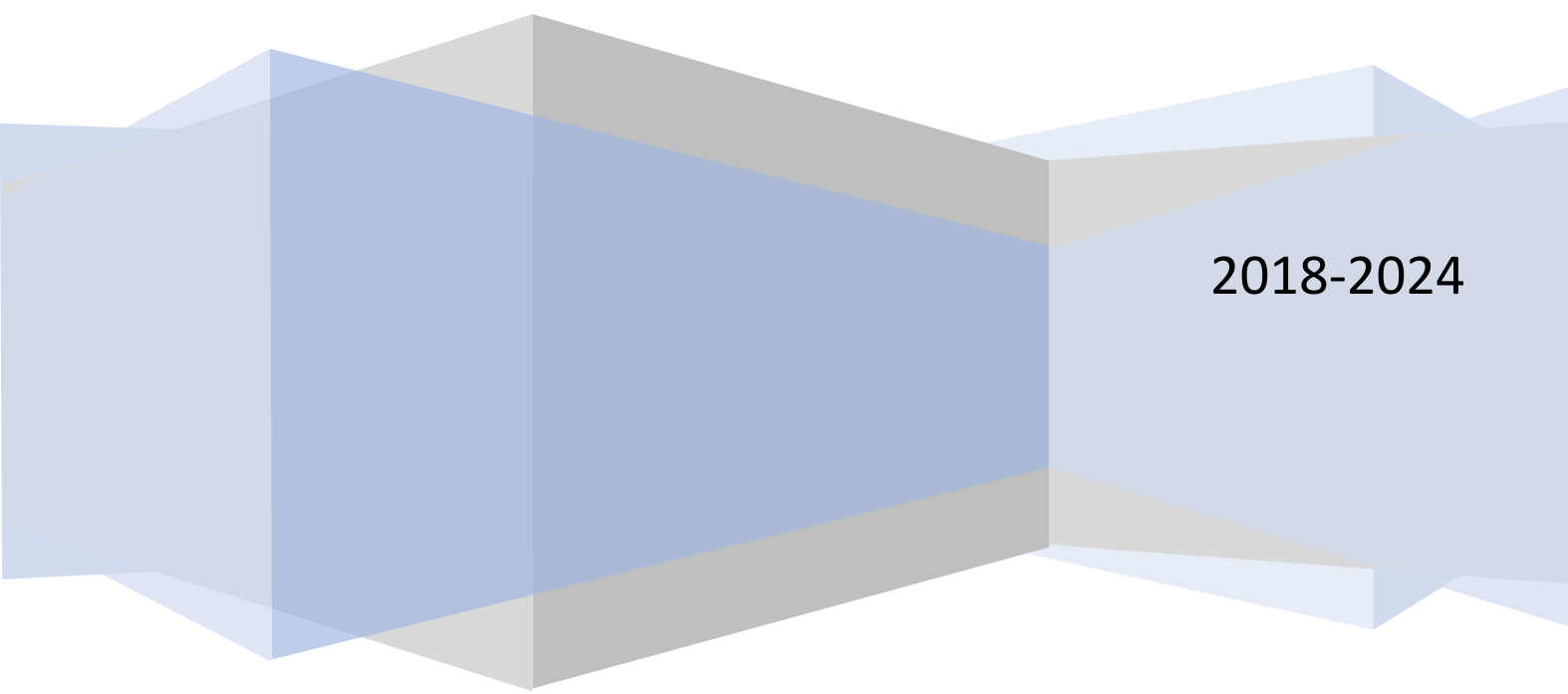


NORTH GAUHATI COLLEGE

NORTH GUWAHATI, ASSAM

FIRE AND SAFETY AUDIT



2018-2024

NORTH GAUHATI COLLEGE

Fire and Safety Audit Report

in

Academic Year

2018-24

Prepared by

Mr. Nepur Ranjan Hazarika

Coordinator

Fire and Safety Audit Committee

Assistant Professor, Department of Mathematics,

Fire and Safety Audit Committee

Dr. Prabhat Chandra Sarma (Chairman)

Mr. Nepur Ranjan Hazarika (Coordinator)

Dr. Tapan Chandra Deka (Member)

Dr. Achyutananda Baruah (Member)

Dr. Sikha S. Kashyap (Member)

Dr. Malashi Choudhury (Member)

Dr. Sujata Deori (Member)

Dr. Gautam Saikia (Member)

Dr. Lalit Shrestha (Member)

**Special Assistance: -M/S. DP Fire Safety and Security, H/N – 07, Prasanti Path,
Near Central Nursing Home, Survey, Beltola, Guwahati,
Assam-781028**

Photo Assistance: - Mr. Ujjal Boro, Office Staff, North Gauhati College

Mr. Mezart Changma, Office Staff, North Gauhati College

Mr. Nripen Haloi, Office Staff, North Gauhati College

Fire and Safety Audit Report- 2018-2024



Hon. Principal (i/c), Dr. Prabhat Chandra Sarma.

North Gauhati College.

Acknowledgement

In order to organize conscious, planned and determined efforts, in order to improve fire prevention, life safety and fire protection measures in the premises of North Gauhati College, under the able leadership of Hon'ble Dr. Achyutananda Baruah, Co-ordinator, IQAC, North Gauhati College, who took a significant decision for Fire and life Safety auditing of NGC campus, was one step ahead for strengthening the fire-safety of premises. A committee has been formed to do the fire audit and Mr. Nepur Ranjan Hazarika, Assistant Professor, Department of Mathematics has been selected as a nodal officer of the committee.

The fire and life safety audit report are to document the facility of fire protection and life safety necessities in the building campus. This report would serve as a useful reference to fire safety stakeholders of the institute.

The auditing team will investigate the fire safety situation of the required selected NGC campus thorough safety audit regarding the Fire prevention control system, Electrical systems, emergency preparedness, evacuation system and safety management etc.

I am thankful to the team of M/S. DP Fire Safety and Security, which is authorized license agency of Assam fire services giving for valuable inputs that have added immense value to the contents of this report.

I also thankful to Mr. Nepur Ranjan Hazarika and all the members of the fire and Safety committee of our college for taking hard efforts.

I express my sincere gratitude to all the members of the fire and Safety committee, the team of the M/S. DP Fire Safety and Security, all HOD, teaching faculties and non-teaching staff of college for spearheading this initiative and making Hon'ble chairman's vision of life prevention and safety into a reality.

Dr. Prabhat Chandra Sarma.

Principal (i/c)

North Gauhati College

Fire and Safety Audit Report- 2018-2024



Mr. Nepur Ranjan Hazarika
Coordinator, Fire and Safety Audit Committee,
Assistant Professor,
Department of Mathematics, North Gauhati College

Foreword


According to directions issued in the committee meeting on 2, April, 2024, there necessary, to undertake the Fire and Life Safety Audits, a committee was constituted under the provision of fire prevention and life safety measure Act 2006 we appoint M/S. DP Fire Safety and Security, H/N – 07, Prasanti Path, Near Central Nursing Home, Survey, Beltola, Guwahati, Assam- 781028.

Physical Safety Audit of premises was carried out during the months of April, 2024 to June 2024. The detailed Safety Audit Reports with emergency plan was shared to the stake holders of college through website publication. It is worth mentioning that Committee has carried out the Fire and life safety audit task within the time frame prescribed by Hon'ble Principal. I wish to express my appreciation to all the members of the Committee for sparing their valuable time & sharing their experience and making valuable contribution in bringing out this report.

Further, I thank to the of Hon'ble Dr. Prabhat Ch. Sarma, Chairman and Dr. Achyutananda Baruah, IQAC Co-Ordinator of our college, for taking this Fire and Life safety audit in positive spirit and extending all the cooperation to the Committee members during the audit.

I express our sincere thanks to the Teaching, administrative staff, and non-teaching staff for their co-operation help, without which this Fire and Life Safety Audit could not have been possible.

Nepur Ranjan Hazarika
Mr. Nepur Ranjan Hazarika
Coordinator, Fire and Safety Audit Committee,
Assistant Professor,
Department of Mathematics, North Gauhati College

DP FIRE SAFETY AND SECURITY			
📍 H/N - 07 PRASANTI PATH, NEAR CENTRAL NURSING HOME, SURVEY, GUWAHATI, BELTOLA, ASSAM- 781028			
GSTIN - 18HRUPS1671B1Z9			
Ref No. DP/24-25/002		Date: 03.07.2024	
<u>TEST CERTIFICATE</u>			
This is to certify that undernoted portable/movable fire extinguishers are refilled by us on 28.06.2024 & valid up to 27.06.2025. Now this fire extinguisher is in proper working condition.			
Sl No	Type of Extinguisher	Capacity	Quantity
1	ABC	4 KG	9 Nos
2	CO2	4.5 KG	1 Nos
Name and address of the owner: North Gauhati College, College Nagar, Guwhati – 781031, Assam, India			
Thanking you			
For DP Fire Safety & Security  Proprietor			
📞 3613157955 📞 93659 46844 ✉️ dpfiresafetya@gmail.com			

PART-1 SUMMARY.

EXECUTIVE SUMMARY

1.1 Positive areas:

- Material kept below staircase was cleared immediately
- Some part of terrace was seen clean
- At some place cable trays are made for electric wiring
- Instructions are displayed as required.
- At chemical lab. and stores are displayed.
- Maintenance of firefighting arrangement should be done regularly.
- Depending on the hazards they available in every room.
- Safe access ladders are present.
- While working in chemical Lab. staff and students wear apron.
- Ventilation safety is majorly implemented
- First aid box is maintained at required places.

1.2 Areas of Improvement:

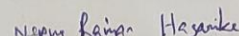
- Reduction in fire load is required to be done by removing non – required item
- Newer equipment such as vacuum cleaner may be used for cleaning
- Dangling wires, unclean panel room, open main switches, access behind mainpanel are the electrical problem. All problems need improvement
- Maintenance of earthing, checking its resistance is neglected insure periodically.
- combustible fire hazards are lying in every area of college, regular removal is a must.
- Wherever necessary refrigerator may be used for chemical storage.
- Safety during working at height is neglected everywhere, including certain area of terrace.
- Use suitable bird repellent to stop these birds entering in college premises
- Total emergency plan needs to be prepared
- Safe access should be provided to every work place.
- All aspects of safe chemical storage in laboratory must be implemented.

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- Safety in canteen is totally neglected.
- Safety of all instruments should be ensured.
- Avoid corrosion everywhere. It may create bad accident.

1.3 Areas of Improvement:


- There should be a separate safety department
- All concerned must be given safety training on various areas of safety suitable college.
- Immediately start accident/fire reporting system/mechanism.
- Regular safety inspection is required.
- On site emergency plan should be prepared and mocks are drilled periodically.


Mr. Nepur Ranjan Hazarika


Coordinator

Fire and Safety

Audit Committee


Dr. Achyutananda Baruah

Coordinator IQAC
Dr. Achyutananda Baruah
IQAC Co-ordinator
North Gauhati College

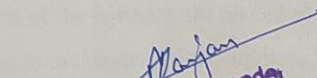

Dr. Prabhat Chandra Sharma

Principal
Principal I/C
North Gauhati College
North Gauhati College

Forwarded with best compliment for certification.

The Fire and Safety Audit Summary of North Gauhati College

Dist- Kamrup (State: Assam) is Verified Certified by:


Response Team Commander
Fire & Emergency Services
Station North Guwahati

PART 2: GENERAL

2.1 Institution History:

North Guwahati is situated on the northern bank of mighty river Brahmaputra, just opposite the city of Guwahati. This ancient capital town of the ancient rulers of Kamrup also enjoys the privilege of being the birthplace of some erudite scholars of Assam like Anundoram Barooah (eminent Sanskrit Scholar and both first graduate and first Indian Civil Services Officer from the state of Assam), Karambeer Nabin Chandra Bordoloi, Bolinarayan Borah, Col. Shivram Borah, Lakshiram Baruah, and many others. Also known as the temple town of Assam, it houses important sites of pilgrimage such as Ashwakranta, Dirgheswari, Manikarneswar, Rudreswar Devalaya, Doula Govinda Mandir, Auniati Satra, etc.

September 4, 1962, was an important date in the history of North Guwahati. The day saw the establishment of 'North Gauhati College, which was the only institution of higher education catering to greater North Kamrup (Old Kamrup District). A group of young, educated youths under the leadership of Sri Manindra Kumar Barooah gave shape to the initiative of establishing a college in the locality. Amidst the applause of a jubilant crowd, the inaugural function was held at the premises of AKI, North Guwahati, on September 4, 1962, which was graced by the presence of Sri Devkanta Barooah, the then Education Minister of Assam. Sri Kokil Bezbaruah, who was working in the history department at Pragiyotish College, headed the institution with a student strength of only 35 as the first principal in charge. On September 4, 1963, the college celebrated its 1st Freshmen Social, and the meeting was presided over by the then Vice Chancellor, Dr. Taylor. Following which, on November 24, 1963, Sri Devkanta Barooah laid the foundation stone of the college in the present location. The hard work of a group of young, educated youths and the love and faith of the people, along with the donations received from the people, led to the well-being and prosperity of the institution.

2.2 Mission: -

"The biggest change in education in the last five years is the focus on "learners". This being so, the needs of the learners are placed at the center of the discussion. Thus, the vision of the institution is to make education inclusive, which will be able to cater to diverse needs and give appropriate weight to activities, skills, and knowledge."

2.3. Vision: -

"The College has embarked on a mission of making higher education accessible and affordable for the people of North Guwahati and its neighbouring areas. By providing quality education, skill-based education, and vocational training to the youth, the college aims to foster economic growth in the region. Besides enhancing its' student's chances at employability, the college works with a mission of inducing inclusive social growth, which entails aspects like making proper health care, women's empowerment, environmental sustainability, and good governance achievable in North Guwahati and its adjacent areas. Not only does the college steer its students towards obtaining academic and professional degrees, but it also stresses the all-round development of students—physical, intellectual, moral, and spiritual development."

2.4. Introduction

The Principal of North Gauhati College form the committee and entrusted the responsibility of performing the complete Fire and Safety Audit of college, the committee was leaded by Mr.Nepur Ranjan Hazarika as coordinator of the committee. In committee meeting on 2 April 2024 decided to make the Fire and Safety Audit of college buildings should under the provision fire prevention and life safety measure Act 2006. For this committee starts the searching of government registered vendors, consultant, authorized NGOs and authorized fire and safety engineers for auditing. After long discussion and visiting the college site for N-times the management can offer this work to M/S. DP Fire Safety and Security, H/N – 07, Prasanti Path, Near CentralNursing Home, Survey, Beltola, Guwahati, Assam-781028, which is authorized licence agency of Assam fire services. The working team of M/S. DP Fire Safety and Security was visited periodically in between April 2024 to May 2024in the college premises and install the equipment's like Fire Extinguisher CO2 4.5 Kg, Fire Extinguisher ABC etc, by the plan. Meanwhile they conduct the Fire and Safety Audit was conducted and certify accordance to provision fireprevention and life safety measures of Assam State Govt.

2.5. Objectives

The objectives of the fire and safety audit are as follows:

- 1)Examine the existing fire and safety measures, procedures, system for controllingmeasures.
- 2)Identify potential hazards which have caused or are likely to causepersonal injury, propertydamage or loss of time.
- 3)Recommend on the basis of identified hazards, changes (if any) to improve upon theexisting system and procedure of work.

2.6. Methodology

The following methodology has been adopted to achieve the objectives.

- 1)Actually, visiting every room of college.
- 2)Visiting every nook and corner of the college.
- 3)Collecting all the existing fire load and safety deficiencies and positivesafety areas
- 4)Preparing report based on actual finding
- 5)Presenting the same to the dignitaries in the college on a conveniently suitable day andpresenting draft report.
- 6)Getting suggestions. Based on the suggestions received prepare a final report and submitto the management.

2.7. Observations and recommendations-

The Safety Audit was conducted by actual field visit to see the actual hazards at sitein terms fire and safety of requirements and accordingly recommendations and suggestionswherever applicable are given against each finding.




Since the audit is based on sample inspection, recommendation given in a particularcase will be the same for any uncovered area where similar situation exists.





PART 3: PHYSICAL HAZARD


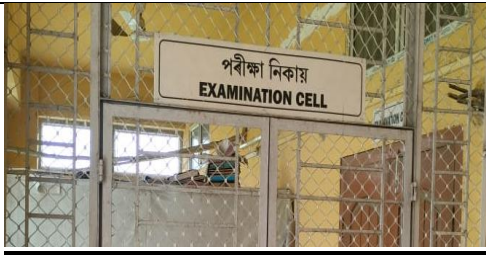



No.	Observations	Recommendations
3.1	Fire Load	
	<p><u>Visible items</u></p> <p>a) Combustible material</p> <p>Recorded book items -2500Kg (approx)</p> <p>Departmental files Register book etc.: 200Kg (approx)</p> <p>Furniture items: (Wooden/Plastic):</p> <p>Table, chair, Rack, desk bench: 17500Kg (approx)</p> <p>Gas cylinder: 10</p> <p>Bunsen Burner: 75</p>	<p><u>Visible items</u></p> <p>Wherever possible reduce</p>
	<p>1) Electric load: Light and fan: 559</p> <p>2) Computer-74</p> <p>Printers – 16</p> <p>Xerox Machine - 3</p> <p>3) Chemical equipment such as incubator etc –</p> <p>Oven: 1</p> <p>Shaker: 1</p> <p>Hot plate: 1</p> <p>Microwave: 1</p> <p>Conductometer: 2;</p> <p>pH meter: 2;</p> <p>Colorimeter: 1;</p> <p>Calorimeter: 30</p>	<p>Systematic storage is required and reduce use wherever possible. Regular monitor the switch of drills.</p>
	<p><u>Chemical stock in store (from all labs.)</u></p> <p>1) Flammable liquids in store –</p> <ul style="list-style-type: none"> ○ Acetone: 1 litre; ○ Benzene: 1 Litre; ○ Methanol: 3 Litre ○ Ethanol: 6 litre; ○ Petroleum ether: 500ml <p>2) Toxics –</p>	<p>Display safety instructions where is required.</p> <p>Provide skill and trainings for proper safety use.</p> <p>Chemical neutralizer with capacity 9 liter 2 Nos. ABC type extinguisher with capacity 10 kg 2 nos.</p>




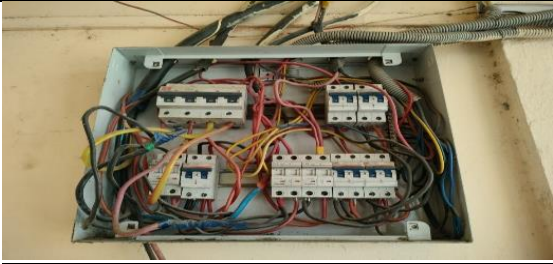
	<ul style="list-style-type: none"> ○ Methanol: 3 litre; ○ Formaldehyde: 1 Litre ○ Chloroform: 1litre; ○ Phenol: 1Litre; ○ Arsenic Oxide: 500gm; ○ Lead nitrate: 500gm ○ Red lead: 200gm <p>3) irritants –</p> <ul style="list-style-type: none"> ○ Benzoyl Chloride: 1Litre; ○ Bromine: 1Litre; ○ Concentrated acid: 10Litre; ○ Pyridine: 1 litre <p>4) oxidizing and reducing agents –</p> <ul style="list-style-type: none"> ○ Potassium Permanganate: 1Kg ○ Nitric acid: 2.5Litre; ○ Iodine: 300gm ○ Oxalic acid: 3kg; ○ Potassium Dichromate: 1.5kg ○ Stannous Chloride; 2Kg ○ Sodium Thiosulphate: 1kg <p>5) Corrosive –</p> <ul style="list-style-type: none"> ○ Conc Sulphuric acid: 3.5Litre ○ Conc Nitric acid; 2.5 Litre ○ Conc Hydrochloric acid: 2.5Litre ○ Glacial acetic acid: 2.5Litre ○ Bromine: 1Litre; ○ Sodium hydroxide: 2Kg; ○ Aniline: 1Litre ○ Hydrge Peroxide: 3Litre ○ Benzoyl Chloride: 1Litre 	
	<p><u>Chemical LAB</u></p> <p>j) Hazardous chemical – Chemistry, Industrial Chemistry, Botany and Zoology labs. Handles grade</p>	<p>Provide Chemical</p>

	II. Hazardous chemicals. The Laboratory can maintained good records, Accessionregisters and their stick records.	neutralizer with capacity 9 liter 2 Nos. ABC type extinguisher with capacity 10 kg 2 nos & one CO ₂ extinguisher with capacity 4.5 kg.
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No.	Observations	Recommendations
	<u>Entrance and Internal Road</u> 1) Entrance road width – 5 Meter 2) Road width near library – 2meters 3)Internal Road (Social Science) width- 2 meter 4) Old building roadroad– 2meters 5)Staircase width- 1.5 meter 8) Four-wheeler/ two-wheeler parking	Entrance road and leaving roads are wider. Make separate four-wheeler and two-wheeler parking design and implement it strictly.
3.2	Proper Housekeeping	
		
	Combustible material storagebelow the staircase	Action taken – It is removed.
		





	Unclean electrical room at first	Clean it. Do not allow such practices.
		
	Keeping anything above the cupboard is unsafe. It may fall down on someone's head.	Action taken. It is removed.
		
	Room for Non-Teaching staff –No lockers given for keeping clothes. They have hanged them near switch. No place for keeping brooms and other cleaning equipment.	Give separate lockers for keeping their clothes etc. Give separate place for keeping all cleaning equipment
		
	Housekeeping inside the cupboard is equally important. All things mixed together. No labelling.	Keep similar things together. Label them.


			
	Rods should be keep hidden.		Take necessary action
			
	Stationary above thecupboard.		Do not allow any material to keepabove the cupboards
	  		
	Green vegetation is allowed toincrease in structure at some places.		It is dangerous. Remove it and monitor.

		
	The security cabin is clean.	Good.
		Provide one CO ₂ extinguisher with 4.5 capacity and one AFFF extinguisher with capacity 9 liter.
	The generator should have a roof.	
3.3	Electrical Hazards	
		
	See this loose temporary wiring. Increase the chances of fire and electrocution	Lose electrical wiring are to be conduit or conceal type.
		
	Electrical switches should never be kept open like this. Dirt, dust enters, deposits and increases the resistance, draws	Do not allow such practice of keeping switches open.

	morecurrent, increases hazard of fire.	
		
	Dangling wire. If it is liveit may increase fire hazard	Do not allow such thing should happen
		
	Loose wiring	Remove it immediately. Do not allowsuch things to happen.
		
	Burnt socket is indicator of overdrawing of current. Not investigated.	Investigate why it got burnt. Looseconnection or any other reason andtake corrective action
3.4	Combustible fire hazards	

		
	Collection of dry leaves increase combustible fire hazard	See that same is cleaned every day.
3.5	Fire fighting	
		
	Pond is available but not clean. Separate water storage tank for emergency can be built for fighting fire.	All building above ground floor should be provided terrace tank with capacity 10, 000 Litter, hose-reel hose system, manual operated fire alarm system, terrace pump with capacity 450 lpm.
		
	The fire extinguisher was seen in at good working condition.	In every 20 meter sq. area one ABC type fire extinguisher with capacity 6kg should be provided.
3.6	Structural Problems	

		
	Infrastructure is not completed yet.	Complete as soon as possible.
3.7	Emergency Plan	
		
	No lights on the ground.	Provide lighting.
3.8	First Aid Box	
	No first aid box is available.	Provide it at a visible place.
3.9	Corrosion	
		
	Corroded window frames	Change it.
3.1	Disable Friendly design	
0		

		
	Ramps for classroom and Library	In both arts and Science building ramps are erected with minor slope was very easy for the disable persons.

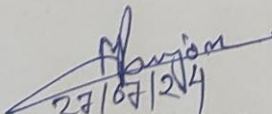
Part 4: Safety Management

Sl. No.	Observations	Recommendations
4.1	Safety Department	
	There is no safety department in college campus or in premises also.	<p>If possible, safety department maybe prepared so that it can take responsibility of safety inspection, organizing safety training, monitor the drills etc.</p> <p>Appoint the in charge of safety department should be minimum B.Sc. – Chemical + Advance Dip. In Industrial Safety (Or fire and safety at organization level in Campus.)</p>
4.2	Safety Training	

	Security person does not know how to use fire extinguishers	Impart training on use of fire extinguishers to security people.
	They Cannot identify fire hazards in the college	Impart training on identification of fire hazards to security people.
	They have only one lathi with them. No training for use of lathi	Impart training on using lathi to security people
	All selected staff not given training on use of fire extinguishers.	Impart training on Use of fire extinguishers to selected staff
	No training is imparted in various areas of safety such as 1) Accident reporting investigation 2) Safe Storage of chemicals in laboratory 3) Machine/ experimental safety or guarding 4) Fire prevention and protection 5) Other necessary subjects as and when necessary	Impart training to the concerned staff as observed
4.3	Accident/ fire incidence reporting	
	No system of accident reporting, fire incidence reporting.	Start reporting every minor accident, every fire incidence reporting
	Accident/ fire investigation does not exist.	After every report of accident/ fire department do investigation. Find out causes without blame fixing on anybody. Decide remedial measure in order to prevent reoccurrence of such incident.
4.4	Safety Inspection	
	Inspection of premises from Safety hazard and fire hazard not done.	Its monitoring should be done regularly by the concerned person.
4.5	Housekeeping	

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	At present no understanding of housekeeping apart from common understanding.	Teach all concerned way of housekeeping and implement the same in premises.
4.6	Emergency Plan	
	There is no emergency plan in college.	<p>Prepare on site emergency plan.</p> <p>Identify Possible emergencies.</p> <p>Prepare different teams of students also. Educate them for their duties on table top exercise.</p> <p>Make actual mock drill and monitor. Identify deficiencies.</p> <p>Make improvement in every mock drill.</p>
4.7	Fire Protection	
	Nobody is to look after fire Protection	Safety department has to look after this area too.


27/07/24

Scrutinised & Verified by

Moon Onjon Raamchiary

Response Team Commandar

North Guwahati Fire & Emergency Services Station

Guwahati – 31, Kamrup, Assam

Response Team Commandar
Fire & Emergency Services
Station North Guwahati