

MINORS IN WORK AREAS

INTRODUCTION

PURPOSE

Duke acknowledges that there are justifiable and productive reasons for the presence of Minors in work areas. Due to potential exposure to biological, chemical, radioactive, and physical hazards – particularly in research laboratories – the following guidelines are necessary to minimize risks.

This policy addresses activities for individuals under the age of 18 who are not covered under existing policies and procedures. This policy does not apply to:

- Enrolled Duke Students who are under the age of 18
- Patient care-related activities pertaining to Minors in the Duke University Health System or Duke patient-related settings
- Minors who are research study participants for studies approved by the Duke Institutional Review Board
- Events open to the general public that are not targeted toward Minors, and at which any Minors will be accompanied by their parent/legal guardian at all times

DEFINITIONS

Minor A person who is under the age of 18 years old.

Volunteer A person who volunteers or donates their services, usually on a part-time basis, for public service, religious or humanitarian objectives, not as employees and without contemplation of pay. The [Duke Volunteer and Unpaid Intern Policy Guidelines](#) on the Duke Human Resources Website list criteria for ensuring that a volunteer is not an employee.

Unpaid Intern An individual who volunteers for purposes of educational or professional interest as part of a formal or informal educational program, assessed under specific factors from the Department of Labor (see [Duke Volunteer and Unpaid Intern Policy Guidelines](#) on the Duke Human Resources Website).

Sponsor	For the purposes of this policy, Sponsor refers to a Principal Investigator in research settings, or a Responsible Employee in other areas.
Responsible Employee	A fully trained Duke employee who is responsible for the work area (supervisor, manager, etc.).

RESPONSIBILITIES

Heads of all Departments shall take appropriate steps, as described in this policy, to ensure the safety of all Minors in the areas under their supervision.

Heads of Departments which sponsor Minor Volunteers in Duke Hospitals must coordinate with [Duke University Hospital Volunteer Services](#) (or the appropriate contact for other Hospitals) for any volunteer positions within Duke Hospitals or Clinics and comply with their requirements.

The Sponsor (the Principal Investigator (PI) for research areas or a Responsible Employee for non-research areas) must:

- Only allow Minors in their laboratories or related work areas that fulfill the requirements outlined in this policy.
- Maintain constant line-of-sight supervision of the Minor at all times when the Minor is in a work area with chemical, biological or physical hazards, or designate other personnel to be the Direct Supervisor for the Minor and document this on the [Workplace Safety Statement](#). (Note: Unless there is a written authorization from the Director of Youth Programs for flexibility in supervision, minors should be supervised with line-of-sight supervision at ALL times.)
- Sign the [Workplace Safety Statement](#) to acknowledge all applicable policies and certify that they will comply with any additional safety requirements or restrictions outlined by OESO on the approved Workplace Safety Statement.

The Direct Supervisor for the Minor (or Sponsor, if unspecified) must:

- Be registered as “Program Staff” for an approved Duke Youth Program and be compliant with all [Youth Protection](#) requirements.
- Ensure the Minor completes all required safety training noted on the OESO-approved [Workplace Safety Statement](#) before entering any work areas with hazardous materials. The Direct Supervisor must also have their own required safety training completed.
- Assess the potential risk of exposure to hazards and direct the Minor’s access accordingly. If any other employees will be escorting or supervising the activities of the Minor, the Direct Supervisor must also communicate these risks and directions to those employees.

- Ensure the Minor has fully reviewed and signed any safety documentation relevant to the work area and tasks being observed or performed, such as a lab-specific Chemical Hygiene Plan (CHP) and any additional safety SOPs or Guidelines.
- Sign and date any relevant safety documentation alongside the Minor to document the Minor's training.
- Ensure the Minor is informed of where to go in case of a fire alarm or other emergency.
- Ensure the Minor is familiar with the location of any safety equipment in the work area such as eyewashes, safety showers, handwashing sinks, as well as any relevant engineering controls.
- Ensure the Minor wears the appropriate PPE for the work area or task being observed or performed.
- Maintain line-of-sight supervision of the Minor at all times while in the work area (unless flexibility in supervision is authorized by the Director of Youth Programs as noted above) and ensure the Minor is following all safety policies, SOPs, and Guidelines.
- Prohibit the Minor from remaining in the work area if the Minor cannot abide by safety policies and procedures.
- Sign the [Workplace Safety Statement](#) to acknowledge all applicable policies and certify that they will comply with any additional safety requirements or restrictions outlined by OESO on the approved Workplace Safety Statement.

The [Occupational & Environmental Safety Office](#) (OESO) is responsible for reviewing and determining approval for the activities documented on the [Workplace Safety Statement](#) and notifying the personnel listed on the Workplace Safety Statement when approval has been granted. Review of the Workplace Safety Statement may include obtaining additional information, performing a safety evaluation of the work area, and outlining any additional safety requirements, restrictions, or recommendations.

Minors who will volunteer or serve as an unpaid intern in laboratory settings or in other areas where additional safety procedures or regulatory requirements apply must complete all required safety training noted on the OESO-approved Workplace Safety Statement before entering those work areas.

Responsibilities from related policies and resources:

- Duke has developed Standards that all Youth Programs, where applicable, must follow. These Standards can be found on the [Program Operations and Standards](#) page on the Duke Human Resources website.
- Where applicable, individuals who escort or supervise the activities of Minors at Duke will also abide by the "[Youth Protection at Duke University Policy](#)" on the Duke Human Resources website.

- Where applicable, the requirements of the “[Employment of Minors Policy](#)” on the Duke Human Resources website must be met.
- Where applicable, minors who are volunteers or unpaid interns (and their Sponsors) will also abide by the “[Volunteer & Unpaid Intern Policy Guidelines](#)” on the Duke Human Resources Website.
- Where applicable, individuals who escort or supervise the activities of Minors at research field sites will also abide by the “[Fieldwork Safety Policy](#)” on the Duke OESO Website.
- Where applicable, Minors (and their Sponsors) who will visit or observe Duke animal care and use operations will abide by the IACUC “[Visitation, Animal Observations, or Photography of Animals Policy](#)”, as well as any other relevant [Animal Care and Use Policies](#) on the Animal Care and Use Program secured website.

Before a Minor may be hired as an employee or paid intern within Duke University Health System (DUHS), the following requirements must be met:

- The Supervisor/Hiring Department must adhere to this policy “[Minors in Work Areas](#)” to ensure the Minor is not assigned in any capacity that is deemed hazardous or potentially detrimental to the Minor’s health or well-being.
- Minors who will be in laboratory settings or in other areas where additional safety procedures or regulatory requirements apply must complete all safety training requirements administered by the Occupational & Environmental Safety Office (OESO) before their start date. The Supervisor/Hiring Department is responsible for coordinating and scheduling all required training for new hires.

PROCEDURES

AGE RESTRICTIONS

Minors under the age of 16 are not permitted to work or volunteer (this includes internships, work study, etc.) at Duke or participate in Duke programs or activities (“Programs”) covered in Duke HR’s “[Youth Protection at Duke University Policy](#)” or participate in lab placements except when participating in an approved and supervised tour.

These age restrictions apply regardless of whether the work is performed in a paid or non-paid status, whether the event is classified as a Duke sponsored event, or whether the work occurs pursuant to a third-party agreement. Minors between 16 and 18 years of age may be permitted to work at Duke upon approval from the Vice President of Human Resources or their designee. See the “[Employment of Minors Policy](#)” on the Duke Human Resources website.

APPROVAL OF MINORS IN THE WORK AREA

Minors must not enter laboratory, animal care, patient care, makerspace, or industrial areas without written approval from the Duke Occupational & Environmental Safety Office (OESO) for the activities the Minor will undertake or observe. Written approval must first be obtained from the “Sponsor” (Principal Investigator for laboratory or other research locations, or a Responsible Employee for non-research locations). The Duke personnel requesting OESO approval for the Minor must provide OESO with written evidence of approval by the Sponsor by using the [Workplace Safety Statement](#) on the OESO website.

The Duke personnel requesting OESO approval must indicate the following details on the Workplace Safety Statement:

- Whether the Minor will be actively performing activities or solely observing
- A description of the activities the Minor will engage in or observe
- Identification of any hazardous materials or potential risks that the Minor may be exposed to in the work area

The Workplace Safety Statement must be signed by the Sponsor, as well as the employee who will be directly supervising the Minor (Direct Supervisor, if not the Sponsor). The Workplace Safety Statement should be submitted to OESO at least four weeks prior to the arrival of the Minor.

Upon submission, the OESO will review the request to assess compliance with applicable safety regulations. The review process may include the following steps:

- Evaluation of the described activities, work areas, and associated risks
- Requests for additional information as needed
- A site-specific safety evaluation of the proposed work area
- Collaboration with the Direct Supervisor or Sponsor to address any necessary safety measures required for approval of the described activities

Following the review process, the OESO will return a finalized Workplace Safety Statement to the Direct Supervisor and Sponsor which includes a summary of approval conditions for the proposed activities. Laboratories must be in compliance with Duke OESO’s laboratory safety evaluation performance factors in order to receive final approval from OESO.

TRAINING AND SUPERVISION FOR MINORS

In order to work or volunteer at Duke, Minors must be able to successfully complete all relevant safety trainings administered by Duke Occupational & Environmental Safety Office (OESO) and must review and sign any applicable lab-specific SOPs or general safety guidelines. Minors at Duke must complete safety training required for employees doing similar tasks in that work area and any other safety-related training indicated by OESO.

Minors must satisfactorily complete all applicable training and orientation appropriate to the role prior to commencing activities. Depending on the nature of the service, training may also include HIPAA requirements, additional health and safety precautions, lab protocols, animal lab requirements, or compliance or customer service requirements. The Minor will be prohibited from continuing to be in the work area if safety procedures are not followed.

Minors with approval to work, volunteer, or observe in laboratory or other work areas must be supervised by responsible personnel from that area (the Sponsor or Direct Supervisor designated on the [Workplace Safety Statement](#) approved by OESO). Where deemed appropriate, the Sponsor may place additional restrictions on the presence of Minors in the work area.

Under no circumstance will a Minor be allowed in any work area where they present a distraction to the employees in the area. Distractions may be due to the activities of the Minor or due to the level of supervision the Minor may require.

AREA RESTRICTIONS FOR MINORS

No Minor is permitted to enter an area where it is determined to be hazardous or potentially detrimental to the Minor's health or well-being, including but not limited to:

- Any area under construction or renovation.
- Any area where there is an increased risk of exposure to infectious diseases transmitted via the aerosol route, including but not limited to patient-care areas, clinical and research microbiological laboratories, or autopsy suites.
- Any area requiring Biosafety Level 3 or higher-level containment.
- Any area where research involving controlled substances is being performed.
- Any area where there is potential inhalation exposure to [Particularly Hazardous Substances](#) (i.e., where volatile liquids or powdered Particularly Hazardous Substances are handled outside of a ventilated enclosure such as a chemical fume hood).
- Any area where it is determined that there is potential exposure to radiation in excess of 0.1 rem (1 mSv) total effective dose equivalent or in excess of the limits set forth in 10A NCAC 15.1601(a)(15). Authorized Users of radioactive materials or lasers exceeding Class 3a (3R) who plan to involve Minors in activities in their laboratories must notify the Duke OESO Radiation Safety Division prior to beginning work in the laboratory.
- Any area where agricultural pesticides have been applied or which would otherwise violate the age restrictions in the [Environmental Protection Agency's Worker Protection Standard](#) for Agricultural Pesticides.

RESTRICTED MATERIALS AND PROCESSES FOR MINORS

No Minor is permitted to observe, work, volunteer or intern in a capacity where it is determined to be hazardous or potentially detrimental to the Minor's health or well-being, including but not limited to:

- Any task that would expose the Minor to hazards prohibited for employees under the age of 18 by the *Fair Labor Standards Act* or the *North Carolina Wage and Hour Act*, summarized on the [NC Department of Labor webpage](#).
- Any task that would put the Minor at risk of serious physical harm, such as but not limited to: operating heavy equipment (including vehicles in a way that would violate the [Vehicle Safety Policy](#)), working with stored energy (e.g., steam, electricity, hydraulics), working with or around hot liquids or steam, working at heights of more than 4 feet, or metalworking such as welding, brazing, or torch-cutting.
- Any task that would expose the Minor to physical hazards, such as using autoclaves or Bunsen burners. Minors may only observe the use of such equipment when it is determined safe for them to do so. For autoclaves, the Minor must remain a distance of at least 6 feet away from the autoclave door as it is opened after a cycle. The adult employee operating the autoclave while the Minor observes must follow the [Autoclave Safety Training Checklist](#) on the OESO website.
- Any task that would expose the Minor to Select Agents as identified by the [Federal Select Agent Program](#).
- Any task that would potentially expose the Minor to human blood or body fluids, infectious diseases, or other biological material or agents that require medical surveillance.
- Any task that would potentially expose the Minor to chemicals which are identified as [Particularly Hazardous](#) based on the criteria published by the Duke Occupational & Environmental Safety Office (OESO), or which are classified by the International Agency for Research on Cancer (IARC) as Group 1 or 2A carcinogens, or which are regulated as carcinogens by the Occupational Safety and Health Administration. Minors may observe work with non-volatile particularly hazardous substances that are already in solution. Before observing the use of any non-volatile particularly hazardous substances, the Minor must also review any relevant chemical safety SOPs or guidelines and the Chemical Hygiene Plan specific to that laboratory or research location before entering the work area.
- Any task that would involve the Minor handling research animals in areas managed by the Division of Laboratory Animal Resources (DLAR) or entering any animal areas posted with a door sign for hazardous materials in animal bedding.
- Any task that would potentially expose the Minor to agricultural pesticides or would otherwise violate the age restrictions in the [Environmental Protection Agency's Worker Protection Standard](#) for Agricultural Pesticides.

Some materials or procedures require additional safety procedures to be in place before Minors will be approved to observe or work with them, including but not limited to:

- Any Minor who will be performing or observing tasks in research laboratories must complete the “*Hazard Communication for Laboratory Employees*”, “*Laboratory Safety – General*”, and “*Fire/Life Safety*” trainings administered by OESO (at minimum).
- Minors may not handle any Risk Group 2 (BSL-2) biological materials (or higher). Minors may observe the use of these materials when it is determined safe for them to do so. If the Minor will be in a Biosafety Level 2 (BSL-2) lab, completion of the “*Biosafety Level 2 and Bloodborne Pathogens for Lab workers*” safety training administered by OESO is strongly recommended. The Minor must also be given a chance to fully review and sign any relevant biological safety SOPs or guidelines before entering the work area.
- If the Minor is to observe or handle research animals in situations that are not prohibited in the prior section, the Minor must first be listed as personnel on the applicable IACUC Protocol and must complete all required training and occupational health activities. If the Minors will be in rooms with research animals, the participant agreement provided to the Minor’s parent or guardian must include the following statement: “*The minor will be exposed to animal allergens in the work area. Exposure to animals or animal products can cause asthma and allergies. Individuals with pre-existing allergies, especially those sensitized to domestic animals such as cats and dogs, are more likely to develop sensitivity to laboratory animals than non-allergic individuals.*”
- Minors may handle slides with fixed tissue that have been rinsed in PBS or another non-hazardous solution at least three times for 5 minutes each. If the Minor(s) are in the area during the rinsing, at least the first rinse (but preferably all rinses) must be done within a chemical fume hood.
- Minors may work around a cryostat with the following restrictions: they may not have their hands near the blade; others must load and unload the blade and fixed tissue sample and set up the cryostat for sectioning. Additionally, the Minor may turn the exterior hand wheel and, when sections are on the far end of the stage away from the sharp side of the blade, the Minor may (with supervision) collect the tissue section on a slide or pick it up with a paint brush and put it in a buffer solution nearby. Minors may handle covered slides at room temperature. Fixed tissue samples may be rinsed as noted above and then the Minor may work around the fixed, rinsed slides before they are covered. Any tissue samples must not be from any Risk Group 2 organisms (or higher) unless fixed.
- Minors working with confocal microscopes must be informed about the presence and hazards of lasers in the confocal microscope and understand not to bypass the safety interlocks or additional safety measures. No Minors are allowed in the laser control area for instances where the laser compartment needs to be accessed for

maintenance or re-alignment. No Minor shall perform any laser alignment procedures. Safety training requirements depend on the risk associated with the specific confocal microscope. For low-risk microscopes, the operational training on the confocal microscope should suffice. For high-risk confocal microscopes, completion of the “*Laser Safety for Non-Clinical Users*” safety training administered by OESO is required for both the Minor and their supervisor.

- Any Minor who will be handling sharps must follow the [Sharps Management Plan](#) provided by OESO.
- Minors working around ultraviolet light must review the information sheet on [Working Safely with Ultraviolet Light](#) provided by OESO.
- Any tasks that involve flammable liquids (including ethanol) must limit volumes to 250 mL or less.
- Any tasks that involve corrosive liquids (including bleach) must limit volumes to 100 mL or less.

INCIDENT REPORTING FOR MINORS

Any exposures to hazardous materials must be reported by contacting OESO.

Additionally, the Minor’s Direct Supervisor or Sponsor must report any incident involving a Minor by completing the [incident reporting form](#) on the Duke Human Resources website.

QUESTIONS

Questions about this policy should be directed to the Duke Occupational & Environmental Safety Office Laboratory Safety Division by calling (919)-684-8822 or sending an email to labsafety@duke.edu.

REFERENCES

Code of Federal Regulations, Title 10, Part 20.1301 (OSHA), “[Dose limits for individual members of the public](#)”

Code of Federal Regulations, Title 29, Part 570 (OSHA), “[Child Labor Regulations](#)”

Code of Federal Regulations, Title 29, Part 1910.1096 (OSHA), “[Ionizing Radiation](#)”

Code of Federal Regulations, Title 40, Part 170 (EPA), “[Worker Protection Standard](#)”

Duke Animal Care & Use Program “[Guidance on Minors in Duke University Programs](#)”

Duke Health Policy Center 01.23, “[Visiting Observer Policy \(Non-Physician\)](#)”

Duke Human Resources “[Program Operations and Standards](#)”

Duke IACUC/OAWA Policy “[Animal Care and Use Policies](#)”

Duke University Policy 03.19, “[Volunteer and Unpaid Intern Policy Guidelines](#)”

Duke University Policy 06.18, “[Visitation, Animal Observations, or Photography of Animals Policy](#)”

Duke University Policy 09.24, “[Employment of Minors Policy](#)”

Duke University Policy 09.24, "[Youth Protection at Duke University Policy](#)"
Duke University Policy 10.18, "[Vehicle Safety](#)"
Duke University Policy 11.15, "[Fieldwork Safety](#)"
Federal Select Agent Program list of "[HHS and USDA Select Agents and Toxins](#)"
North Carolina Statutes, Chapter 95, Article 2A, "[Wage and Hour Act](#)"