

# Senior Project Room Rules:

1. Access to the Senior Project Room (SPR) is available 24/7 (excepting game days) to all students currently enrolled in Mechanical Engineering Senior Design.
  1. Any student not enrolled in senior design who wishes to use the SPR may do so with TA permission, approved certification and training, and supervision.
  2. All students using the SPR will be issued a badge, which they must have with them in order to use the SPR.
2. Students found breaking any of the SPR rules will receive a verbal warning on their first offense. A second offense will result in revocation of the student's access to the SPR and the loss of a letter grade (10 points) from the student's final grade for that semester.
3. The following activities are considered "restricted" and must be supervised by a SPR TA
  1. Use of machine tools
  2. Use of chemicals and aerosols
  3. Use of welding equipment <sup>(1)</sup>
  4. Use of power tools
4. While any restricted activities are taking place, all students within the work-zone of the activity must be wearing proper Personal Protective Equipment (PPE)
  1. Proper PPE consists of, but is not limited to: safety glasses, long pants, short-sleeved shirt, closed-toe shoes, tied-back long hair, and no loose jewelry
  2. SPR TA's have the right to require any additional PPE according to the activities being performed.
5. Work Space Policy:
  1. All projects can be assigned work spaces for in-process assembly by request.
    1. All teams in possession of an assigned work space are required to have completely cleaned that workspace before their final presentation.
    2. Any team who has not cleaned their assigned workspace WILL NOT receive a final grade until they have done so.
  2. Unassigned work spaces are free for use by any project during SPR Hours
    1. Any tools, parts, or projects left in unassigned workspaces without their owners present will be confiscated by the SPR TA.
    2. Confiscated items will be returned to groups during SPR hours, by request.
6. Tool Policy:
  1. A toolbox full of basic tools for project assembly will be offered to all teams at the beginning of their manufacturing semester
    1. Any team which accepts a toolbox takes full responsibility for maintaining the contents of the box
    2. All teams in possession of a toolbox are required to return the full toolbox, including all original contents, before their final presentation
    3. Any team who has not returned their toolbox in full WILL NOT receive a final grade and will lose access to the SPR until they have done so
  2. Specialty tools and power tools are the responsibility of the SPR TAs, and can be lent out during SPR hours by request
  3. Any tools bought by a team using team funds become property of the SPR at the end of that team's final semester
    1. Tools bought using personal funds belong to the individual who bought them

<sup>(1)</sup> Students who have passed the welding certification class can weld with the supervision of another certified welder in lieu of a TA

# PPE Requirements

It is the responsibility of the TA on duty to enforce all PPE Requirements. Students within the work-zone of any restricted activity MUST be wearing proper PPE.

## Basic PPE:


- safety glasses
- long pants
- short-sleeved shirt
- closed-toe shoes
- tied-back long hair
- no loose jewelry

## Additional PPE during Restricted Activities

1. Use of machine tools
  - none
2. Use of chemicals and aerosols
  - Wet Layups:
    - Respirator
    - Facemask/Goggles
    - Long Sleeves
    - Gloves
  - Cutting Composites:
    - Respirator
    - Facemask/Goggles
    - Long Sleeves
  - Pre-preg:
    - Gloves
  - Painting:
    - Respirator
    - Gloves
    - Facemask/Goggles
    - Long Sleeves
3. Use of welding equipment
  - All Arc Welders
    - Welding Mask
    - Welding Jacket
    - Heat-Resistant Gloves
  - Open Flame
    - Heat-Resistant Gloves
4. Use of power tools
  - Abrasive Cutters
    - Facemask

# Badges

- Badges will be colored by training level (individual certifications will be listed):
  - Green – TA or equivalent
  - White – Senior Design
  - Orange – Student Organization
  - Blue – non-Senior Class (Concepts, Computer Aided, ect.)
- Badges will display
  - Name
  - Picture
  - Group Association (class, team, or project)
  - All passed certifications (listed on next page)
- Badge Template/Example:

	<b>Kyle Kubik</b>		<b>First Last</b>		<b>First Last</b>
<b>Group</b> TA		<b>Group</b> Corp 1		<b>Group</b> Hyperloop	
<b>Certifications</b>		<b>Certifications</b>		<b>Certifications</b>	
Lab Assistant Training		Shop Safety	Power Tool Safety	Shop Safety	Power Tool Safety
Shop Safety	Power Tool Safety	Composite Safety	Chemical Safety	Composite Safety	Chemical Safety
Composite Safety	Chemical Safety	Hot-Shop Safety	Machining Safety	Hot-Shop Safety	Machining Safety
Hot-Shop Safety	Machining Safety	Welding Cert.	Bridgeport Cert.	Welding Cert.	Bridgeport Cert.
Welding Cert.	Bridgeport Cert.				
<b>Issue Date</b> 1/2/2017		<b>Issue Date</b> 1/2/2017		<b>Issue Date</b> 1/2/2017	
Mechanical Engineering Senior Project Room		Mechanical Engineering Senior Project Room		Mechanical Engineering Senior Project Room	
	<b>First Last</b>		<b>First Last</b>		<b>First Last</b>
<b>Group</b> CAD		<b>Group</b>		<b>Group</b>	
<b>Certifications</b>		<b>Certifications</b>		<b>Certifications</b>	
Shop Safety		Shop Safety	Power Tool Safety	Shop Safety	Power Tool Safety
Woodworking Safety		Composite Safety	Chemical Safety	Composite Safety	Chemical Safety
		Hot-Shop Safety	Machining Safety	Hot-Shop Safety	Machining Safety
		Welding Cert.	Bridgeport Cert.	Welding Cert.	Bridgeport Cert.
<b>Issue Date</b> 1/2/2017		<b>Issue Date</b> 1/2/2017		<b>Issue Date</b> 1/2/2017	
Mechanical Engineering Senior Project Room		Mechanical Engineering Senior Project Room		Mechanical Engineering Senior Project Room	

# Certifications

All Restricted activities require TA supervision regardless of student certification.

- **Shop Safety**
  - Allows access to Project Room Work Spaces, and all basic assembly tools
  - Requirements:
    - SPR Safety Course **OR** University Project Safety Course
- **Woodworking Safety**
  - Allows the use of power tools specifically for woodworking purposes
  - Requirements:
    - University Project Safety Course
- **Power Tool Safety**
  - Allows the use of power tools for both woodworking and metalworking
  - Requirements:
    - SPR Safety Course
- **Composite Safety**
  - Allows the use of Composite materials, and allows the use of tools for composite cutting
  - Requirements:
    - SPR Safety Course
- **Chemical Safety**
  - Allows the use of aerosols and flammables
  - Requirements:
    - SPR Safety Course
- **Hot Shop Safety**
  - Allows the use of the WEMS Outreach Hot-Shop
  - Requirements:
    - SPR Safety Course
    - Hot-Shop Safety Course
- **Welding Certification**
  - Allows the use of the WEMS Outreach Hot-Shop and Welders without TA supervision (partner with at least Hot Shop Safety required)
  - Requirements:
    - SPR Safety Course
    - Hot-Shop Safety Course
    - TA Approval of Welded Certification Piece
- **Machining Safety**
  - Allows the use of Grizzly Mills, Lathes, and Band-Saws
  - Requirements:
    - SPR Safety Course
    - Up-to-date DML Certification **OR** SPR Machining Course
- **Bridgeport Certification**
  - Allows the use of the Bridgeport Mill
  - Requirements:
    - SPR Safety Course
    - Up-to-date DML Certification **OR** SPR Machining Course
    - Hands on experience with close TA supervision

# Training

The following training courses will be offered by the SPR Lab Manager and Assistants for certification purposes. Details on each class will be added soon.

- University Project Safety Course
- SPR Safety Course
- Hot-shop Safety Course
- SPR Machining Course
- Lab Assistant Training

# Toolboxes

Senior Project Room toolboxes will be loaned out to student teams by request. All toolboxes and tools will be color-coded in order to differentiate which tools belong to which teams. It is the responsibility of the student teams to maintain the contents of the toolbox.

Power-tools and specialty tools will be loaned out by a TA during Project Room Hours by request.

- Toolboxes will include the following items:
  - Set or metric Allen wrenches
  - Set of standard Allen wrenches
  - Set of standard open/box end wrenches
  - Adjustable wrench
  - Combination pliers
  - Needle-nose pliers
  - Diagonal Pliers/Cutters
  - Channel-lock Pliers
  - Multi-purpose Electrician's Pliers
  - Carpenter's hammer
  - Dead-blow Hammer
  - Multi-bit screwdriver
  - Small standard socket wrench set
  - Tape measure
  - Small digital level
  - Speed Square
  - 6-inch calipers
  - Utility Knife
  - Small Flashlight
  - File Set