

FACULTY OF ARCHITECTURE
WORKSHOP USER HANDBOOK

WORKSHOP STAFF

Manager: **Keith Millan** 474-6436 millan@cc.umanitoba.ca
Technical Asst. **Rick Finney** 474-6436 finney@cc.umanitoba.ca

WORKSHOP OVERVIEW

The Faculty of Architecture Workshop provides equipment, facilities, staff and instruction to the Faculty of Architecture students for the execution and enrichment of their educational experience. The Workshop provides a full complement of power and hand tools for the manipulation of wood and related media. A limited selection of equipment for the working of metals and other materials is also available. Workshop staff provide user assistance, training and supervision while offering extensive knowledge of materials, tools, processes and safety. Other roles of the workshop and its staff include: support of faculty and staff in the design and construction of office work spaces and storage, technical support to design build studios, management of the materials store and overseeing all laser cutting activities.

All students new to the Faculty must enroll in a mandatory workshop orientation. Identification and contact with these students will be done through the departments. Instructors of courses which will utilize the workshop are encouraged to contact workshop staff to arrange for an introduction to workshop capabilities and procedures and to communicate regularly with shop staff regarding resource utilization.

Never attempt to use a tool that you are unfamiliar with. Seek the assistance of shop staff if you have any questions about the safe operation of any tool. Think through an operation before performing it. Know what you are going to do and what the machine will do in response. Make all the necessary adjustments before turning a tool on. Never remove or adjust a safety guard on any machine or tool without permission. You must be wide awake and alert. Never operate a power tool when you are tired. **Unsafe use of workshop facilities or equipment may result in revocation of access to the facility.**

GENERAL OPERATING HOURS

Monday to Friday 8:30 am – 4:00 pm

Workshop users should be prepared to clean up their work area and leave the shop by 4:00 pm

During busy times of the year, i.e. mid November to mid December and mid March to mid April the shop will have extended hours posted (these may vary depending on Faculty requirements).

POLICIES AND PROCEDURES

Shop Access Privileges

- Shop users must be registered students or Faculty of Architecture staff
- Shop users must have taken the workshop safety orientation
- Shop users must have legitimate course related projects
- Shop Access privileges can be revoked at any time at the discretion of shop staff
- Revocation of shop access privileges must be reconciled with the shop manager
- Shop users must sign in EVERY time they use the Workshop

Shop Hours

- Shop hours are established each term and may vary without notice. Hours are posted in the shop and on the web page
- Any extension of scheduled operating hours MUST be approved by shop management
- Extension of shop hours must be requested by instructors at least 48 hours prior to the hours in question

Personal Protective Equipment

- Safety boots are required whenever working in the shop (U of M policy)
- Safety glasses or goggles MUST be worn during the operation of any stationary or portable power equipment (non-tinted, plastic-lens prescription glasses are also acceptable)
- Ear protection is available and should be worn during sustained use of noise generating equipment
- Dust masks are available and should be worn when generating significant dust

Tool Check-Out

- Borrowers are responsible for tools checked out. If workshop equipment is lost, stolen or damaged while checked out, borrowers are responsible for replacement – do not to loan the equipment to anyone else (borrowers will be deemed responsible).
- Obtain approval from shop staff before removing ANY tool from the shop. Special permission must be obtained for periods longer than 2 hours
- Tools should be returned to the shop promptly upon completion of use
- Tools checked out overnight should be removed no more than 1 hour before closing
- Tools checked out overnight must be returned within one hour of opening the next day
- Borrowed tools must be returned directly to workshop staff
- Tool check-out privileges can be revoked at any time at the discretion of shop staff
- Overdue fines for tools returned late are \$2/day for hand tools and \$5/day for power tools (rates subject to change without notice)

Housekeeping

- A clean shop is an effective shop. Be considerate of other shop users by keeping your work area neat.
- ANY materials sitting on the floor at ANY time will be considered trash and treated accordingly.
- Sweep up any significant dust or refuse as it occurs. Throw away scraps as they are made.
- Daily clean-up starts ten minutes before closing. Please help us clean up by stopping work, returning tools and removing/storing materials at least ten minutes before closing time.

Adjacent Work Areas (assembly room, hallway)

- The assembly room and hallway areas are available for 24 hr access
- Storage of projects and/or materials in this area is restricted unless approved by shop staff.
- If these areas are not maintained, they may be CLOSED or off limits for the next 24 hours.

Air Quality and Dust Collection

- In order to maintain the air quality in the shop and neighboring areas an extensive dust collection system is provided.
- **NEVER** allow sparks or other incendiary material to enter the dust collection system.
- Sawdust is a known carcinogen; please help to minimize exposure to this and other toxic substances.
- The generation of harmful fumes outside of properly ventilated areas is a serious health and safety hazard.
- Oil based finishes are a significant fire hazzard and cannot be applied without consent and supervision of workshop staff.
- Use finishes, adhesives, resins and similar products in designated areas ONLY!!

Materials Storage

- Obtain permission from a shop staff before leaving any materials unattended in the shop
- Store materials neatly and out of the way of other shop users
- Clearly mark all materials with name, date and contact information
- Unidentified materials may be disposed of at the discretion of shop staff
- Identified materials may be disposed of if left in the shop for over one week

Non-Academic Projects

- Faculty, staff and currently registered students may use the workshop during regularly scheduled hours for non-academic projects under these conditions:
 - All standing policies and procedures are followed
 - Users are Faculty of Architecture students or employees
 - Users have attended a User Orientation Session
 - The use does not interfere with users undertaking course-related work in any way.
 - Shop management approves the use.
 - No consumable shop supplies are used (glue, abrasives, hardware, etc.)
 - No commercial, professional or financial gain is made by any party.
- Shop staff on duty have the authority and responsibility to determine whether any such work is permitted on a case by case basis.

Materials Sales

- The workshop provides miscellaneous materials, tooling and hardware for sale to shop users.
- Check on inventory of materials prior to needed date, stock can be inconsistent.
- With adequate notice, specific materials may be ordered by shop staff, check with shop management.

WORKSHOP OCCUPANCY POLICY

The primary responsibility of Shop staff is monitoring the safety of shop users. The number of users which an individual is able to effectively monitor is affected by many factors. It shall be each staff member's responsibility to determine how many users they can effectively monitor under any given circumstances. Generally, each shop staff should be able to monitor 20-25 users. This limit may be adjusted upward or downward at the discretion of staff dependent upon conditions.

If occupancy limits are exceeded:

The most recent arrivals will be asked to leave the shop area and the workshop door will be locked. Shop users will be asked to wait in the hallway, and establish a queue amongst themselves. As users leave or machines become available, shop staff will admit users. If a safe environment cannot be established through the application of the procedure above, the workshop may be CLOSED to establish order. Application of this policy will be left to the discretion of Shop staff. Resolution of any disputes regarding the application of this policy shall be the responsibility of the workshop Manager in conjunction with the Dean's Office.

Academic staff should consider these occupancy limits when assigning projects and deadlines and notify workshop management of expected heavy shop use so that adequate staff can be scheduled.

WORKSHOP POLICY ON SPECIAL PROJECTS

The primary mission of the workshop and its staff is to serve the needs of Faculty of Architecture students in their academic work. At the same time, the workshop receives many requests to work on special projects.

These projects will be managed under the following policy:

- Actual cost of materials used in the completion of a project will be charged to the department/individual responsible.
- Special projects will only be considered based on staff availability and the needs of shop users at that time. Special projects will not normally take priority.

MATERIALS USAGE GUIDELINES

Staff in the workshop have the challenging task of providing the student body with a safe, efficient and cost effective work environment. Certain materials, processes and/or practices have a detrimental effect on the workshop's ability to provide one or more of the above elements. The [Materials Usage Guidelines](#) below are intended to maximize the potential of the workshop's capacities and avoid the workshop being overwhelmed by particular materials, processes and/or practices. Instructors are asked to consider these guidelines when developing assignments.

Sheet Stock- Sheet stock should be employed only in the thicknesses in which it is commercially available. The widespread practice of planing or thickness sanding of sheet materials will not be allowed.

Shaping/Modeling- Shaping of rectilinear objects into organic forms through sanding should be kept to a minimum. Such activities are the root cause of the majority of shop accidents and overwhelm our dust collection system. Additive processes rather than reductive processes should be explored when developing assignments involving organic forms. There is no mechanism for the containment of dust generated by significant contouring of site models or other organic forms.

Recycled Materials – All recycled material should be approved by the workshop manager. Wood containing old paint may contain lead and can not be sanded, planed or machined. The source of recycled material should be known.

Toxic Materials – The employment of toxic materials must be kept to a bare minimum. Please review the Material Safety Data Sheet for any material before assigning its use.

Welding – The workshop has capacity for welding only raw steel and aluminum. Welding of stainless steel, galvanized steel, finished and exotic metals that generate toxic gases are not permitted in the workshop.

Spray Booth – The spray booths in Architecture 2 and Russell are the only approved locations to use substances which generate harmful vapors. Never use spray adhesive, spray paint, solvents or other volatile materials anywhere but the spray booth.

Material Safety Data Sheets (MSDS) – MSDSs provide information about the health hazards that may be associated with manufactured products as well as recommendations for limiting exposures and treating potential exposures.

Feel free to contact workshop management if you have any questions about these guidelines or other workshop related issues.

GENERAL WORKSHOP SAFETY

Consult with a shop staff member before performing any procedure you are unfamiliar with. Shop staff are the ones who decide if the work can and should be done. They will suggest the safest, most efficient way to do it. Think of the Workshop as an applied physics lab. **For every action, there is an equal and opposite reaction.** Be prepared for all of the possible reactions to your action. Be thoughtful and helpful toward other shop users. Be sure the work you are doing is not endangering yourself or others. Caution other students if they are not following safe operating procedures. Select the proper size and type of tool for your work. Never use a tool unless it is sharp and in good condition. Inform shop staff if tools are damaged, dull or in need of adjustment.

Clothing - Dress properly for your work. Safety boots are required whenever working in the shop (U of M policy). Remove coats and jackets, roll up loose sleeves, remove loose jewellery and tie back long hair.

Eye Protection - Wear safety glasses, goggles or a face shield when operating any power tools. Be sure you have enough good light to see what you are doing.

Headphone/IPods, etc - The use of headphones is prohibited when operating power tools. When operating machines, you need to be able to hear what's going on around you.

Carrying Tools - Keep sharp-edged and pointed tools turned down. Do not swing or raise your arms over your head while carrying tools. Do not carry sharp tools in the pockets of your clothes.

Clamping Stock - Whenever possible, mount the work in a vise, clamp or special holder. This is especially important when using chisels, gouges, portable electric tools, or drill press.

Working Speed - Give yourself enough time to complete your work. Rushing can lead to accidents and seldom produces quality work.

Floor safety - The floor should be clear of scrap blocks and excessive litter. Keep projects, saw horses and other equipment and materials you are using out of traffic lanes. Immediately wipe up any liquids spilled on the floor.

Injuries - Report any injury, however minor, to a Shop staff.

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