



Certificate course on Skill Development in Care, Management of Laboratory Animals & Experimental Techniques

CSIR-CDRI

CSIR-Central Drug Research Institute (CSIR-CDRI) is a premier R&D institution in India, equipped with state-of-the-art infrastructure to drive new drug discovery and development from “Concept to Commercialization.” The Institute is committed to emerging as a global leader through cutting-edge science, advanced technologies, and multidisciplinary research. Aligned with the vision of New India, CSIR-CDRI is transforming itself into a comprehensive, multidisciplinary hub dedicated to addressing unmet medical needs and supporting the aspirations of the pharmaceutical and biotechnology industries. Beyond its core mandate of drug discovery and development, the Institute actively contributes to several national missions, including Make in India, Skill India, Digital India, Start-up India, and Sashakt Bharat.

This certificate course offers a unique and valuable opportunity for individuals seeking skill development and foundational training in laboratory animal science. The program is designed to provide comprehensive exposure to:

- Management and operation of laboratory animal facilities
- Routine care, handling, and husbandry practices for various laboratory animal species
- Essential experimental procedures and techniques
- Quality control and assurance processes
- Good Laboratory Practices (GLP) and regulatory compliance

Participants will gain hands-on knowledge and technical competence required for professional roles in biomedical research laboratories, laboratory animal facilities in public and private institutions, pharmaceutical industries, contract research organizations, and academic research settings.

The course aims to empower trainees with the skills and understanding necessary to excel in laboratory animal care, management, and experimentation, opening up strong career prospects in one of the fastest growing sectors of scientific research.

CSIR-CDRI invites applications for the course as per the details given below:

Title of the Course	Certificate course on Care, Management of Laboratory Animals & Experimental Techniques
Duration	03 Weeks (2nd Feb to 20th Feb 2026)
No. of Seats	20
Minimum Educational Qualification	10+2 (Science stream will be preferred)
Venue of the course	CSIR-CDRI, Lucknow
Course Fee	Rs. 10,000/-
Last Date for application	20th Jan 2026
Course Coordinator	Dr. Rajdeep Guha (E-mail: rajdeep.guha@cdri.res.in)

TRAINING CURRICULUM

Module 1: Basic Principles of Laboratory Animal Care and Management

This module provides foundational knowledge on the biological, behavioral, and environmental needs of laboratory animals.

Topics Covered

- Introduction to research animal species (rodents, lagomorphs, canines, primates, zebrafish, etc.)
- Species-specific biology and behavioral characteristics
- Basic husbandry practices: housing, feed, water systems, bedding, enrichment, and identification
- Animal facility layout, functional zones, and workflow (clean corridor, dirty corridor, quarantine, experimental rooms)
- Routine sanitation and hygiene protocols
- Cleaning, washing, and sterilization of cages, racks, bottles, and bedding
- Biosafety and biosecurity considerations

Module 2: Breeding Techniques of Laboratory Animals

This module covers the fundamentals and advanced principles of breeding laboratory species.

Topics Covered

- Introduction to breeding methods for various species
- Inbreeding, outbreeding, and hybrid breeding: principles and applications
- Key factors influencing successful breeding (age, health, pairing, environmental conditions)
- Setting up and maintaining breeding colonies
- Breeding and management of genetically modified animal models (transgenics, knockouts, conditional mutants)
- Genetic quality control and characterization of breeding stocks
- Record keeping and tracking of breeding performance

Module 3: Experimental Techniques in Laboratory Animals

Hands-on training on essential experimental procedures performed in preclinical research.

Topics Covered

- Species-specific handling and restraint methods
- Routes of administration: oral, intraperitoneal, intravenous, subcutaneous, intramuscular, intranasal, etc.
- Biological sample collection techniques: blood, urine, tissues, and swabs
- Necropsy procedures and organ collection
- Principles and practice of anesthesia
- Humane endpoints and euthanasia techniques
- Ensuring refinement and minimizing animal stress

Module 4: Pathophysiology of Common Laboratory Animal Diseases and Their Prevention

This module focuses on animal health, disease identification, and preventive strategies.

Topics Covered

- Overview of common infectious and non-infectious diseases in laboratory animals
- Recognizing clinical signs and abnormal behavior
- Health monitoring programs: sentinel systems, sampling methods, and diagnostic testing
- Environmental and procedural factors affecting disease development
- Preventive and therapeutic measures
- Quarantine management and outbreak control measures

Module 5: Record Keeping and Documentation

Accurate documentation is essential for regulatory compliance and scientific integrity.

Topics Covered

- Animal breeding records and lineage documentation
- Records for animal receipt, distribution, and disposal
- Feed, bedding, and consumables stock management
- Veterinary care and health monitoring records
- Experimental logs and IAEC-related documentation
- Importance of traceability and audit readiness

Module 6: Animal Nutrition

This module introduces the principles of laboratory animal nutrition.

Topics Covered

- Basic nutritional requirements of different species
- Types of laboratory animal diets and their composition
- Principles of diet formulation (theory)
- Storage, handling, and distribution of animal feed
- Water quality standards and supply systems

Module 7: Animal Ethics and Welfare

This module emphasizes humane care, ethical responsibilities, and regulatory compliance.

Topics Covered

- Concepts of animal welfare: 3Rs (Replacement, Reduction, Refinement)
- National and international guidelines
- Ethical issues in animal experimentation
- Designing and preparing animal experiment protocols
- Roles and responsibilities of the Institutional Animal Ethics Committee (IAEC)
- Humane endpoints and monitoring criteria

Module 8: Instrumentation for In-vivo Research

Provides an overview and operational principles of instruments commonly used in animal research facilities.

Topics Covered

- Hematology and serum biochemistry analyzers
- Neurobehavioral assessment systems
- Non-invasive blood pressure monitoring systems
- Imaging platforms: Micro-CT, IVIS (In Vivo Imaging System), ultrasound, etc.
- Principles of calibration, maintenance, and safe operation
- Data acquisition and interpretation basics

CERTIFICATION

The certificate will be issued to the successful candidates.

IMPORTANT DATES:

Receiving of application by E-mail (last date): 20/01/2026

Intimation to selected candidates: 23/01/2026

Course Start: 02/02/2026

Kindly send Application by E-mail only (sdp@cdri.res.in)

For more details kindly visit the link;

https://cdri.res.in/SkillDevelopment_InternshipPortal

Contact:

Coordinator, Skill Development Programme CSIR-Central Drug Research Institute

Sec-10, Jankipuram Extension, Sitapur Road Lucknow 226031 (Uttar Pradesh)

E-mail: sdp@cdri.res.in