laboratory – 01
- Staff room- 01
- LCD Projector -02
- LED Display - 01
- Computer – 01
- Laptop - 01
- Printer-01
- Internet facility

❖ Faculty Members:

Sr. No.	Name of the Teacher	Designation	Qualification	Qualification acquired during the year	Teaching Experience (Years)
1	Mr. Manoj Kumar	Head, Assistant Professor	M. Sc., B. Ed., DCA.	-	2
2	Smt. T. S. Muthal	Assistant Professor	M. Tech.	-	1



Audit Report (2020-2021)



❖ Laboratory audit and check list :

Sr. No	Topic	Yes	No	NA	Findings /Comments
A	General Work Environment				
1	Work area and Design	Yes			Sufficient work area & properly designed Laboratory
2	Lab Manual	Yes			SOP of all instruments is available
3	Means available to reach items stored at shoulder level.	Yes			Regular items are at reachable height
4	Emergency Action Plan	Yes			Fire extinguisher and first aid box available.
5	Material Safety Data Sheets (MSDS) Readily accessible	Yes			
6	Chemical Hygiene Plan available in lab	Yes			
7	Aprons / protective measures available	Yes			
B	Exit				
1	Required visible Signs	Yes			
2	Path free from obstacle	Yes			
3	AlterNet Exit available	Yes			
C	Emergency planning				
1	Fire extinguisher mounted near doorway	Yes			
2	Fire extinguisher fully charged	Yes			
3	Fire extinguisher tamper indicator in place	Yes			
4	Fire extinguisher inspected	Yes			
5	shower			NA	
6	first aid box	Yes			
7	Emergency gas and Electricity shut-off	Yes			
C	Chemical Storage				
1	Refrigeration units for chemical storage labelled No Food			NA	
2	Refrigeration units for food labelled Food Only	Yes			
3	Chemical storage cabinets properly labelled	Yes			



Audit Report (2020-2021)



Sr. No	Topic	Yes	No	NA	Findings /Comments
4	No volatile chemical storage in unventilated environmental chambers			NA	
5	Containers clearly labelled with chemical name.	Yes			
6	Storage strictly limited in actively used fume hoods			NA	
7	Materials with shelf lives dated and disposed of per supplier's recommendations	Yes			
8	Refrigeration units approved for flammables storage			NA	
9	Flammable liquids not stored near hot plates or other ignition sources	Yes			
D	Waste Disposal				
1	Containers kept sealed except during transfer	Yes			
2	Containers labelled with the words Hazardous Waste	Yes			
3	Separate disposal containers available for broken glass	Yes			
4	Biological Waste disposal after sterilization	Yes			
E	Ventilation				
1	Fume hoods used			NA	
2	local exhaust devices			NA	
F	Security				
1	Doors to the lab operate, close and lock properly	Yes			
2	Windows operate, close and lock properly	Yes			
G	Training/Awareness				
1	Workers have attended Laboratory Safety Training	Yes			Instructions of Laboratory Safety are given.
2	Workers have attended Emergency Action Plan Training	Yes			Instructions of emergency action plan are given.
3	Workers have attended Laboratory Security Training	Yes			Instructions of laboratory security are given.
H	Do laboratory workers know				
1	What to do in the event of an emergency, such as fire, injury, including evacuation routes	Yes			
2	How to clean up chemical spills	Yes			



Audit Report (2020-2021)



Sr. No	Topic	Yes	No	NA	Findings /Comments
3	What an MSDS is and where to find them and other safety information	Yes			
4	What type of personal protective equipment to use and when to use it	Yes			Apron, Gloves, Mask, Fire extinguisher and first aid box
5	what to do with chemical waste				
6	What are the most hazardous materials you use and what precautions to take	Yes			Acid added with micropipette
	E. COMPUTERS, EQUIPMENT & INSTRUMENTATION	Yes			2 computers

Recommendations:

- Need water purifier for food product preparation
- Require sanitization point at the lab entry
- Require aprons, gloves, hair caps, clinical masks

❖ Laboratory equipments-

Sr. No.	Name Of Equipment	Quantity	Make
1.	Digital Weighing Balance	2	Contech ,Wensar
2.	Digital pH Meter	1	Equiptronics
3.	Water Bath 6 Hole	1	Shital
4.	Hot Plate	1	Modern industries
5.	Hot Air Oven	1	Kumar
6.	Heating mantel	1	Labline
7.	Mixer grinder	1	Winner
8.	Cylinder	2	HP
9.	Refrigerators	2	Godrej, Samsung
10.	Vertical Autoclave	1	UTC
11.	Portable autoclave	1	Kumar



Audit Report (2020-2021)



Sr. No.	Name Of Equipment	Quantity	Make
12.	Spectrophotometer visible	1	Equiptronics
13.	Colori meter	1	Equiptronics
14.	Oven	1	LG
15.	Magnetic Stirrer	1	MI
16.	Gerber Centrifuge	1	Jupiter Seals
17.	Micro centrifuge	1	Spinwin
18.	Clinical centrifuge	1	Remi
19.	Cooling centrifuge	1	Remi
20.	Bacteriological Incubator	1	Kumar
21.	Distillation Plants	2	Bioera
22.	Rotary shaker	1	Besto
23.	Laminar Air Flow	1	Rescholor
24.	Vortex mixture	1	Remi
25.	Colony counter	1	Besto
26.	Electrophoresis unit	1	Bioera
27.	Inoculation chamber	1	Assembled
28.	Shaker incubator	1	Neolab, MI
29.	Vacuum pump	1	Bioera
30.	Ultra scope	1	Areche Bio Logics
31.	Anaerobic jar	1	Besto
32.	Laboratory dryer	1	Borosil
33.	Binocular Microscope	8	Coslab
34.	Monocular Microscope	9	Besto ,Coslab
35.	Dissecting microscope	2	Coslab
36.	BP Apparatus	1	Omeron
37.	Glucometer	1	Accu-check
38.	Electronic personal scale	1	Live care
39.	Solvent filtration apparatus	1	Bioera



Audit Report (2020-2021)



Dept of B. Voc. Food Processing Technology



1. Muffle furnace



2. Hot air oven



3. Grain dryer



4. Sieve shaker



Audit Report (2020-2021)



5. Autoclave



6. Centrifuge machine




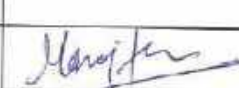


7. Cream separator



Audit Report (2020-2021)



1	Dr. B. S. Jagdale Prin. L. V. H. College, Panchavati, Nashik	Chairman	
2	Prof. Dr. V. D. Bobade HPT Arts & RYK Science College, Nashik	Member	
3	Mr. A. L. Bhagat Arts, Commerce & Science, College, Vadner-Bhairav	Member	
4	Mr. Manoj Kumar HOD - Dept. of B.Voc - FPT.		

Recommendation:

1) Purchase equipments as per syllabus.



* * * * *