NGU Hazardous Materials Waste Disposal Policy

Policy Name	Hazardous Materials Waste Disposal Policy
Effective Date	January 2025
Review Cycle	Every 2 years
Approved By	NGU University Council

1. Overview

Newgiza University (NGU) uses and generates hazardous materials in its teaching and research laboratories, NGU Hospital, dental and medical clinics, pharmacy units, workshops, and campus operations. These materials include chemicals, medicines, biological and infectious agents, sharps, radioactive sources, and electronic and other hazardous items. If they are not handled and disposed of correctly, they can harm people, animals, and the environment. NGU is therefore committed to managing every hazardous material it uses from purchase to final disposal in a way that is safe, legal, and environmentally sound, and to reducing the amount of hazardous waste it produces.

2. Purpose and Scope

This policy aims to:

- Protect students, staff, patients, visitors, contractors, and the surrounding community from exposure to hazardous materials and hazardous waste
- Make sure that all hazardous waste is identified, segregated, labeled, stored, transported, treated, and disposed of safely and in line with Egyptian law
- Prevent hazardous waste from entering general waste, drains, soil, or water
- Reduce the quantity and hazard of the waste NGU produces at source
- Track hazardous waste quantities and report on them each year

This policy applies to:

- All NGU schools, departments, teaching and research laboratories, NGU Hospital, clinics, pharmacies, animal facilities, workshops, stores, and offices
- All hazardous materials, whether chemical, pharmaceutical, biological, radiological, or physical, and all waste arising from them
- All staff, faculty, students, researchers, and visitors who use, handle, or generate hazardous materials
- All contractors and service providers working on NGU premises, including cleaning, catering, maintenance, and waste collection contractors, and their subcontractors

3. Definitions

3.1 Hazardous Material

Any item or agent (biological, chemical, radiological, and/or physical) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.

3.2 Hazardous Waste

Any hazardous material, or any item contaminated with a hazardous material, that is no longer needed, has expired, or is left over from teaching, research, clinical care, or campus operations.

3.3 Licensed Contractor

A waste collection, transport, treatment, or disposal company that holds a valid license from the competent Egyptian authorities for the type of hazardous waste it handles.

3.4 Satellite Accumulation Area

A marked area inside a laboratory, clinic, or unit where hazardous waste is collected at the point where it is generated, before it is moved to the Central Hazardous Waste Store.

3.5 Central Hazardous Waste Store

The secure, ventilated, and access-controlled area on campus where hazardous waste is kept until it is collected by a licensed contractor.

4. Policy Statement

NGU will manage hazardous materials safely throughout their life cycle. Hazardous waste will never be disposed of in general waste bins, sinks, or drains. All hazardous waste will be segregated at source, kept in suitable labeled containers, stored securely, and handed over only to licensed contractors for treatment and disposal by approved methods, with full records kept. NGU will also prefer safer alternatives to hazardous materials wherever possible and will work to reduce the amount of hazardous waste it generates.

5. Categories of Hazardous Waste

5.1 Chemical Waste

- Includes solvents, acids, bases, oxidizers, toxic, flammable, corrosive, and reactive chemicals, heavy metals, and their contaminated containers
- Collected in compatible, leak-proof, closed containers, with incompatible chemicals always kept separate
- Halogenated and non-halogenated solvents are collected separately
- Disposed of through a licensed contractor by incineration, chemical treatment, or secure hazardous landfill

5.2 Pharmaceutical Waste

- Includes expired, damaged, or unused medicines, returned medicines, and active pharmaceutical ingredients used in teaching and research
- Cytotoxic and cytostatic drugs are kept separate and clearly marked
- Expired medicines are recorded and destroyed in line with the rules of the Egyptian Drug Authority; controlled drugs are destroyed under the required supervision

5.3 Biological and Infectious Waste

- Includes microbial cultures and stocks, contaminated media and consumables, blood and body fluids, human and animal tissues, and animal carcasses
- Collected in red bags or containers marked with the biohazard symbol
- Laboratory cultures are decontaminated by autoclave before they leave the laboratory, where possible
- Treated by a licensed contractor by autoclaving or incineration in line with Ministry of Health and Population requirements

5.4 Sharps

- Includes needles, syringes, scalpels, lancets, broken glass, and glass pipettes
- Placed immediately after use in puncture-resistant safety boxes, which are closed and replaced when three-quarters full
- Needles are never recapped, bent, or broken by hand

5.5 Radioactive Waste

- Includes radioactive sources and any materials contaminated with radioactive substances
- Handled only by authorized and trained staff, and stored in shielded and labeled containers
- Managed and disposed of in line with Law No. 7 of 2010 and the requirements of the Egyptian Nuclear and Radiological Regulatory Authority

5.6 Electronic and Other Hazardous Waste

- Includes computers and electronic equipment, batteries, fluorescent and mercury-containing lamps, toner cartridges, used oils, paints, and compressed gas cylinders
- Collected separately and sent to licensed recyclers or returned to suppliers under take-back arrangements
- Gas cylinders are returned to the supplier

6. Hazardous Waste Handling Procedure

6.1 Identification and Segregation

- Users identify the hazards of every material before work begins, using its Safety Data Sheet
- Waste is segregated at the point of generation

- Hazardous waste is never mixed with general waste, and incompatible wastes are never mixed with each other

6.2 Containers and Labeling

- Containers must be compatible with their contents, in good condition, leak-proof, kept closed, and filled to no more than 80%
- Each container carries a hazardous waste label stating its contents, hazard symbols, the laboratory or unit, the responsible person, and the start date

6.3 Storage

- Waste is kept in a marked Satellite Accumulation Area, away from drains, heat sources, and exits, with secondary containment for liquids
- Waste is moved to the Central Hazardous Waste Store regularly, and at the latest when containers are full
- The Central Hazardous Waste Store is locked, ventilated, signposted, and equipped with spill kits, fire extinguishers, and first-aid supplies

6.4 Collection, Transport, and Disposal

- Hazardous waste is collected only by licensed contractors approved by the Health, Safety, and Environment (HSE) Office
- Every consignment is accompanied by a signed waste transfer record stating the type and quantity of waste
- NGU obtains a certificate of treatment or disposal from the contractor for every consignment

6.5 Documentation

- The HSE Office keeps a hazardous waste register recording the type and weight of all waste generated and disposed of, together with transfer records and disposal certificates

7. Hazardous Waste Minimization

NGU reduces hazardous waste at source by:

- Buying chemicals and medicines in the quantities needed and keeping an up-to-date chemical inventory
- Sharing surplus chemicals between laboratories before buying new stock
- Substituting less hazardous materials wherever a safer alternative exists
- Using microscale experiments and green chemistry principles in teaching laboratories
- Preferring suppliers that take back packaging, equipment, and unused materials

8. Spills, Emergencies, and Exposure

- Every laboratory, clinic, and store that holds hazardous materials has a spill kit suited to the materials used there, and trained staff to use it

- Spills, leaks, exposures, and needle-stick injuries are reported immediately to the laboratory supervisor and the HSE Office
- Injured or exposed persons receive first aid and medical follow-up through the NGU clinic or NGU Hospital
- All incidents are investigated, and corrective actions are taken to prevent them from happening again

9. Contractors and Outsourced Services

- Contractors working on NGU premises must follow this policy and must not dispose of any hazardous material through general waste or drains
- Cleaning and maintenance staff receive instructions on how to recognize and avoid hazardous waste containers
- Waste management contractors must provide copies of their valid licenses before signing a contract, and NGU checks these licenses each year
- Contracts include clauses requiring compliance with this policy and allowing NGU to end the contract for serious breaches

10. Responsibilities

10.1 University Council

- Approve this policy, provide the resources needed to apply it, and review the annual report on its implementation

10.2 Health, Safety, and Environment (HSE) Office

- Apply and oversee this policy, approve waste contractors, inspect laboratories and stores, keep the hazardous waste register, and prepare the annual report

10.3 Facilities Management

- Maintain the Central Hazardous Waste Store and manage on-campus contractors and their compliance with this policy

10.4 Schools, Laboratories, NGU Hospital, and Clinics

- Name a waste coordinator for each laboratory or unit, provide suitable containers and labels, and make sure that staff and students follow this policy

10.5 Sustainability Committee

- Advise on hazardous waste reduction, set annual targets, and promote awareness across the University

10.6 Staff, Faculty, Students, and Researchers

- Segregate, label, and store hazardous waste correctly, complete the required training, and report any spill or incident immediately

10.7 Contractors and Service Providers

- Comply with this policy and the law, hold valid licenses where required, and make sure their subcontractors do the same

11. Training and Communication

- This policy is published on the NGU website and shared with all schools, units, and contractors
- All staff and students who work with hazardous materials receive safety and waste handling training before starting laboratory or clinical work, with refresher training every two years
- Segregation guides and hazard signs are displayed in every laboratory, clinic, and waste storage area

12. Record Keeping and Monitoring

The HSE Office reports each year to the University Council on:

- The quantity of hazardous waste generated and disposed of, by category, in kilograms
- The number of consignments collected, with confirmation that each has a disposal certificate
- The number of laboratory and store inspections carried out, the non-conformities found, and the corrective actions taken
- The number of spills, exposures, and needle-stick injuries, and the training delivered
- Progress against hazardous waste reduction targets

13. Review

This policy will be reviewed every two years, taking into account monitoring data, incidents, changes in Egyptian law, and feedback from staff, students, and contractors, to ensure that NGU's management of hazardous materials remains safe, compliant, and in line with international good practice.

This policy is applied in line with Environment Law No. 4 of 1994, Waste Management Regulation Law No. 202 of 2020, Law No. 7 of 2010 on the Regulation of Nuclear and Radiation Activities, and the regulations of the Ministry of Health and Population and the Egyptian Drug Authority, as amended. Where the law sets a stricter requirement than this policy, the law applies.