 CSN Procedure	Facilities Management
Category: Environmental Health and Safety	Effective Date: 1/24/2022
Laboratory Inspection Procedure	

I. PURPOSE

The purpose of this procedure is to assure a healthy and safe working environment at the College of Southern Nevada (CSN) laboratories. Its purpose is to improve regulatory compliance, increase campus awareness, and correct environmental, health and safety issues found in CSN laboratories.

II. SCOPE

This procedure applies to all CSN faculty, staff, students, volunteers, space licensees, and contractors that work in CSN teaching and research laboratories.

III. OVERVIEW

This procedure establishes a program for correcting deficiencies and issues of non-compliance. All CSN employees directly involved in or in support of instructional and research laboratory activities are responsible for the implementation and adherence to this procedure.

IV. DEFINITIONS

Laboratory: An academic facility or location where the laboratory use of hazardous chemicals, materials or equipment occurs; and where the physical, biological, or chemical use processes or the use or storage of the materials or equipment may present a potential hazard. It includes but is not limited to: Research laboratories, teaching laboratories, waste accumulation areas/locations including solid waste, hazardous waste, universal waste, cold rooms, laboratory storage rooms, and analytical laboratories.

Laboratory Supervisor: Any faculty or employee, who is responsible for the operations of a CSN laboratory. It includes employees who may have authority to hire personnel, evaluate performance, direct work assignments, apply progressive discipline, and direct resources to correct identified safety issues.

Laboratory Worker: For purposes of this procedure, any individual who actively performs work functions with hazardous materials or equipment in a laboratory. A worker may be a faculty, staff, student, visitor, volunteer, or anyone else assisting or performing an experiment, research, or any process in a laboratory.

Imminent Danger: Any conditions or practices in any place of employment which are such that a danger exists which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated.

Major Finding: A finding of non-compliance that requires immediate corrective action due the nature of the finding and the immediate risk to human health and the environment.

Minor Finding: A finding of non-compliance that does not present an immediate risk to human health or the environment. An example might include the need to update a laboratory standard operating procedure. *(Note: repeated minor laboratory findings can become systemic issues that could become major laboratory findings).*

Principal Investigator: Individual who has primary responsibility for the design, execution and management of a research project.

V. PROCEDURE

The following procedures will be followed to ensure proper monitoring, assessment, and assurance of laboratory safety compliance.

A. Responsibilities

1. Environmental Health & Safety

- Ensure administration of this procedure; conduct periodic reviews and updates.
- Ensure compliance with environmental, health and safety regulations through implementation of this procedure.
- Conduct annual laboratory safety inspections in accordance with this procedure.
- Review and analysis of incident/accident/injury reports.
- Monitor and report findings, deficiencies, and trends to affected departments.
- Maintain inspection records for up to three years.

2. Managers, Supervisors, and Faculty of Department with Applicable Laboratories

- Ensure application of proper safety procedures and required training in accordance with the procedures identified herein.
- Support practices that provide self-inspection of laboratories on a periodic basis during those months that classes are in session and/or when research is in process.
- Ensure laboratory users maintain a safe and healthy work environment. They are in the best position to know the hazards inherent in their work and implement appropriate controls.

B. Procedures

1. Laboratory Inspections

- Laboratory Supervisors must monitor their laboratory workers for adherence to safe work practices on an ongoing basis in the laboratory.
- Generally, laboratory inspections cover the following areas:
 - General laboratory safety
 - Chemical storage and handling
 - Fire safety
 - Personal protective equipment
 - Emergency equipment
 - Biological and chemical waste disposal
 - Compressed gases
 - Biological safety
 - Machinery and equipment safety
- All laboratories shall be inspected during regular use, with a formal written and documented inspection on the following schedule:
 - Research Laboratories: Laboratory Supervisors, Principal Investigators or designee shall conduct an annual self-inspection of their laboratory operations. These self-inspections should take place sometime during the months of January and February of each year.
 - Teaching Laboratories: Laboratory Supervisors, or designee shall conduct a self-inspection at least once with the opening period of the fall, spring, and summer semesters, where applicable.
- If new research is conducted or the scope of the laboratory work changes significantly, an additional self-inspection must be conducted prior to start of work. EHS can assist with any additional inspections, if required.
- Laboratory Supervisors must take appropriate and effective corrective actions in a timely manner. Major findings are required to be corrected within 48-hours; minor findings must be corrected within 30-days. If a condition is found to pose an imminent danger, the operation must be suspended immediately and EHS must be notified to oversee the corrective action.

- At a minimum, EHS will conduct an annual inspection of each laboratory typically during the months of June, July, and August of each year. Additional inspections may be required as, needed. EHS will provide the affected department with advance notice of the annual inspection.
- It is recommended, but not required, that staff responsible for the laboratory accompany the annual EHS inspection. If the designated laboratory staff is not available, the individual accompanying EHS on the inspection should be familiar with all the activities occurring in the laboratories.
- EHS can assist with correcting findings and verify that corrective actions have been completed.

2. Inspection Documentation

- All departmental self-inspections and EHS annual inspections will be conducted using the *Laboratory Inspection Checklist (Biological & Physical Sciences / Health Sciences) [Appendix A]* or the *Laboratory Safety Inspection Checklist (Applied Technologies / Art & Design) [Appendix B]*.
- Completed inspection forms and the actions recommended and/or taken to correct identified unsafe conditions shall be maintained on file for a minimum of three (3) years.
- Completed copies of inspection forms are to be forwarded to the department chairperson, EHS, and respective Dean to monitor report findings, deficiencies, and corrective actions.

VI. APPENDICIES:



**Appendix A – Laboratory Safety Inspection Checklist
(Biological & Physical Sciences / Health Sciences)**

**Appendix B – Laboratory Safety Inspection Checklist
(Applied Technologies / Art & Design)**



Appendix A - Laboratory Safety Inspection Checklist (Biological & Physical Sciences / Health Sciences)

LABORATORY SAFETY INSPECTION CHECKLIST					
Date:		Inspected By:			
Department:		Supervisor:			
Campus:	Building:	Room:			
<i>For each item check Yes, No, or N/A. Be sure to retain all documentation regarding inspections, including findings and corrective actions taken for any "No" responses, for a minimum of 3 years. Contact EH&S for questions or additional information.</i>					
GENERAL SAFETY			YES	NO	N/A
1. Laboratory Safety Plan is present, updated (annual review required), and includes emergency information?					
2. CSN Chemical Hygiene Plan available in the lab?					
3. Emergency contact numbers posted in the laboratory?					
4. Lab is maintained secure; door is locked when no one is in lab?					
5. Lab floors, aisles, exits and adjacent hallways unobstructed?					
6. Broken glassware is not in use; glassware is properly discarded in designated containers?					
7. Lab is adequately organized and cleaned to provide sufficient workspace for operations without spills, accidents, or other preventable incidents?					
8. Floors dry and free of slip hazards?					
9. No evidence of food or drink storage or consumption?					
10. Appropriate warning signs posted on outside of door?					
11. 'No Food or Drink' or 'Not for Human Consumption' warning signs posted on outside of refrigerators, ice machines, and microwaves?					
12. Hand washing sink is available with towels and soap present?					
13. All equipment guards are in place?					
14. Laboratory electrical panels accessible and unobstructed?					
15. Extension cords only used temporarily, and power strips not daisy-chained together?					
16. Equipment with motors, heaters, and other high amperage needs plugged directly into a wall receptacle?					
17. Electrical or extension cords free of exposed wiring?					
CHEMICAL STORAGE & HANDLING			YES	NO	N/A
18. Lab personnel know how to access Chemical Inventory and Safety Data Sheets?					
19. Appropriate labels are found on all chemical containers and secondary containers (No abbreviations/formulas)?					
20. Chemical containers are kept closed when not in use?					
21. No corroded/compromised chemical containers?					
22. Benchtops, fume hoods, biosafety cabinets organized and clean?					
23. Chemical storage cabinets properly labeled and kept closed when not in use?					
24. Storage cabinets clean and free from spilled material?					

Appendix A - Laboratory Safety Inspection Checklist (Biological & Physical Sciences / Health Sciences)

 LABORATORY SAFETY INSPECTION CHECKLIST 			
25. Incompatible materials stored separately?			
26. Peroxide forming chemicals labeled with expiration date and not expired?			
27. Chemical containers stored away from sinks or floor drains?			
28. No corrosive liquids storage above eye level?			
29. Hazardous materials storage is available and adequate, if required?			
30. Food and drinks stored and consumed away from toxic materials?			
31. Lab free of chemicals that are old or no longer needed?			
32. Fume hoods kept uncluttered and rear ventilation is not blocked or covered?			
33. Processes that emit vapors, gases, or fumes adequately captured by local ventilation (hoods, snorkel)?			
FIRE SAFETY	YES	NO	N/A
34. Fire extinguishers are charged and unobstructed?			
35. Flammable liquids are stored in appropriate containers?			
36. No more than 10 gallons of flammable liquids stored outside of cabinets?			
37. Flammable materials requiring refrigeration are placed in explosion-proof or flammables refrigerators only?			
38. No excess combustible material near ignition sources?			
39. Suspended ceilings have all their ceiling tiles in place?			
40. Laboratory doors kept closed when unoccupied?			
41. All objects stored at least 18 inches away from fire sprinklers?			
42. Evacuation maps are posted where required?			
PERSONAL PROTECTIVE EQUIPMENT	YES	NO	N/A
43. Appropriate attire (no shorts or sandals) worn by everyone in lab?			
44. Adequate gloves available and in use?			
45. Adequate eye protection available and in use?			
46. Lab coats available for use?			
47. Areas requiring the use of PPE have adequate signage posted and enforced?			
EMERGENCY EQUIPMENT	YES	NO	N/A
48. First aid kit is present and stocked?			
49. Shower/eyewash free of obstructions and in good working order?			
50. Shower/eyewash available within 10 seconds travel (approx. 50ft.)?			
51. At least one fire blanket is available and accessible?			
52. Chemical/biological spill kits available?			
BIOLOGICAL AND CHEMICAL WASTES	YES	NO	N/A
53. Waste containers are clean, structurally sound, and closed when not in use?			
54. Waste containers are labeled "Hazardous Waste" with the proper hazard warning label?			
55. Waste containers are in good condition (not leaking, rusted, bulging or damaged)?			

Appendix A - Laboratory Safety Inspection Checklist (Biological & Physical Sciences / Health Sciences)

 LABORATORY SAFETY INSPECTION CHECKLIST 			
56. Waste containers marked with full chemical names identifying the contents stored inside (no abbreviations or formulas)?			
57. Incompatible chemical wastes segregated by hazard class?			
58. Biohazardous waste placed in appropriate red bags and labeled containers?			
59. Biohazard waste autoclaved in a timely manner?			
60. Sharps placed in a designated sharps container?			
COMPRESSED GASES	YES	NO	N/A
61. Correct compressed gas regulators used?			
62. Compressed gas cylinders are secured from falling?			
63. Compressed gas cylinders away from heat sources?			
64. Compressed gas cylinders capped when not in active use?			
65. Compressed gas cylinders are properly labeled and legible?			
66. Incompatible compressed gases in storage segregated?			
67. Empty compressed gas cylinders are marked or tagged "EMPTY"?			
BIOLOGICAL SAFETY	YES	NO	N/A
68. Biohazard signs present on doors?			
69. Biohazard labels present where biological materials are stored?			
70. Biological Safety Cabinets not being used to store items or have equipment that is blocking the cabinet's airflow?			
71. Appropriate disinfectants present in lab for spill decontamination and bench top cleaning?			
72. Autoclave is routinely maintained or serviced as recommended by manufacturer?			
73. Log maintained for ultra-centrifuge rotor use, if recommended by manufacturer?			
Inspector's Signature:	Date:		

Appendix B – Laboratory Safety Inspection Checklist (Applied Technologies/Art & Design)



 **LABORATORY SAFETY INSPECTION CHECKLIST** 

Date:	Inspected By:		
Department:	Supervisor:		
Campus:	Building:	Room:	



For each item check Yes, No, or N/A. Be sure to retain all documentation regarding inspections, including findings and corrective actions taken for any "No" responses, for a minimum of 3 years. Contact EH&S for questions or additional information.

GENERAL SAFETY	YES	NO	N/A
1. Laboratory Safety Plan is present, updated (annual review required), and includes emergency information?			
2. Emergency contact numbers posted in the laboratory?			
3. Laboratory is maintained secure; door is locked when no one is in the laboratory?			
4. Laboratory floors, aisles, exits and adjacent hallways unobstructed?			
5. Broken glassware is not in use; glassware is properly discarded in designated containers?			
6. Laboratory is adequately organized and cleaned to provide sufficient workspace for operations without spills, accidents, or other preventable incidents?			
7. Floors dry and free of slip hazards?			
8. Food and drinks are kept in the designated area at all times? (Note: closed drink containers are permitted work areas).			
9. Appropriate warning signs posted on outside of door?			
10. Refrigerators/freezers labeled with food and drink specifications?			
11. Hand washing sink is available with towels and soap present?			
12. All equipment guards are in place?			
13. Laboratory electrical panels accessible and unobstructed?			
14. Extension cords only used temporarily, and power strips not daisy-chained together?			
15. Equipment with motors, heaters, and other high amperage needs plugged directly into a wall receptacle?			
16. Electrical or extension cords free of exposed wiring?			
CHEMICAL STORAGE & HANDLING	YES	NO	N/A
17. Laboratory personnel know how to access Chemical Inventory and Safety Data Sheets?			
18. Appropriate labels are found on all chemical containers and secondary containers (No abbreviations/formulas)?			
19. Chemical containers are kept closed when not in use?			
20. No corroded/compromised chemical containers?			
21. Desk, work, and storage areas organized and clean?			
22. Chemical storage cabinets properly labeled and kept closed when not in use?			
23. Storage cabinets clean and free from spilled material?			
24. Incompatible materials stored separately?			

Appendix B – Laboratory Safety Inspection Checklist (Applied Technologies/Art & Design)

 LABORATORY SAFETY INSPECTION CHECKLIST 			
25. Chemical containers stored away from sinks or floor drains?			
26. No corrosive liquids storage above eye level?			
27. Hazardous materials storage is available and adequate, if required?			
28. Food and drinks stored and consumed away from toxic materials?			
29. Lab free of chemicals that are old or no longer needed?			
30. Processes that emit vapors, gases, or fumes adequately captured by local ventilation (hoods, snorkel)?			
FIRE SAFETY	YES	NO	N/A
31. Fire extinguishers are charged and unobstructed?			
32. Flammable liquids are stored in appropriate containers?			
33. No more than 10 gallons of flammable liquids stored outside of cabinets?			
34. Flammable materials requiring refrigeration are placed in explosion-proof or flammables refrigerators only?			
35. No excess combustible material near ignition sources?			
36. Suspended ceilings have all their ceiling tiles in place?			
37. Laboratory doors kept closed when unoccupied?			
38. All objects stored at least 18 inches away from fire sprinklers?			
39. Evacuation maps are posted where required?			
PERSONAL PROTECTIVE EQUIPMENT	YES	NO	N/A
40. Are all lab users wearing long pants, sleeved shirts and appropriate footwear and are loose clothing, hair and jewelry restricted while working in the lab?			
41. Adequate gloves available and in use?			
42. Adequate eye protection available and in use?			
43. Personnel are wearing appropriate PPE for tasks being performed?			
44. Areas requiring the use of PPE have adequate signage posted and enforced?			
EMERGENCY EQUIPMENT	YES	NO	N/A
45. First aid kit is present and stocked?			
46. Shower/eyewash free of obstructions and in good working order?			
47. Shower/eyewash available within 10 seconds travel (approx. 50ft.)?			
48. At least one fire blanket is available and accessible, if required?			
49. Appropriate spill kits, PPE and decontamination material available where needed?			
HAZARDOUS WASTE	YES	NO	N/A
50. Waste containers are clean, structurally sound, and closed when not in use?			
51. Waste containers are labeled "Hazardous Waste" with the proper hazard warning label?			
52. Waste containers are in good condition (not leaking, rusted, bulging or damaged)?			
53. Waste containers marked with full chemical names identifying the contents stored inside (no abbreviations or formulas)?			
54. Incompatible chemical wastes segregated by hazard class?			
55. Sharps and blades placed in a designated sharps container for disposal?			

Appendix B – Laboratory Safety Inspection Checklist (Applied Technologies/Art & Design)

 LABORATORY SAFETY INSPECTION CHECKLIST 			
COMPRESSED GASES	YES	NO	N/A
56. Correct compressed gas regulators used?			
57. Compressed gas cylinders are secured from falling?			
58. Compressed gas cylinders away from heat sources?			
59. Compressed gas cylinders capped when not in active use?			
60. Compressed gas cylinders are properly labeled and legible?			
61. Incompatible compressed gases in storage segregated?			
62. Empty compressed gas cylinders are marked or tagged "EMPTY"?			
WELDING	YES	NO	N/A
63. Compressed gas cylinders secured upright with a double chain and valve protector caps?			
64. Welding ventilation systems are operational and clean, and filters regularly changed?			
65. Welding curtains are available and used when appropriate?			
66. Welding rod holders are empty and properly stored when not in active use?			
67. Compressed gas cylinders and hoses free from cracks or dents?			
68. Cylinders, valves, couplings, regulators, hoses, and apparatus are kept clean and free from residue?			
69. Valves are kept closed whenever cylinders are not in active use?			
70. Welding hoses are properly color coded (fuel gas-red, oxygen-green, inert gas-black)?			
MACHINERY & EQUIPMENT	YES	NO	N/A
71. Written standard operating procedures (SOPs) or operating manual available for each machine and executed by all users?			
72. All machines have guards to protect against points of operation, nip points, rotating parts, moving parts, flying chips, sparks, etc.?			
73. All emergency stops, safety guards, and safety devices located on equipment and tools working and adjusted properly?			
74. Tools and equipment are in good condition and broken tools are removed from service?			
75. Sharp and pointed tools are shielded to prevention accidental contact?			
76. Damaged/malfunctioning equipment promptly reported, tagged "OUT OF SERVICE", and repaired?			
77. Start, stop, emergency and other operating controls within the operator's reach?			
Inspector's Signature:	Date:		

