

## **SAFETY RULES IN NEWMARK STRUCTURAL ENGINEERING LABORATORY**

This document covers the general safety rules for working in the Newmark Structural Engineering Laboratory (NSEL). Other, more specific rules are associated with specific equipment that will be introduced during the associated individual training/verification processes. Each user must understand Safety Rules in NSEL and sign the compliance form, which can be found at the last page of this document.

There are two (2) attachments in this document: **Attachment A: Executive Policy** and **Attachment B: Compliance Form**.

The NSEL Safety Rules are listed below.

1. Each student who is to work in the NSEL must undergo general laboratory safety training. All undergraduate and graduate students must sign a compliance form (Appendix D) acknowledging that they have received this training and will abide by NSEL rules and regulations.
2. Each area directly surrounding the designated testing area must be marked off by using traffic cones with yellow chain/tape.
3. All students working in the lab must be dressed appropriately for the nature of work being performed:
  - a) A sleeved shirt and pants as well as closed-toe shoes required at all times. A user of NSEL should not wear loose clothing. Long hair must be tied back at all times.
  - b) Eye safety glasses are required while working in NSEL at all the times.
  - c) Hard hats must be worn at all times while in the MUST-SIM testing facility on the NSEL floor. While working anywhere in NSEL, hard hats also must be worn at all the times when lifting heavy objects with crane and if there is a danger of falling objects.
  - d) Harness must be used by user (users) of scissor lift all the time.
  - e) Neckties, bracelets, and other loose clothing/jewelry must be removed prior to working in the lab.
4. Any electrical installation must follow rules:
  - a) Extension cords shall contain the number of conductors required for the service plus an equipment ground wire.
  - b) Extension cords shall be protected from damage (including that caused by foot traffic, vehicles, sharp corners, protections, and pinching).
  - c) Flexible cord shall be used only in continuous lengths without splice or tape. Patched, oil-soaked, worn, or frayed electric cords or cables shall not be used.
  - d) Plugs and receptacles shall be kept out of water unless they are of an approved submersible type.

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- e) All equipment used in damp areas should be connected to a Ground-Fault Circuit Interrupting (GFCI) device. If the GFCI device is not integral to the wall receptacle, a portable GFCI breaker should be used as close to the wall receptacle as practicable.
- 5. A first-aid kit must be placed in the NSEL. Anyone working in the lab must know the location of the first-aid kit.
- 6. Hearing protection (ear plugs) should be readily available to shop users.
- 7. An oil-spill kit must be placed in an accessible area. Any oil spilled on the floor must be immediately cleaned up.
- 8. A fire extinguisher must be readily available.
- 9. No person should work alone.
  - a) During the normal work days between the hours of 8:00 a.m. and 4:00 p.m., students should inform one of the NSEL staff members before using any machine or power tools in the lab.
  - b) At least two people should be in the NSEL when working after hours (i.e., 4:00 p.m. to 8:00 a.m. on weekdays, as well as weekends and holidays).
- 10. No horseplay in the lab is permitted. Testing equipment can be dangerous.
- 11. No loud radios (boom-boxes) are allowed in the lab.
- 12. No headphones/earbuds are allowed while operating power tools/equipment or while conducting tests.
- 13. The lab area must be kept clean. It is impossible to maintain safe and high quality work in messy environment. Users are responsible to keep the designated area organized and clean.
- 14. Practice common sense. If your gut tells you not to setup a part in a certain way in a testing machine, don't do it. Most lab accidents are a result of lack of knowledge, not carelessness. If you have any doubt, consult personnel working in the lab.

## **APPENDIX A: EXECUTIVE POLICY**

1. The NSEL Director is responsible for implementation and execution of safety rules in NSEL. He may designate a person; e.g. lab coordinator/manager, who will provide training and execute safety rules on daily basis.
2. NSEL has been always divided into areas associated with research projects. Principal Investigators (PIs) and the lab coordinator/manager are responsible for organization, cleanliness, and safety in testing areas. Safety rules for the designated sections must coincide with general rules listed previously. Each testing area should be well marked using traffic cones together with either yellow chain or tape.
3. Students and staff working on the experimental research project are allowed in the designated sections, only. Visitors are allowed in the lab under the condition that they follow general rules established for the lab and specific rules for designated section.
4. Each new student should be introduced to general and specific safety rules prior to the initiation meeting associated with new project (he/she will receive a copy of this document via e-mail to gain familiarity with the rules). He/she should be verified during an initiation meeting and asked to sign a compliance form; Appendix D.
5. Faculty and staff of NSEL will monitor students and staff working in the lab. Faculty and staff shall correct to any obvious violation of safety rules.

**APPENDIX B: COMPLIANCE FORM**

**NEWMARK STRUCTURAL ENGINEERING LABORATORY**

I have read, understood, and will comply with the rules outlined in the Newmark Structural Engineering Safety Rules. I will take full responsibility for any action that may happen while using the Civil and Environmental Engineering Laboratories.

**STUDENT:**

\_\_\_\_\_  
Last Name (print)

\_\_\_\_\_  
First Name (print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date Signed

**PRINCIPAL INVESTIGATOR:**

\_\_\_\_\_  
Last Name (print)

\_\_\_\_\_  
First Name (print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date Signed