

# FIRST and Mini-Baja Shop and Laboratory Safety Policy

## College of Engineering, Northeastern University

### INTRODUCTION:

Northeastern's College of Engineering policy allows students enrolled in the NU FIRST Robotics and Mini-Baja programs to have access to certain laboratories and machine shops in the basement of Richards Hall (RI) under certain conditions. Every effort is made to make these areas as safe as possible. However, the use of any power or hand tools is inherently dangerous and caution should always be taken. The following is a list of requirements and safe operating procedures that any NU-TRONS team member must follow when using these facilities. After reading the following information, please sign the attached form in the indicated space(s) and return one copy to the team faculty coordinator, Don Goldthwaite. **Unless this sheet is signed and received by Professor Goldthwaite, you will not be allowed to use the laboratory and shop areas.**

### GENERAL POLICY:

1. Access to the labs and machine shop areas requires the presence of a qualified individual to monitor the area.
2. Always wear safety glasses in all shop and lab areas. No exceptions. Glasses are available in all labs and shops for your use while in the shop. Please return them when finished. Depending on the type of work you're doing, you may need additional protective gear. See a technician or advisor for a recommendation.
3. Students are required to undergo the safety orientation training program prior to the use of any laboratory facilities.
4. No student is allowed to use the machine shop areas until he/she has done the following:
  - Taken the machine shop tutorial course posted to the web by MIT at <http://electron.mit.edu/~gsteele/mirrors/www.nmis.org/EducationTraining/machinshop/safety.html>
  - All students must view the **Shop Safety**, **Metal Cutting Physics**, and **Measurement** sections. Students wishing to use the **belt sander**, **grinder**, **drill press**, or **band saw** must view the sections of the tutorial devoted to these tools.
  - Any student wishing to use the **Lathe** or **Milling Machine** must also review the sections covering those tools, and must demonstrate their ability to use the tool to the faculty coordinator, or Mr. Jon Doughty—the Forsyth Machine Shop technician—in a session arranged in advance by the student and the observer. A signature from one of the above individuals is required for successful completion of the certification. All students are encouraged to view this informative site in its entirety.

**A list of those who are in compliance will be maintained by the Faculty Coordinator, and distributed to the laboratory staff indicating who may use the labs and machine shops, and what tools they are allowed to use. Only NU students are allowed to use the machine shop.**

5. The MIME lab technicians have the right and responsibility to refuse the use of the laboratory to any student who does not follow safe operating procedures, does not know how to use the equipment and refuses to accept instruction, or who is caught using the facilities without supervision. The technician will report these problems to the Faculty Coordinator/advisor and Laboratories Director, and appropriate action will be taken. Any student found deliberately breaking the policies set forth in this Policy will be barred from further use of the facility.
6. Students should identify the location of exits and telephones when first entering the laboratory. Emergency phone numbers are clearly listed next to each phone in the laboratory. The University Public Safety number to be used in emergencies is **3333**.

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7. Use common sense. If an unsafe condition exists - leave the area and notify the responsible person. If you feel uncomfortable using a piece of equipment, please ask the technician for help, or take a break and come back.
8. Improper behavior in the laboratory or shop areas will not be tolerated. These areas are not playgrounds. These areas require your full attention when you use them, and they are not to be used as social gathering areas.
9. **No food, beverage, or smoking is allowed in the labs. Use of stereos, MP3 players, and cell phones in the machine shop is expressly prohibited and will result in disciplinary action.**
10. Do not use any broken or unsafe tools. Report any unsafe conditions to the technician in the area. If you do not get an adequate response, please report these conditions to the following individuals:  
Don Goldthwaite      373-3684  
Jeff Doughty      373-3457
11. If you do not know how to use a tool or how to perform an operation, ask the technician for assistance. Due to the heavy laboratory load, the technician may ask you to arrange a time for the instruction, or may suggest that he will do the work himself.
12. Never work alone. The "buddy system" provides a large measure of safety, and is a requirement.
13. In case of an accident, follow the CHECK, CALL, CARE procedure:
  1. **CHECK** the area to make sure it is safe and then check the victim to see what is wrong.
  2. **CALL** for help immediately (call **3333** for on-campus emergency assistance). Calling for help can be more important than assisting the victim. You need to get trained help on the scene as quickly as possible.
  3. **CARE** for the victim if you are able. Notify the supervisor as soon as possible. Once the situation is under control the following people should be contacted:

Jeff Doughty                      335 SN 373-3457  
Don Goldthwaite                      207 SN 373-3684

**It is important that a full time staff member be informed of the accident as soon as possible.**

**For Emergencies Dial 3333**

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**Use of FIRST Lab:** I have attended the provided safety orientation training or an equivalent (circle: Capstone safety lecture, Safety video series, Other: \_\_\_\_\_)

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

**Use of Hand / Power Tools:** I have viewed the hand-tools safety videos and read the safety introduction at the on-line tutorial at <http://electron.mit.edu/~gsteel/mirrors/www.nmis.org/EducationTraining/machineshop/safety.html>

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

Faculty Advisor Approval to use these tools: \_\_\_\_\_

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**Use of Machine Shop:** I have performed the on-line tutorial at <http://electron.mit.edu/~gstele/mirrors/www.nmis.org/EducationTraining/machineshop/safety.htm>, and have completed the following sections (&/or their equivalents on the below web-site):

<u>Section</u>	<u>Completed</u>
Introduction _____	
Safety _____	
Physics _____	
Measurement and Layout _____	
Belt Sander _____	
Grinder _____	
Band Saw _____	
Drill Press _____	

I wish to use the lathe and/or milling machine. I have reviewed the information on these tools on-line at <http://electron.mit.edu/~gstele/mirrors/www.nmis.org/EducationTraining/machineshop/safety.html>, and have demonstrated an acceptable level of skill in using these machines:

Lathe \_\_\_\_\_  
Milling Machine \_\_\_\_\_

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

Faculty Advisor Approval to use these tools: \_\_\_\_\_