Temple University
Environmental Health and Radiation Safety

RESEARCH SAFETY GUIDE

MINORS IN RESEARCH LABORATORIES

Document # CHE087-RSG-Minors in Research Laboratories	**Distribution:** External
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1. DESCRIPTION:

This document is intended to provide guidance to Principal Investigator (PI) and/or designated faculty for minors participating in university-sponsored function of laboratory research. Due to their relative lack of experience with hazard recognition in a laboratory environment, restrictions are placed on minors working in laboratories to help ensure a safe research experience. These requirements and restrictions apply regardless of whether the minor participate as a volunteer or employee at the university.

Contact EHRS via ehrschem@temple.edu for questions on minors in research operations.

2. DEFINTIONS:

2.1 Minor: A person under 18 years of age who is not enrolled in a degree program at Temple University. This document applies whether the minor is employed or volunteering to work.

2.2 Laboratory: A laboratory is a research or clinical setting where scientific research or instruction is conducted. This often includes working with or near hazardous materials (e.g., hazardous chemicals, biohazardous agents, radioisotopes, etc.) and/or physical safety hazards (e.g., lasers, moving machinery parts, extreme temperature, electrical apparatus, etc.)

2.3 Restricted Activities: Restricted activities are those experiments and/or tasks that involve hazardous materials and/or hazardous operations that are prohibited from use and/or require additional review, approvals, and controls. Refer to section 6 for a listing of restricted activities. Additional activities may be designated as prohibited based on EHRS review and assessment of proposed research activities involving minors.

3. SUPERVISION

The Principal Investigator (PI) and/or designated faculty member has responsibility for health and safety of minors working under their supervision in their laboratory(s) and adherence to all applicable policies and procedures. This also includes the provision for and enforcement of

correct use of engineering controls, work practices and personal protective equipment (PPE).

The PI/designated faculty member may delegate daily supervision to trained and knowledgeable laboratory personnel. However, the PI/faculty member retains responsibility.

A minor may only work in laboratories under direct supervision by the PI or designated laboratory personnel. Minors are not permitted to be alone in the lab. For this reason, minors are not permitted to have their own building and laboratory access.

4. OBSERVATION-ONLY VISITS

Minors not taking part in a university-approved visit or volunteer role are not permitted within research settings. Research settings must never be used as a substitute for childcare options due to the nature of risk. Among other things, this prohibition applies to instances when an employee office is inside a laboratory space. Minors participating as "observation-only" participants are not allowed to perform tasks in research facilities. An example of an observation-only visit is when high school students tour a laboratory.

4.1. Approval Process

Anyone wishing to bring a minor into research facilities for an acceptable reason **must:**

4.1.1. Seek approval per their department's procedures.
4.1.2. Refer to TU Ethics & Compliance-Minors on Campus. Specific requirements regarding program registration, code of conduct, background screening, and reporting requirements apply to minors working or volunteering at the university.

NOTE: Observation-Only visits do not require EHRS notification.

4.2. Personal protective equipment (PPE) Requirements

Minors **must** be provided with appropriate personal protective equipment (PPE) as needed based on work activity underway in the laboratory. At a minimum, safety glasses, long pants and closed-toe shoes **must** be worn.

4.3. Training Requirements

Observation only minors **must** receive a brief discussion of potential hazards that may be encountered in the laboratory during their visit and procedures to follow in the event of an emergency.

5. MINORS PERFORMING RESEARCH ACTIVTIES (VOULNTEER or EMPLOYED)

5.1. Approval Process

Anyone wishing to bring a minor into research facilities for an acceptable reason **must:**

5.1.1. Register with Temple University Ethics and Compliance Office. All programs and activities involving minors at Temple University must be registered using the Minors on Campus registration system. Registration must be completed **at least 60 days** prior to the first scheduled date of participation by minors.

5.1.2. Review CHE087-RSG-Minors in Research Laboratories. Section 6 of the document identifies hazardous materials and/or activities that are restricted.

5.1.3. Instruct all participating students to complete EHRS **Initial Safety Training for Researchers and any laboratory-specific training required by the PI.** All training must be completed by each minor prior to using or being exposed to any hazardous materials or operations. Additional training courses may be deemed necessary by the minors' supervisor and/or EHRS.

5.1.4. EHRS will review the information submitted in the registration and contact the PI if additional information, documentation (SOPs), and/or controls are required prior to the minor beginning work. EHRS may conduct a brief visit of the lab prior to the minor beginning work.

5.1.5. EHRS will notify the PI once the EHRS review has been completed. Minors are prohibited from working in the laboratory until the PI receives notification from EHRS.

NOTE: EHRS may delay/deny the proposed research activity if the requesting PI and associated labs have prior compliance issues or failure adhering to TU/EHRS policies and procedures.

5.2. General Requirements

5.2.1. Review these requirements for Minors in Research Laboratories and discuss the requirements with all minors that may be working in the laboratory.

5.2.2. Provide and document hazard specific training with the minor.

5.2.3. Provide personal protective equipment, specific for any hazard, with instructions on proper use and disposal.

5.2.4. Ensure the minor is always supervised while in the laboratory and never left alone. The minor is not permitted to work alone in the laboratory.

5.2.5. Ensure the laboratory is in full compliance with all applicable university safety policies and regulations.

5.3. Personal protective equipment (PPE) Requirements

Minors **must** be provided with appropriate personal protective equipment (PPE) as needed based on work activity underway in the laboratory. At a minimum, safety glasses, long pants and closed-toe shoes **must** be worn.

5.4. Training Requirements

Initial Safety Training for Researchers must be completed by each minor prior to using or being exposed to any hazardous materials or operations. Additional training courses may be deemed necessary by the minors' supervisor and/or EHRS.

5.5. Laboratory-Specific Training

Lab-specific training provided by the Principal Investigator (PI) **must** cover necessary work practices, procedures, and policies to ensure that minors are protected from all potentially hazardous chemicals, biological pathogens and dangerous equipment used in the laboratory. Training on emergency procedures must also be included.

6. RESTRCITED ACTIVITIES

The following tables identifies work restrictions for minors participating in research activities.

WORK RESTRCTIONS FOR MINORS PARTICPATING IN RESEARCH ACTVITIES	
HAZARDS	**RESTRCITIONS**
Chemicals	• Minors are not allowed to use or be exposed to any hazardous substance which means a contaminant, substance, mixture of substances that is toxic, corrosive, an irritant, a strong sensitizer, or highly flammable or which generates pressure through decomposition, heat, or other means if the

	substance or mixture of substances is capable of causing substantial personal injury, impairment, or substantial illness through absorption, inhalation, or personal contact. • Substances, as described above, would be designated on a Safety Data Sheet (SDS) with the signal word "DANGER."
Biological Materials	• Minors are not permitted to enter the BSL3 facility. • Minors are not allowed to handle live pathogenic microbial agents and infectious materials that require BSL2 or higher laboratory containment. (Infectious materials include, but not limited to materials of human or non-human primate origin, as well as animals and animal products that are known to be infected or contain pathogenic microbial agents that require BSL2 or higher laboratory containment.) • Minors are not allowed to handle toxins of biological origin. • Handling of pathogenic microbial agents, infectious materials, or biological toxins that are attenuated or have been inactivated are evaluated in case-by-case basis. • Observation of or being present in areas where activities with live pathogenic microbial agents, infectious materials, or biological toxins are performed are evaluated in case-by-case basis.
Controlled Substances	• Minors cannot work in labs where controlled substances are accessible and/or in-use.
Radioactive Materials	• Minors are not allowed to handle, receive an exposure from or have access to radioactive materials, nor operate or receive an exposure from x-ray producing equipment.
Lasers	• Minors are not allowed to be assigned to activities involving calls 3B or 4 lasers.
Respiratory Use	• Minors are not allowed to work in areas or assigned tasks that require respiratory protection:
Equipment Use	Minors are not allowed to be assigned work task that involves the following types of equipment: • Powered industrial trucks such as forklifts, powered pallet jacks and hoists. • Powered equipment or processes that could cause fatalities, amputations, burns, electrocution, or severe injuries such as pug mills, lathes, welding, and high voltage equipment. • Use of powered hand tools must be done under direct supervision. • Energized Equipment High Voltage

7. REFERENCES

7.1. Temple University-Ethics and Compliance Office-Protecting Minors on Campus
7.2. Temple University-Environmental Health & Radiation Safety (EHRS)