Pre-safety Checklist

1. Provide the Shop with the account number and professor’s name to facilitate the work order.  
2. Is your right-to-know training (RTK) current? Ask the Shop when your right-to-know training expires.  
3. Are the faculty members participating in your safety check current on their right-to-know training? Ask the shop about their right-to-know training expiration dates.  
4. Are the personal protective equipment (PPE) training forms attached for the equipment you’ll be using? (safety glasses, hearing protection, ladders, etc.)  
5. Are material safety data sheets (MSDS) attached for each and every chemical or product you’ll be using?  
6. Have you talked to the Shop about what will be expected and scheduled an appropriate time for your safety talk?  
7. Have you arranged an acceptable time with the faculty participating in your safety check?  
8. Have you practiced with someone who’s done a safety check before?  

Herrick Laboratory Safety Checks What You Should Know

1. General Safety Information
   - What to do in case of an emergency.  
   - Where is the closest telephone?  
   - Where are the fire extinguishers? On what kind of fires should each type be used?  
   - Top portion of form completed, account number, phone numbers,  
   - Are PPE’s (Personal Protective Equipment) appropriate for the experiment? Are copies of your training completion form attached?  
   - Are you dressed appropriately? Closed toe shoes, PPE (Personal Protective Equipment) available for inspection team, etc.  
   - Are MSDS (Material Safety Data Sheets) for chemicals used attached? Both student and faculty member must hold current RTK certification. (Right-to-Know )  

2. Design of the Experiment
   The safety check should not be the final step in the design and construction of an experiment. The project design process should include safety considerations from the very start.  
   - You should be able to describe and answer any and all questions concerning your experiment.  
   - You should prepare a hand out/ for the inspection team, it may include the following:
     1. What is the purpose of this experiment?  
     2. Schematic or diagram  
     4. Some set ups with multiple operators will require an operation log book in check list form be developed and maintained by the operators.  

3. Safety Check CHECKS
   It is the student’s responsibility to arrange for the final safety check. You must schedule your professor, another HERL faculty member and a shop person (who did not help build your set up). Schedule sufficient time for both the safety check and to find and schedule faculty members for the safety check.  
   - Expect to actually start-up, shut-down, and demonstrate (run) your experiment.  
   - Don’t be nervous, take your time, don’t rush through the demonstration.
Mark off items on the check list as you complete them, as you should do whenever you run the experiment (as you should do whenever you run the experiments).

Be pro-active, anticipate questions and formulate answers.

1. You and your faculty member **MUST** have current **Right-to-Know (RTK) certification**.
2. You must have completed the required Personnal Protective Equipment (PPE) training for any safety equipment identified as necessary. And have the equipment available. Also have the form signed.
3. Copies of the safety check form with sections A & B completed are distributed to each member of the safety review team prior to the inspection. Copies of the **NEW Approved Safety Check Form** are available from the shop and on the Herrick Laboratory web site: [https://engineering.purdue.edu/Herrick/InfoFor/Safety/index.html](https://engineering.purdue.edu/Herrick/InfoFor/Safety/index.html).
4. All relevant Material Safety Data Sheets (MSDS) should be attached.

**During the final inspection and Safety Check a decision will be made as to whether one or two persons will be required during operation, and if any additional operational limits are to be imposed.**

**General "housekeeping" is important to safety, the student is expected to keep the experiment and the area assigned to him/her neat and clean. Tools and equipment not in use should be stored in an appropriate location.**

**Notes**

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_________________________________________________________________
SAFETY CHECK LIST FOR
EXPERIMENTAL INSTALLATIONS
AT HERRICK LABS

This form must be completed and filed with the HERL Safety Committee before the initiation of the experiment.

A. General Information  Account number must be provided.

1. Project Title:  
Project Account Number:  

2. Professor in Charge of Project  
Professor’s Office Number:  Telephone:  E-mail:  

3. Operator’s (Student):  
Operator’s (Student) Office Number:  Telephone:  Home Phone:  E-mail:  

PROPRIETARY PROJECT  (CIRCLE ONE)  

Yes  No

B. Safety Variables (maximum possible value should be given)

Pressure (psi):  max  Toxic materials (lbs. and type):  max

Sound Level (db):  max  Toxicity (ppm):  max

Combustibles:  max  Rotating Machinery (RPM):  max
(fuels, solvents, gases, etc.).

Flow rate/quantity stored in system: max

MSDS’s on file and experimenter has copies and has read them for all relevant materials. List all that apply and attach to form:

C. General Experimental Equipment Checks:

Any member of the Herrick Laboratories’ faculty can participate in safety checks.

<table>
<thead>
<tr>
<th>Student</th>
<th>Technician</th>
<th>Your Major Professor/Adviser</th>
<th>Another Herrick Professor</th>
<th>Comments</th>
</tr>
</thead>
</table>

1. Pressure vessel installed properly. [examples : current date proof test, a) overpressure protection relief valves or example burst diaphragms, b) cleanliness such as oxygen service, etc.]

2. Piping or tubing properly installed (examples: pressure rating, tied down if containing high pressure flanges and fittings proper rating, meets cleanliness for example oxygen service, etc.)

3. Flexible hoses (hydraulic or gas) properly installed (examples: pressure rating, current date proof test, tied down if containing high pressure, meets cleanliness for example oxygen service, etc.)
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Exhaust and venting systems installed properly (examples: no leakage, vented to a inter-lock, etc.)</td>
<td></td>
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<tr>
<td>5.</td>
<td>Personnel safety equipment work or installed properly (examples: ear protection, respiratory protection, protective clothing, gloves, shoes, eye protection hood or safety glasses, etc.)</td>
<td></td>
<td></td>
<td>PPE Training completed. [ ] yes [ ] no</td>
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<tr>
<td></td>
<td>Expected completion date:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td>Fuels, solvents, paints and toxic stored and handled properly (examples: quantity stored limited by state and university regulations, etc.)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7.</td>
<td>Equipment safety shield installed properly (examples: belt guards, rotating shaft guards, optical barriers for lasers etc.)</td>
<td></td>
<td></td>
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<tr>
<td>8.</td>
<td>Electrical wiring installed properly (examples: equipment properly grounded, circuits fused, high voltage shielded or interlocked, etc.)</td>
<td></td>
<td></td>
<td>No loose wires.</td>
</tr>
<tr>
<td>9.</td>
<td>Laser properly installed (examples: warning signs or lights posted, door interlocks if high energy laser is used, etc.)</td>
<td></td>
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<tr>
<td>10.</td>
<td>Fire extinguisher equipment location established (examples: proper extinguishing material, and extinguisher charged, etc.)</td>
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<td>11.</td>
<td>Gas cylinders installed and stored properly (examples: chained to wall or rack, capped when not in use, etc.)</td>
<td></td>
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<tr>
<td>12.</td>
<td>Laboratory area properly certified for intended use.</td>
<td></td>
<td></td>
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<tr>
<td>13.</td>
<td>Laboratory area properly secured against accidental entry (examples: signs indicating hazard, doors secured, personnel barriers if hazardous area exists during the conduction of the experiment). These items for laser covered in Item 9 above.</td>
<td></td>
<td></td>
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<tr>
<td>14.</td>
<td>Special considerations</td>
<td></td>
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</tbody>
</table>

**D. Written or posted operation checklist prepared** (examples: apparatus start up, run, and shutdown procedures, night and weekend securing procedures, posting of critical shut-off locations for fire department, need for continued running during university shut down, etc.). [Professor in charge and building safety coordinator or committee initials]

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**E. Number of people present while running equipment**

Approved hours of operation  ___________a.m. ___________p.m.

Please initial (professor in charge and building safety coordinator/committee member)

**F. Safety Instructions**

The student and/or technician have been instructed in all matters of safety. Current/valid “Right-to-Know” Training is required for operator and faculty member. **Appropriate PPE training identified has been, or will be, completed.** (Note: the experimental apparatus will not be run until PPE training is completed, see page 3).

**G. Maximum duration of test time**

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**Major Professor sign:** ___________  **Date:** ___________

**Copies to:** All Signers

Herrick Safety Committee

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PERSONAL PROTECTIVE EQUIPMENT
CERTIFICATION OF TRAINING

DATE(S) OF TRAINING: ________________________________________________

DEPARTMENT: _________________________________________________________

BUILDING: _______ Ray W. Herrick Laboratories ________________ ROOM: ____________

TASK OR ASSIGNMENT DESCRIPTION: ________________________________________

_________________________________________________________________________

PPE REQUIREMENTS: _______________________________________________________

_________________________________________________________________________

ATTENDEES:

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

CERTIFICATION: I certify training was conducted in accordance with the provisions of the Purdue University Personal Protective Equipment Policy and that each affected employee has received and understood the training provided.

Name: ___________________________________________________________ Date: ____________

DISTRIBUTION: Department PPE Training File, Kepner Building, REM/CIVL
Relevant Chemical/Materials for which Material Safety Data Sheets (MSDS) are attached.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. 

Add more if needed: