**Dr. Monroy’s Lab Student/Employee Training Checklist**

All training documents are located at <http://www2.nau.edu/~fpm/>

**Student/Employee Name (& initials):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Supervisor Name (& initials):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PURPOSE: To provide standardized training for all laboratory workers at Dr. F. Monroy’s Lab at Northern Arizona University.**

1. *Student/Employee and supervisors are both responsible for implementing this training checklist.*
2. *Students/Employee are* ***not allowed to do lab work*** *without approved training.*
3. *Retraining is recommended if a student has not used an instrument or work area for several months.*

**INSTRUCTIONS: Student/**Employees sign their initials on every line item. Supervisors sign their initials in boxes and DATE each main topic (or page).

**REQUIRED BASICS 1:** This training is required before lab personnel can enter the lab without supervision.

1. *Immediate supervisors are expected to conduct the majority of BASICS 1 training for a new student/employee.*
2. *Complete this training in the first week of employment.*

ATTITUDE Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_FM Lab is a team environment. Our lab is a professional facility shared by multiple labs.

\_\_**Individual accountability: if you break something or forget to clean up after yourself, take responsibility, respond as needed, and communicate with your coworkers. Honest mistakes are valuable learning experiences.**

\_\_Respect the shared workspace. Positive attitude is essential.

\_\_Stay on top of your individual maintenance duties. It is not acceptable to treat lab maintenance as “someone else’s problem”.

\_\_Be prepared to help lab workers and office staff when volunteers are needed.

\_\_Focus on your work.

\_\_Be realistic about planning time.

WORKPLACE ETIQUETTE

\_\_FM Lab needs to be a productive environment where people can work without being distracted.

\_\_Minimize loud & distracting conversations.

\_\_The radio volume needs to remain low, unless ALL coworkers in the lab agree on the setting. Every person has veto power and may turn off the radio, no questions asked.

COMMUNICATION

\_\_Communication is essential in our workplace.

\_\_When planning a large or extended experiment, alert the wider lab group of projected needs for equipment & reagents.

\_\_Reserve machines with a taped note. Some instruments use online scheduling (mggen.nau.edu).

\_\_Notify others when you remove their samples from an instrument (via note on instrument or email).

\_\_Inform others if you break something or need help fixing a mistake.

\_\_If a problem arises with a specific individual, please address them directly. If the problem continues, seek the help of your supervisor or the laboratory manager.

\_\_ Investigate machine alarms and unfamiliar noises.

\_\_Contact Primary/Secondary people quickly with machine problems.

\_\_Label EVERYTHING with content, date, initials. Please write legibly. Make temporary labels easy to remove (roll end of tape).

LAB ANNOUNCEMENTS

\_\_Email is used to distribute announcements across the wider FM Lab group. Plan time for work-related email, and choose a single email address.

\_\_**Read email instructions carefully.** Make sure you understand the email content. If not, just ask.

\_\_Know when to “REPLY ALL” vs. when not

\_\_Some management emails request employees to perform an action and afterwards contact their supervisor. Follow through with this process.

CLEANING

\_\_Clean up after yourself: leave a workstation cleaner than it was when you arrived! Success requires that each person plans time for cleanup & organization. Double check ALL work areas that you used.

\_\_If desired, use 70% ethanol to clean benchtops before work. DO NOT use DNA Away except when needed (Clean Room, PCR hoods, and sensitive procedures on the benchtop).

\_\_Keep sinks clean. Put tools back where they belong. Discard highly odorous food waste in the parking lot dumpster.

\_\_**Lab cleanup: see Lab Coordinator and assignment schedule.**

COMPUTER ETIQUETTE

\_\_The computer room is the ONLY place where you may eat lunch and share any open computer station.

\_\_Computers belong to NAU, not to students/employees.

\_\_Most work stations are common use; please respect Graduate student space.

\_\_Certain computer workstations are reserved for specific students/employees: grad students).

\_\_Computers are for work use. Priority list:

1. Data analysis and project goals
2. Preparing posters
3. Emails related to work
4. Homework for NAU courses

**NOTE: Minimize personal use on Facebook, YouTube, photos, etc.**

\_\_DO NOT LOCK common use computers for more than 5 minutes. Logoff when you are finished with a computer.

\_\_If a specific computer is needed for long-term data analysis, first clear this with your supervisor and Dr. Monroy, and then reserve the computer with a note.

\_\_Contact supervisor with computer & software problems.

SECURITY

\_\_Wettaw Building: DO NOT prop doors open after hours or let unknown people inside the building.

\_\_Report suspicious activity outside or inside Lab/building to NAUPD.

\_\_Please insure that doors at Wettaw and lab close behind you.

\_\_In/Around lab Students/employees are encouraged to question/intercept unfamiliar people that have no escort. Be polite.

\_\_Building keys provide access to main lab and computer room only.

\_\_New undergrads are on a 30-day probation, and may only access the lab during normal working hours (8am-5pm). After this period, undergrad researchers may be granted full access (24hrs/7days) at the discretion of F. Monroy.

\_\_Allowing another person through doors leading to the lab hallway or lab (“tailgating”) is only appropriate if: 1) the additional person has permission to be in the lab, 2) the additional person is familiar/known to the one giving access.

\_\_Visitors to the main lab (anyone not NAU related, such as NAU Facilities personnel) are required to enter their name and contact information into the Visitor Log.

LAB PPE (Personal Protective Equipment)

\_\_PPE is required for main lab. DO NOT CROSS tape line without required PPE.

\_\_Closed-toed shoes. Open-top shoes allowed only with nonhazardous work (i.e., Clean Room, PCR hoods, 7900s).

\_\_Lab coats (okay to order the right size if needed, monthly laundering, use of disposable coats).

\_\_Disposable gloves (see GLOVES section).

\_\_Safety glasses required for handling dry chemicals and projectiles.

\_\_Safety glasses required when using magnetic stir plate, hotplates, and work at the pH meter, microbiology bench, or agarose gel bench

\_\_Use safety goggles/face shield for hazardous liquid reagents OR preparing large amounts of liquid reagents.

\_\_Shorts/dresses are allowed at lab workstations, except when working with hazardous chemicals or pathogen cultures in the BSL2 area.

GLOVES

\_\_Use Sterling Nitrile grey gloves for most applications, since they are the least expensive (7 cents/glove).

\_\_Use Latex if desired (9 cents/glove).

\_\_Use Purple Nitrile if greater protection is needed (10 cents/glove).

\_\_Do not use Extended Cuff Purple Nitrile or Synetron Latex except for BSL2 work. These gloves are too costly for general lab work.

\_\_Use Silver Shield gloves for handling chloroform and phenol.

\_\_Wear autoclave gauntlets over work gloves for hot items.

\_\_Wear cryogloves over work gloves for handling liquid nitrogen.

\_\_Other chemicals or applications may require specialized gloves: discuss with supervisor and order if needed.

\_\_Change gloves as needed.

\_\_Save uncontaminated gloves for other purposes (cleaning, setting up agarose gels, etc.).

LAB SAFETY

\_\_ **Right-to-Know Station**: **F. Monroy Laboratory Manual** (read & understand)

\_\_SIGNS on doors (read & understand)

\_\_Risk Group 2 pathogens (BSL2 agents) are cultured and stored in the main lab. Risk Group 2 pathogens are generally not life-threatening to healthy individuals, and are treatable with antibiotics.

\_\_Fire Extinguishes

\_\_Chemical spill kit location

\_\_Emergency eyewash stations (operation, testing schedule)

\_\_Emergency showers (operation, testing schedule)

\_\_After responding to a chemical spill or using an emergency eyewash/shower station, contact your supervisor and assistant lab director.

\_\_Wash hands before leaving lab.

CHEMICAL SAFETY

\_\_**MSDS Station**: read MSDS on 5 commonly used hazardous reagents (HCl, NaOH, ethanol, formamide, acetic acid, etc.).

\_\_NAU training & paperwork is required for certain chemicals.

\_\_Update MSDS notebooks when ordering new chemicals and kits, and alert lab manager.

\_\_Chemicals are separated according to specific hazard. Check these storage locations for our most commonly used hazardous chemicals:

1. Dry chemical storage cabinet (acids, bases, oxidizers, nonhazardous, media, some liquids)
2. Cabinets under fume hoods (liquid flammables & acids, liquid corrosives, and liquid organics)
3. Refrigerated/frozen storage (many dry chemicals & antibiotics)

\_\_Individual bottles of ethanol and isopropanol <1L can be stored on the lab benches. Larger volumes must be stored in a flammables cabinet.

FUME HOODS (tour only, advance training required before use)

\_\_Hazardous chemicals in use.

\_\_Storage in cabinets under hoods.

\_\_Mixed waste bottles inside for temporary storage.

WASTE DISPOSAL (tour only, advance training required)

\_\_Hazardous categories (flammables, oxidizers, corrosives, toxins).

\_\_Satellite waste storage areas in Lab:

\_\_Fume hoods: multiple barrels

\_\_Ethanol/isopropanol: 1 bottle by sink

\_\_Qiagen Waste: 1 bottle by sink

\_\_Non-RCRA waste locations

1. Blue barrel by agarose bench contains gels with SybrSafe, Hi-Di formamide

SAFETY TOUR (tour only, advance training required later)

\_\_Cell culture Room

\_\_PCR Hoods

\_\_NanoDrop

\_\_Microbiology bench

\_\_BSL2 area & biohazard freezers

\_\_Freezer Farm, backup power, cryosafety, Lq N2

\_\_Qiagen bench

\_\_PCR machines, Post-PCR bench, Agarose bench

\_\_Autoclave room

LABORATORY WATER

\_\_Laboratory DI supply is any spigot labeled “DI” or “PW” has the same quality as E-Pure.

\_\_Carboys only used for storage or backup.

\_\_Domestic supply is only for cleaning.

\_\_Molecular Grade water is available for PCR & dilutions.

ORDERING

\_\_This is **everyone’s responsibility.**

\_\_During lab work, PLAN TO MAKE A LIST of reagents that are running low, AND PLAN TIME to place orders after lab work (carry a notepad).

\_\_First, check to see if a large stash of the item exists in the lab. If you are unsure, ask other people for advice.

\_\_Communicate with Lab coordinator to place orders.

\_\_Order appropriate quantities! Double-check definition of pack vs case, etc. Update useful descriptions to the order to help office staff.

\_\_ Avoid rush orders. For ALL rush orders, send an email alert to Lab coordinator and F. Monroy.

\_\_Track purchases of hazardous chemicals with lab coordinator.

GLASSWARE

\_\_Store at eye level or below.

\_\_Rinse immediately after use, especially bacterial media. Wash your own glassware on the same day you used it.

\_\_Return dry glassware to storage cabinet the next day (set up a reminder for yourself!)

\_\_Save empty bottles for waste storage (nonhazardous chemicals only). Wash bottles first. For ethanol and isopropanol: evaporate trace quantities in fume hoods (no need to wash bottles).

\_\_Broken glass bins are for broken glass only (no serological pipettes, plastics, gloves, etc.).

Trash & Recycling

\_\_F. Monroy Lab must take out its own trash (because access is restricted).

\_\_Do not overflow bins. **Lids must remain closed**, to allow rapid access to circuit breaker panels.

\_\_Keep the trash bins clean and clean up any spills you make (especially in computer room). Do not place perishable or highly odorous food items in the large hallway bin.

\_\_Students of the week are responsible for bundling trash & recycling and moving it to the parking lot dumpsters several times per week (daily if needed). If a student neglects this job, trash duty falls onto their supervisor.

\_\_Large quantities of trash or recycling materials must be taken to the dumpster by the responsible person (and NOT left in the hallway).

\_\_RECYCLING STORAGE LOCATIONS:

1) Nonhazardous plastics: round bin on wheels (pipette tip boxes, soap and bleach bottles that have been rinsed).

2) Batteries (by electronic pipettes).

3) Cardboard & paper in hallway bins. All boxes must be flattened first. Large boxes can be stacked neatly in the autoclave room.

CELL PHONES/TEXTING

\_\_ NO GLOVES! Only handle phones and iPods with bare hands.

\_\_Turn off phone ringers during work – switch to vibrate.

\_\_No phoning or texting during experiments; avoid distractions.

REPORTING HOURS (for part-time employees)

\_\_Keep track of hours logged in your lab notebook (or Excel file).

\_\_Report only the hours you work. Social time does not count! Fraudulent reporting is not acceptable.

\_\_Check reportable hours with your supervisor. Certain undergraduate meetings are not eligible for pay, because students receive credit hours.

\_\_Enter online time by Thursday 5pm (supervisors sign online time Friday afternoon).

REQUIRED NAU TRAINING (**separate course material**)

\_\_Basic Biosafety

\_\_Chemical Hygiene

\_\_NAU CERT program (Conduct, Ethics, Reporting, Transparency) online at <http://nau.edu/Comptroller/Conflict-of-Interest/>

When in doubt, ASK

\_\_Experienced lab-mates

\_\_Supervisor

**I have read, understand, and have been fully trained on the above items. I understand that access privileges to the F. Monroy laboratory depend on successfully adhering to this checklist.**

**Employee/Student Date**

**Supervisor Date**

**NOTE: Any failure to follow the Training Checklist (whether accidental or purposeful), accompanied by a failure of the responsible individuals to hold themselves accountable or admit a mistake, will result in a required meeting with the assistant lab director and immediate supervisor**