

**The Department of Biological Sciences
Safety Program**

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The Department of Biological Sciences Safety Program.

Management practices for Safety in the Department are extremely difficult because of the diversity of research activities, teaching activities and the physical structure of the current facilities.

To facilitate organization of a practical safety policy the Department Head will maintain a list of Research and Teaching laboratories within the Department Office. The document will include the following items:

- i) Building and room Number
- ii) Designated use (Research, Teaching or combination)
- iii) Major discipline
- iv) Supervisor with work & home contact telephone numbers for emergency purposes
- v) Indication of presence of chemicals, MSDS, Instrumentation and associated manuals.

Updates of pertinent information will be carried out when necessary.

Each designated room will organize and maintain its own safety practices. The designated supervisor being ultimately responsible for implementation and maintenance of these practices. This individual will answer directly to the Department Head. Persons in charge will be required to implement safety and laboratory training practices for any individual working in the area and must be able to provide proof of said practices. Prior to individuals working in any area the individual must sign a form (provided by the Department) saying they are aware of all safety procedures relevant to the area and have been given adequate training by the supervisor to work in the laboratory. All laboratory classes will have safety lecture during the first class period. All students will be required to sign a form indicating that they have been given the relevant safety information. Documentation of the safety advisory will be kept on file in the Department Office.

All laboratories will have inventories of chemicals and MSDS available for inspection. In addition a list of instrument, manuals and training practices will also be available for inspection in the laboratories. Certain instruments and safety items require routine maintenance and testing. It is the responsibility of the supervisor to determine the requirement and maintain logs of such equipment and practices. Hard copies of MSDS's can be obtained by accessing chemical company web sites (Technical data) or by photocopying files from Camille Moniotte. The department will have a comprehensive electronic MSDS file from which faculty can download and print MSDS's.

All supervisors will be required to complete and sign a Safety inspection Report monthly. On signing the document the supervisor assumes responsibility for the accuracy of the information and any actions necessary to be compliant with the department safety policy.

All documents will be maintained on file in the Departmental Offices.

All Faculty and Staff will be required to read and be familiar and assume responsibility for the policies. All individuals will be required to sign documentation indicating they are aware of the policies and their individual responsibilities. While not mandated it is highly recommended that each Laboratory develop its own Safety/Training manual.

Further information regarding safety can be acquired online at:

www.selu.edu/Administration/Depts/Safety

Specific information regarding hazardous material storage etc. may be obtained by accessing the online safety manual, Part I. In this section look for Hazardous materials.

Persons to contact regarding Safety Issues:

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Camille Moniotte Holmes (Safety Officer)
Southeastern Hall, Room 210
Tel. (985) 549-2157
e-mail: camille@selu.edu

Fire Extinguishers:
Patricia Martinez (agent for Department Head)
Room 205
Meade Hall
(985) 549-3740

Laboratory Hoods:
Mr. Jim Gericke
Academic Equipment Service
(985) 549-2164

Other Emergencies: contact
University Police
985 549-2222

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The Department of Biological Sciences Facilities and Supervisors:
 (Telephone area codes are 985 unless designated *) This information will be kept in the Department
 Office and the University Police station.

BIOLOGY BUILDING

Room	Use	Responsibility	Discipline	Phone Numbers
109	Instrumentation Lab			
111	Teaching Laboratory		Parasit/Invert/ Entom	
119, A,B,C	Electron Microscopy	Norton		626-4481
120	Teaching Laboratory		Immun/Virol/Histol	
121	Teaching Laboratory	Childers	Upper Div. Microbiology	* 225 695-3366
130	Vivarium	Font	Parasitology/Invertebrate	386-2193
151	Office/Lab	Bond	Microbiology	839-5774
152	Teaching Laboratory	Campo	General Biology	747-8531
159	Preparation Room	Campo	General Biology	747-8531
160	Teaching Laboratory	Campo	General Biology	747-8531
161	Research Laboratory	Font	Parasitology/Invertebrate	386-2193
208	Environmental Room			
209	Radiation Laboratory			
210	Computer Laboratory			
211	Teaching Laboratory		Mol. Biol/ Genetics/Dev. Biol.	
212	Teaching Laboratory		Freshman biology	
214	Autoclave/Dishwash			
220	Teaching Laboratory		Freshman biology	
221	Teaching Laboratory		Freshman biology	
223	Preparation Room	Campo	Freshman biology	
227	Research Laboratory	Dardis		
229	Teaching/Laboratory	Howard	Microbiology	542-5984
230	Walk in Incubator	Childers	Microbiology	* 225 695-3366
231	Preparation Lab	Childers	Microbiology	* 225 695-3366
232	Research Lab	Childers	Microbiology	* 225 695-3366
237	Research Lab	White	Phylogenetics	345-9130
238	Office/lab	Childers	Microbiology	*225 695-3366
241	Electron Microscopy	Norton	Electron Microscopy	626-4481
242	Research Lab	Howard	Microbiology	542-5984

243	Teaching Lab	Childers	Microbiology	*225 695-3366
307	C A Preparation			
308	Research Laboratory	Piller		
309	Teaching laboratory		Comparative Anatomy	
310	Research Laboratory			
311	Research Laboratory	Fontenot		
312	Research Laboratory			
313	Research Laboratory	Stiller		
314	Research Laboratory			
315	Research Laboratory	Nelson /Bancroft	Microbiology	
321	Research Laboratory			
322	Teaching Laboratory		Botany	
323	Research Laboratory	O'Reilly	Neurobiology	
324	Research Laboratory	Shaffer		
325	Research Laboratory	Keddy		
327	Research Laboratory	Childers	Microbiology	
407	Preparation Room		Anatomy & Physiology	
408	Research Laboratory	Jackson	Microbiology	
409	Teaching Laboratory		Anatomy & Physiology	
410	Teaching Laboratory		Neurobiology/Plant Physiology	
411	Research Laboratory	Piller	Aquatic Animals	
412	Research Laboratory		Plant Growth	
418	Research Laboratory	Shaffer	Plant Growth	
419	Research Laboratory	Miller	Plant Genetics	
420	Research Laboratory	Shockett	Immunology	

MEADE HALL

Room	Use	Responsibility	Discipline	Phone Numbers
104	Research Lab			878-8695
105	Lab	Greene	Computer	892-3549
107-107B	Research Lab/Offices	Shaffer	Wetlands Restoration	542-1632
204	Research Lab	Font	Parasitology/Invertebrate	386-2193

214	Storage			
108C	Class/ Lab		Technology	
111	Class /Lab	Shaffer	Statistics	542-1632

SCIENCE BUILDING ANNEX:

Room	Use	Responsibility	Discipline	Phone Numbers
108A	Vertebrate Museum	Stouffer		878-8695
110	Teaching	Stouffer	Comparative Anatomy	878-8695
115	Research/Teaching	Miller	Phylogeny	549-5556

HORTICULTURE CENTER

Room	Use	Responsibility	Discipline	Phone Numbers
101	Lab	Guedry		549-5172
110	Glass GH	Guedry		549-5172
111	Glass GH	Guedry		549-5172
112	Plastic GH	Guedry		549-5172
113	Plastic GH	Guedry		549-5172
114	Plastic GH	Guedry		549-5172

Microbiology Prep Room Utilization

The following are guidelines for use of the Microbiology Prep Room (Biology 231) and adjacent labs used for instruction. Please share these with anyone under your supervision who may have an occasion to use these facilities.

- I. **Any undergraduate or graduate student needs to speak with me before working in the Microbiology Prep Room (Biology 212) and adjacent 206.** For safety reasons, I need to know who is working in the lab and give them a general orientation. This includes students currently working in the lab. Students will need to sign a list detailing the following info: *name, faculty advisor, date starting work in lab*. This list will be updated each semester. If students cannot adhere to these lab guidelines, they will not be allowed to use the laboratory.
- II. **Any media, chemicals or other consumables in the prep room, unless otherwise designated, are for teaching purposes.** Please ask if you need to borrow something.
- III. **Please keep common work areas/equipment (e.g., balance, benches) clean.**
- IV. **All Biohazard waste should be disposed of properly by the research lab generating the waste.** Teaching support staff will **NOT** dispose/autoclave waste generated by research labs, unless it has been specifically arranged on a case by case basis with me. I will be glad to speak with any of your lab personnel if they are unfamiliar with protocols for disposal of biohazard waste.
- V. **Distilled water** is available from the Micro Prep Room (212). You can have somebody from your lab bring a carboy by and we can fill it up, or show them how to operate the distiller.
- VI. **A central computer will be located in the Micro Prep Room in the near future containing an MSDS database as well as an inventory of chemicals in the laboratory.**
- VII. **Research materials and classroom materials will be stored and inventoried separately.**

Form b (to be completed monthly and maintained on file in the laboratory)

BIOLOGICAL SCIENCES SAFETY INSPECTION REPORT

Building _____

Floor _____ Room _____

Teaching _____ Research _____ Both _____ (please check)

Person in charge _____ Contact # Work _____ Home _____

Personal Practices	Yes	No	N/A
Is protective clothing required?			
Is eye protection required & used?			
Are food and beverages stored or consumed?			
Are no smoking signs posted?			
Is eye protection equipment available?			
Are eye protection areas identified?			
Are aprons, gloves provided where required?			

Operational Practices	Yes	No	N/A
Are Safety regulations available?			
Are chemical inventory maintained & available?			
Are MSDS on file & available?			
Are carcinogens and Hazardous materials identified and properly stored?			
Are chemicals properly shelved?			
Are rooms locked when not in use?			
Are containers for special waste provide and identified (Biohazards, Broken glass etc)			
Are squeeze bulbs or similar devices used for pipeting?			
Are chemicals properly labeled and stored?			
Are approved containers used for storage of flammable and hazardous materials?			
Are storage areas organized and not hazardous?			
Are incompatible materials stored separately?			
Are there more than 10 gallons of flammable liquids stored outside of flammable storage cabinets?			
Are flammable storage cabinets labeled "FLAMMABLE"			
Are dry ice and cryogenic gases stored in well ventilated areas?			
Are peroxidizable chemicals labeled as to opening date, tested and disposed of within six months?			
Are procedures for the disposal of biological hazards known and followed by all personnel?			
Are biohazard-contaminated areas immediately and routinely disinfected?			

Are laminar flow hoods and biological safety cabinets			
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inspected annually?			
Are all exits maintained to provide free and unobstructed egress? (no locks or fasteners to prevent free escape)			
Are only knowledgeable individuals operating autoclaves?			
Are aisles and passageways clear of obstructions?			

Who is in charge of all hazardous waste/

What procedures are used for the disposal of sharp objects (not glass)

EQUIPMENT	YES	NO	N/A
Do you have an inventory of equipment?			
Do you possess equipment manuals?			
Do you have a written training scheme for the use of equipment?			
Do fume hoods operate safely (85 fpm with sash open)			
Were hoods and safety cabinets certified within the year?			
Are compressed gas cylinders labeled & secure?			
Do empty or reserve cylinders have caps on?			
Are electrical receptors and plugs grounded?			
Do electrical appliances have UL approval?			
Are all electrical installations, repairs and modifications made by qualified personnel?			
Is wiring in good condition?			
Are circuit breakers and cutoff switches easily accessible?			
Are gas burners in good condition & periodically checked?			
Are equipment use and maintenance logs available?			

Emergency Protection	YES	NO	N/A
Are fire extinguishers available and clearly visible?			
Are fire blankets available and clearly visible?			
Are Safety/Eye wash stations accessible & in good order?			
Have personnel practiced using the eyewash station?			
Do personnel have quick access to eye wash stations?			
Are deluge showers available to personnel?			
Are deluge showers checked for operation frequently?			
Are fire alarm pull stations clearly identified?			
Are portable fire extinguishers maintained and kept in clearly identifiable designated locations?			
Are uses of fire extinguishers clearly marked?			
Are fire extinguishers available in areas were flammable and combustible materials are stored?			
Are personnel aware of procedures to be used in a fire or other emergency?			
Are exits and escape routes clearly marked?			
Are emergency Telephone numbers prominently posted on telephones?			

n.b.

Fire Extinguishers- The laboratory supervisors sole responsibility is to check that they are present and in the correct location (monthly). Quarterly inspections of fire extinguishers are carried out by the building supervisor (Dr. Norton) or his designated agent. Annual inspections are the responsibility of the University Safety Officer.

Laboratory Hoods- The laboratory supervisors sole responsibility is to check that they have been checked monthly and that an annual inspection has been performed. Mr. Jim Gerike of Academic Equipment Services will be responsible for these checks and any service required.

Form c (to be completed monthly and returned to the Department Office)

Laboratory Safety Summary

Building _____

Room _____

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Chemical Inventories are available	_____	_____	_____
Material Safety Data Sheets available	_____	_____	_____
Instrument Inventories available	_____	_____	_____
Instrument manuals available	_____	_____	_____
Monthly Inspection Reports available	_____	_____	_____
Documentation of training available	_____	_____	_____
Chemicals stored properly	_____	_____	_____
Hoods, Eyewash, Showers checked	_____	_____	_____

Laboratory Supervisor Signature: _____

Date: _____

LABORATORY SAFETY POLICY (Post in Laboratory)

FOOD AND DRINK- Food and drink are **never allowed** in a laboratory area, even when the class is only a lecture course. Your instructor will provide any necessary biological material for experimentation. Students are **not allowed** to bring into a laboratory environment any food or drink (for any reason). Students who bring food or drink into the laboratory can be removed from the class roster or have their grade reduced. **Smoking** is always forbidden inside the buildings.

CONDITION OF WORK AREA- You should maintain a work area that is free of un-necessary equipment. Personal articles should be placed in an area that is safe from contamination. Laboratories that utilize living materials must be disinfected before and after each lab activity. There is disinfectant available to wipe down your workstation (in laboratories that utilize living materials). Disinfectant is located either at your workstation or near the sink area. All laboratory spillage must be cleaned up immediately. Notify authorized personnel and students as to the spillage. In the case of bacterial spills, cover the area with a paper towel and pour disinfectant upon the area. In the case of chemical spills, notify authorized personnel for removal. Paper towels are available near the sinks or under your work station. Use them as necessary. The sinks are for laboratory experiments and waste, not trash. Students who fail to maintain a clean work area or put trash into the sink can be removed from the class roster or have their grade reduced.

DISPOSAL OF WASTE MATERIALS- Waste, such as (hand wash) paper towels, loose-leaf paper and similar normal trash, is placed in the trash can near the sink areas. Biohazardous waste, such as chemicals, stains and any microbiologically contaminated materials **must** be placed in the biohazardous containers or on the **discard** shelving/carts. Microbiologically contaminated paper towels or pipettes **must** be placed into the biohazardous containers. Glassware or other similar items are placed in the discard area. Materials such as cotton swabs that contain bodily fluids are considered biohazardous and must be placed into the biohazardous containers. Broken glass must be placed into approved containers.

FIRE is the most serious safety issue in a microbiology laboratory environment. In case of fire, notify authorized personnel and students. Evacuate the laboratory area and sound the fire alarm.

FIRE EXTINGUISHERS- Fire extinguishers are located by each exit, either inside the door or just outside the door. Affixed labels will direct personnel to the appropriate areas. Fire extinguishers contain 8-12 seconds of chemical flame extinguisher. Pull pin and direct extinguisher at base of fire. Do not point or spray fire extinguishers on living tissue.

FIRE SAFETY- In the case of a small fire, and with the help of a volunteer, extinguish the fire if it can be contained within 10 seconds. Pull out safety pin and point nozzle at base of fire; then pull trigger to discharge the extinguisher. The lab's extinguishers are an all purpose type. In the case of a large fire, evacuate the building according to the evacuation instructions located by the exit door. Sound the alarm and notify fire personnel as soon as possible.

FIRE ON A PERSON- Persons catching fire should be placed on the ground/floor and the fire "snuffed" out. Do not allow a person to run while on fire. Fire safety blankets are located in red containers in each laboratory and may be utilized to put out the fire. Do not completely cover or roll the person with the fire blanket as flames and gasses may further endanger the persons health. Never use a Carbon Dioxide or other similar extinguisher on living tissue-it may cause frostbite (unless it is a last resort to save the person's life). Safety showers in the main hallways may also be utilized to extinguish a fire. Place the injured under the shower and pull the ring. The injured will be flooded with water.

THE LABORATORY AND FIRE SAFETY- Be aware of all open flames in use in the laboratory. Natural gas burns almost colorless and is hard to detect when burning. Be aware that the workbench behind you may have an operating burner. Do not wear loose, billowy clothing that may droop into the flame. Be aware of the proper method of lighting each type burner utilized during the laboratory activity. Be aware of any flammable chemicals that may also be utilized near an open flame. Hairspray and similar type hair products are often highly flammable. Do not utilize excessive amounts or allow to cover clothing as it may hasten the combustion of clothing. Student sterilized material may be red hot. Do not touch any red hot

materials or place near skin or clothing. Loose, long hair must be pinned or maintained in such a manner so as to minimize the fire danger. **DO NOT use latex gloves on the hands when using fire!**

EYE PROTECTION- Safety goggles are available and should be used whenever you are using stains or chemicals. If chemicals or bacteria are splashed into your eye, immediately go to the eye wash station located in the main hallway. Place your head over the station and press the lever. A flood of water will immediately begin to wash your eyes. Continue to wash eyes for a minimum of 15 minutes. After washing, notify authorized personnel for further treatment. You may be directed to the infirmary.

BODY PROTECTION- Lab aprons and latex gloves are available for all students who desire to use them. Lab aprons should be used at all times and gloves should be used whenever stains and/or chemicals are handled. If chemicals get onto the body or clothing area and constitute a health threat, immediately remove the affected clothing and/or rinse the body with water. If the area is large, go immediately to the safety shower located in the main hallway. Stand under the shower and pull the overhead ring. You will be immediately flooded with fresh water. After rinsing, remove affected clothing if still a threat and utilize a fire blanket for cover. Notify authorized personnel for further treatment. You may be directed to the infirmary. Powder free gloves are also available for those with documented evidence of allergic reactions to powdered gloves (must have allergist's note).

CLEANLINESS- You must consider your hands contaminated from each lab experiment whether true or not. Always wash your hands with the supplied disinfecting soap and fresh water. Wash your hands whenever you consider them contaminated and always before you leave the laboratory area. Do not place hands or any other potentially contaminated item into or around your mouth, eye or nose areas. Some biological stains utilized in the laboratory experiments will stain clothing or skin. Most clothing stains can be removed in the wash using bleach. Skin staining will wear off after a few washings or you may use a diluted concentration of bleach and water to blot the affected skin area. Do not use a concentrated bleach solution as it may injure delicate skin tissues. Usually a few washings with normal soaps and water is all that is required to remove stains from skin surfaces. Aprons are available for clothing protection and should be worn.

BACTERIAL SPILLS- If a bacterial culture is spilled, immediately place a paper towel onto the area and cover the towel with disinfectant. Notify authorized personnel of the spill. Allow to react for a minimum of 5 minutes and clean up area. If glass has been broken allow authorized personnel to clean up the spill.

CHEMICAL SPILLS- Inform the instructor immediately. Do nothing unless otherwise instructed.

EXPERIMENTS- Most, but not all, lab experiments are designed to be performed in one lab period. If it is required that you return outside normal lab hours to perform or check and experiment, do not come to the lab alone if you will be using fire or hazardous chemicals. Always bring someone with you and notify your instructor that you are in the lab. Again, do not work alone if you use hazardous chemicals or fire. Never mouth pipette lab experiments. Pipette aids are available for any pipetting needs. As there are many labs going on at one time, never touch another person's experiment. The Golden Rule applies here. Carefully label any experiments with your name and/or class number to alleviate any problems. Place your experiment only in designated areas. Experiments placed in other areas will be picked up and discarded by lab personnel. Do not put lab tape on glassware & test tubes.

LABORATORY CONDUCT- You should be courteous and exercise common sense when in the laboratory. Lab partners are utilized to enhance experiments and divide the work into manageable pieces. If you experience problems with your assigned lab partner (s), notify authorized personnel. Not everyone can get along and instructors will evaluate and remedy any problems that may arise. Outside persons, except as outlined in Experiments (above), are forbidden in the laboratory areas. Do not bring friends, offspring or relatives into the laboratory. University regulations designate who may be in class areas. Read your school handbook. Underage children are not allowed in university laboratories. Never bring children into a laboratory under any circumstances for any reason. There will be no practical joking, horseplay or any other rowdiness allowed in the laboratory areas. Endangerment or disrespect toward fellow students or other Southeastern Louisiana University personnel will result in disciplinary actions being taken. Cellular phones, pagers and any distracting electronic devices are prohibited in the laboratory areas. If you disturb the class you will be removed from the class roster and you may be subject to university discipline.

DISCLAIMER:

This safety policy is by no means complete and an absolute statement of safety to be followed. The items discussed are mostly common sense and are required by law. It is the intent of this policy to make the student aware of the dangers involved in using a university laboratory. Other situations may arise that are outside of the scope of this policy and will be addressed when the situation arises. The instructor will point out specific safety precautions to be particularly aware when necessary. **Always** ask if in doubt. If you have problems regarding safety that your instructor cannot remedy notify the Head of the Department of Biological Sciences.

