

## Microbiology BIOL- 215

### Laboratory Safety Agreement

In the interest of safety and accident-prevention, there are regulations to be followed by all credit students in designated science laboratory rooms at Carroll Community College. Faculty and staff members are authorized to deny the use of any laboratory to students who do not adhere to the regulations mentioned below or in instances when the safety of any of the student, staff or faculty member in the laboratory might be jeopardized.

Regulations for all science laboratories are as follows:

1. Lab experiments have been designed to minimize unnecessary exposure to any hazardous substances; however, it is not advisable for pregnant women or those with certain medical conditions to be exposed to any chemicals or microbes. A list of all chemicals, specimens, and/or microbes used in the laboratory is available on the [Lab Safety website](#). If you are pregnant, or you suspect, should become, or plan to become pregnant during the semester, or have any medical condition or concern, including but not limited to the following, immunocompromised system, seizures, epilepsy, severe allergies, it is your, the student's, responsibility to consult with your medical care provider regarding any medical issue associated with taking this lab and communicate accordingly with the Office of ADA/Disability Support Services, Room A101 so that reasonable accommodations can be determined.
2. For Security and First Aid call 8123 on any College phone or 410-386-8123 on a cell phone or non-College phone. For emergency medical care call 911 and then follow up by calling 8123 or 410-386-8123 so that Security personnel can direct emergency services to the correct location within the College.
3. Refer to the Safety/Security Guide that is posted in every room for College safety guidelines.
4. Proper attire must be worn at all times in all science labs. Long hair must be tied back. No loose or baggy clothes, or dangling jewelry is allowed. Jewelry may be secured with tape. Shoes must completely cover the foot with heels no higher than one inch. For all dry labs, students must wear crew neck shirts with sleeves to mid-biceps and shirt hem must be over the waistband of the trousers. Trousers must cover knees when seated without adjustments. Lab coats do not fulfill this requirement but must be worn in addition when instructed by the lab professor. Please refer to the course specific regulations for wet labs and/or dissections.
5. Cell phones must be turned off or left turned on in the vibration mode only. They should not be placed on the laboratory bench work station.
6. Consuming food and drinks, chewing gum, and applying cosmetics (including lotions and lip balms) are prohibited in the laboratories.
7. As directed by the lab professor, laboratory desks and floor aisle ways must be clear of extra books, clothing and other personal/extraneous items in order to avoid accidents.
8. Be organized. Maintain a clean, open work area free of anything except materials directly required for the exercise. Keep laboratory material/equipment away from edges of work surfaces and electrical cords from hanging below the surface of tables.
9. Equipment and/or chemicals should never be taken out of the lab unless authorized by your professor.
10. Many of the lab activities have students moving around the lab or involve moving objects. Be alert and aware of what's going on around you.
11. Be familiar with the location and the use of the following in your laboratory: e.g. broken glass receptacle, first-aid kit, emergency gas shut-off valves, fire blanket, closest fire alarm, fire extinguisher, eye wash, safety shower, spill kit, emergency telephone, and emergency exits and routes.
12. It is of utmost importance to know the rooms that are off-limits to the students. The students should not enter those prohibited areas.
13. **Be prepared.** Study the assigned exercise **before** you come to lab. Clarify instructions and safety protocols before starting lab exercise. Being familiar with the lab exercise prevents confusion and accidents. No unauthorized

experiments are to be performed. Students must follow the procedural instructions in the lab handout/manual unless modifications to the procedures have been announced by the laboratory professor, in which case the student must follow the professor's procedural instructions.

14. Bunsen burner outlets and/or hot plates should be turned off when not in use.
15. Lab professor must be notified immediately following an accident (even minor), breakage, spillage or potentially hazardous incident in the laboratory. Any spillage can be cleaned up with your professor's instructions. Early treatment can prevent long-term effects or further injury. Never touch any form of broken glass. Broken glass should be disposed of in the broken glass receptacle and only by College personnel.
16. To prevent possible transmission of blood-borne diseases, appropriate and approved gloves must be worn if assisting other students in accidents involving open wounds or blood flow.
17. Caution should be used when working with electrical equipment. Both high and low voltages present hazards.
18. Students must wash their hands with soap and water as instructed by faculty after a wet lab or dissection.
19. Student must clean work area in the method directed by your professor before leaving the lab.
20. Read all chemical labels carefully.
21. A chemical should never be tasted. Odors of certain chemicals or a chemical reaction can be determined by gently wafting some of the vapor towards the nose with a motion of hand.
22. Materials must be disposed of appropriately per the lab professor's instructions. Nothing should go down the drain unless specifically directed by the professor. Containers are available for waste chemicals.
23. Unused reagents should not be returned to the reagent stock bottle. One should make sure to take only what is actually needed out of the reagent bottle. Reagents must not be contaminated.
24. Treat chemicals/microbes/specimens with the respect that they deserve. Hazards can be found on Safety Data Sheets provided.

#### **BIOL-215: Lab-Specific Regulations**

25. **Treat** all bacterial cultures with the respect that they deserve. All bacteria should be treated as pathogens. Always follow proper aseptic technique when working with bacterial cultures. Label all cultures.
26. The bench top is to be cleaned with the provided disinfectant before and after every lab session. It is the student's responsibility to wash hands with soap and water before and after every lab experiment.
27. All personal items should be placed in the lab storage area. Only those items needed for the day's exercise should be at the bench.
28. Personal protection equipment must be worn in all BIOL-215 lab room where chemicals, stains, microbiological cultures, and glassware or microscope slides are used. This includes a full-length lab coat, OSHA recommended safety goggles ANSI 87.1 splash goggles and non-latex gloves. Legs must be fully covered from the bottom of the shirt to the top of the shoes during wet labs.
29. Lab coats must remain in the lab and never taken out for any reason. They will be disposed of at the end of the semester. Lab coats must be buttoned; sleeves must cover the entire arm.
30. Gloves will be provided at the start of each lab and **must be removed safely and disposed of only in the designated biohazard containers. Do not dispose of gloves in the trash can.**
31. If you wear contact lenses, these should be removed when working near chemicals.
32. Hands, pencils, pens, etc. must be kept away from the eyes, nose, and mouth in order to avoid contamination.
33. Incinerator is **Extremely Hot!** Please use caution when handling

## HOME LAB SAFETY ADDENDUM:

1. Please review (1.) above for health guidelines that apply to your home environment.
2. Since student safety is paramount, experiments are intentionally designed to avoid extremely hazardous chemicals and chemicals in hazardous quantities or concentrations. Carefully review the Safety Data Sheets (SDS) for any microbe that will be used in the lab. If using everyday objects found in the home, assure that they are stored away from eating areas while being used for a lab (ie cell phones).
3. Sterile petri dishes which are unused, may be stored in your refrigerator until ready for use.
4. Any microbes intended for at home labs must be stored away from eating areas, labs must not be performed in the dining or kitchen area.
5. DO NOT STORE Microbes in the refrigerator or return used petri dishes or plates to the refrigerator. Do not store in or near dining areas.
6. Use proper PPE (gloves/goggles) as defined in (28.) above when performing the labs.
7. Always wipe down your "lab station" before and after the lab with an approved disinfecting solution. As an alternative, you may use a fresh sheet of aluminum foil as a work surface which shall be carefully disposed of upon completion of the lab. Please consult with your instructor with any questions about approved disinfecting solutions.
8. Dispose of lab plates per the manufacturer's instructions.
9. If no instructions are included in the purchased kits, pour a solution of 10% bleach to 90% water onto the plates and dispose the disinfected plate into the trash. Make sure you are wearing the proper PPE when performing the disinfecting process. Since regulations can vary in some communities, students are advised to check with their area authorities to confirm that they are in compliance with local regulations. If Students desire assistance with disposal, Students are encouraged to contact or view their local Public Safety Department's guidelines with regard to proper disposal.
10. Remove goggles and dispose of gloves properly only AFTER completion of clean-up.



