# Gerald Hatch Centre

## for Engineering Experiential Learning

Procedural Manual

McMaster University
Faculty of Engineering
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# Revision History

| Revision Number | Author | Date of Revision | Changes/Comments |
|---|---|---|---|
| 0 | Mitchell Kurnell | August 10, 2017 | Initial document creation, monitor usage of meeting rooms to possibly shift away from Faculty bookings |
| 1 | Liam McDermott | May 24, 2018 | To prepare the document for public use, the Procedure Manual needs to be edited to be consistent with the MES policy manual. In our policy manual MES clubs are referred to as “Groups” so a distinction can be made between them and department clubs.<br><br>Additionally affiliates are not supposed to be able to apply for certain resources, which is why there are some edits where they are removed from the manual.<br><br>The last appendix for bay rental was edited as a week is too short in both Matt and I’s opinion (based on a discussion we had).<br><br>The edits to appendix A concerning diversity and accessibility are changed based on feedback Matt had in the google doc and the fact that this is something the MSU has been looking into. Although we don’t report to them, they do provide funding for some of our clubs and teams so providing records on diversity helps that relationship. |
| 2 | Hunter Ceranic | December 2, 2019 | Updated entirety of document, specifically updating the MES Hatch Centre Student Coordinator position, and changes to policy surrounding meeting rooms, project lockers, Clubs and Teams office and safety and training regarding the Hatch Bay Space |
| 3 | Mark Fahmy | September 6, 2022 | Edited section 4.2 to reflect that bookings can be made by Hatch Coordinator, |

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| | | | miscellaneous edits, added section 5.10 and Appendices L (faculty room card waiver for student groups - refer to 5.10), M (junction TV waiver) |
| 4 | Luke Schuurman | July 24, 2023 | Updated responsibility changes to the new MES VP Internal position, renamed positions, updated JHA form, clarified booking process for Atrium and Junction. |
| 5 | Hatch Operating Committee | February 5, 2025 | Updated SOPs, JHA Form, Temporary Bay Space Use Request Form, MES Gerald Hatch Coordinator role name, workshop training, The Drain, After Hours Access, and other clerical changes. |

# Mission Statement

This document contains guidelines, rules, and policies regarding the spaces within the Gerald Hatch Centre for Engineering Experiential Learning, hereafter referred to as the Hatch Centre. This procedural manual was developed by a committee of students and Engineering faculty members with the consultation of various other stakeholders within the McMaster community.

The Hatch Centre is a place for students to participate in experiential learning through extra-curricular activities, which will assist in further developing their technical and professional skills. As such, this procedural manual was created to help ensure that the vision of student-focused experiential learning is maintained. This document will serve as a reference for the uses of the various spaces within the Hatch Centre and its rules outline acceptable behaviour within its various facilities.

# 1. Operating Committee

1. The mandate of the Hatch Centre Operating Committee is to coordinate planning for the use of all space on levels one and two of the Hatch Centre, and make requests to the Faculty for any expenditures in support of the student spaces in the Hatch Centre. This includes:
    i. Evaluating the processes and procedures on an annual basis (Fall semester);
    ii. Maintaining and updating the Hatch Centre Procedural Manual;
    iii. Making recommendations to the Faculty of Engineering regarding updates and improvement projects for the Hatch Centre.
2. This committee will meet on a once per term basis, or more often if relevant issues arise.
3. The Ex Officio members of the committee are comprised of students, faculty and staff members to ensure that the original vision of the Hatch Centre is maintained.
4. The committee shall be chaired by the Associate Dean, Undergraduate Studies.
5. The membership of the committee shall consist of:

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| Faculty of Engineering | Associate Dean, Undergraduate Studies | voting (tie breaker) |
| | Assistant Dean, Undergraduate Studies | voting |
| | Hatch Centre Faculty Advisor | voting |
| | Manager, Co-Curricular & Student Engagement, ECCS | voting |
| | Hatch Centre Workshop Technologist | voting |
| | Director, Finance and Administration | non-voting |
| | Director, Outreach and Engagement | non-voting |
| | Manager, Building Operations | non-voting |
| McMaster Engineering Society | President | voting |
| | Vice President, Internal | voting |
| | Vice President, Student Life | voting |

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| | Director of Clubs | voting |
| | Gerald Hatch Centre Coordinator | voting |

6. Quorum requires six of the 10 voting members to be in attendance.
    i. In this case, a minimum of four votes (of the six in attendance) is required to pass a motion.
7. The Hatch Centre Faculty Advisor is appointed by the Dean of Engineering.
    i. Chairing will defer to this person in absence of the Associate Dean, Undergraduate Studies.
8. The MES Gerald Hatch Centre Coordinator, hereafter referred to as the “Hatch Coordinator”, is a member of the MES, appointed by the MES Executive, as outlined in the MES Bylaws.
    i. If more than one individual holds this position at a given time; the position will only receive one whole vote.
9. Any committee member may ask a delegate to attend a meeting on their behalf.
    i. In the case of voting committee members, the delegate should be a member of the same unit or group as the committee member and may vote on their behalf.
10. It is the responsibility of the MES President and Manager, Building Operations to review this manual on an annual basis and update as required.

# 2. General Use Spaces

## 2.1. Walter G. Booth Atrium

1. The Walter G. Booth Atrium (JHE H180, JHE H181), hereafter referred to as the Atrium, is an open space accessible by all students.
2. The space is intended as a spot for students to sit and relax between classes.
3. Students may also wish to complete course work or other projects at the tables in the foyer.
4. Students are expected to treat the space with respect and failure to do so may result in revocation of privileges associated with the Hatch Centre.
5. The Atrium may also be booked by student groups, faculty, or staff for tabling or special events.
6. The Hatch Coordinator will be responsible for approving the requests and tracking the bookings.

## 2.2. David Wilkinson Lounge

1. The David Wilkinson Lounge (JHE H101) is a space intended for engineering students to relax and work collaboratively on assignments, projects and other course work.
2. If tools or machinery are needed to complete the student projects, the work should be done in the Student Workshop.
3. Students are expected to act respectfully and in a manner representative of McMaster Engineering.
4. The lounge furniture may be reorganized as needed, in accordance with the Ontario Fire Code, however, no furniture may be removed or added to the lounge unless approved by the MES Lounge Coordinator(s).
5. The Lounge Coordinator(s) will be responsible for keeping inventory of the furniture and other fixtures in the lounge (e.g. televisions) and will be required to report any missing items to McMaster Campus Safety Services and the Hatch Coordinator.
6. Furthermore, the Lounge Coordinator will be required to maintain the furniture and fixtures of the lounge or request service if the required maintenance cannot be performed by the Lounge Coordinator(s).

7. Any repairs or service required will be handled by the Faculty of Engineering, subject to the discretion of the Director of Finance and Administration.
8. Improvements to the lounge will be paid for with funds as dictated by the MES Policy Manual.

## 2.3. Junction

1. The Junction (JHE H281) is an open area on the second floor of the Hatch Centre, available to students to work on collaborative projects, assignments, other work, and to relax between classes.
2. Students are expected to treat the area with respect and will be held responsible for their actions if any form of vandalism.
3. If any vandalism is found, the incident will be reported to McMaster Campus Safety Services and any evidence available will be handed over to assist their investigations.
4. Additionally, the student may be brought to McMaster's Student Affairs Administrator if it is believed that the Student Code of Conduct has been breached.
5. Students may rearrange the furniture as necessary to suit their needs, in accordance with the Ontario Fire Code, but are expected to return the furniture to its original configuration when they leave the space.
6. No furniture is to be removed or added to the space unless approved by the Hatch Coordinator.
7. The Hatch Coordinator will be required to keep an inventory of the furniture and fixtures in the space and will be required to maintain an organized configuration of the furniture.
8. All activities must be in accordance with McMaster's Event Guidelines and all legislative policies.
9. The Junction may be booked by student groups, faculty, or staff for special events.
10. The Hatch Coordinator will be responsible for approving the requests and tracking the bookings.

## 2.4. Meeting Rooms

1. There are four meeting rooms available for booking by students and faculty on the second floor of the Hatch Centre: three small meeting rooms (JHE H201, H203, H205) and one large meeting room (the Board Room, JHE H204A/B) which may be split up into two medium sized meeting rooms.
2. Unless specifically requested, the large meeting room shall remain split into two smaller meeting rooms to allow for greater usability of the space.
3. Students are expected to treat these rooms respectfully and will be held responsible for their actions while the room is booked out under their name.
4. No furniture is to be removed or added to these rooms unless approved for a specific reason (e.g. information nights) by the Hatch Coordinator.
5. To keep the space student-focused, students will have first priority when booking the second-floor meeting rooms.
6. However, the faculty may request to book these rooms during low use periods or for special events.
7. Students will be able to book the meeting rooms during normal campus building operating hours (normally 7:00 a.m. to 11:00 p.m.) on a first-come, first-serve basis.
8. The MES hosts an online booking service.
9. Time slots will be available for a maximum of three (3) hours at a time for a given individual, unless special permission is requested from the Hatch Coordinator (e.g. a team's information night).
10. MES clubs, teams, groups, and affiliates will be given priority booking at the beginning of each semester to ensure that they have space for their information nights and general meetings.
11. Meetings must be approved through the Associate Dean, Undergraduate Studies in accordance with the Student Event Guidelines.
12. Meeting requests will be accommodated to the greatest extent possible, while ensuring fair access among all MES clubs, teams, and groups, and affiliates.
13. Failure to do so may result in teams being unable to reserve meeting rooms far in advance.
14. In the case of conflicting reservation times, preference will be given to the request which was submitted the earliest.

15. For special events, such as team information nights, additional booking requests can be made by teams to the Hatch Coordinator and will be given highest priority for reservation.
16. Information for meeting or event booking must be delivered at least five business days in advance.
17. Room booking privileges may be revoked if the space is not used responsibly, for example teams or individuals that do not show up to reservations or who fail to clean up after themselves.
18. Teams and individuals are expected to cancel any meeting times which are found to not be needed in order to open the space to others.
19. In order to maximize usage of the space, students with Hatch RFID cards may unlock meeting rooms during normal campus building operating hours (typically 7:00 a.m. to 11:00 p.m).
20. Doors, however, should not be held or propped open.
21. Furthermore, students may use the rooms if they have not been booked out for a meeting.
22. If another student has booked the room, the students without the reservation must leave the room, giving preference to those who booked the room.

# 3. Faculty Spaces

## 3.1. Student Services / ECCS

1. The Engineering Student Services and Engineering Co-op and Career Services (ECCS) offices are located on the third floor of the Hatch Centre.
2. These spaces are administered by the respective parties within the Faculty of Engineering and therefore may dictate their own rules for acceptable conduct.
3. While Student Services and ECCS administer the uses of the rooms contained within this space, they will, however, keep the original vision in mind when making any changes.
4. Furthermore, the Hatch Centre Operating Committee shall be informed of any substantial changes to be made to the space (e.g. moving Student Services out of the space in place of another group).

## 3.2. Kurt Strobele Collaborative Learning Room

1. The Kurt Strobele Collaborative Learning Room (JHE H324) is a space available for students and faculty to book out for events, meetings or other functions including teleconferencing and videoconferencing.
2. This space is administered by the Faculty of Engineering and booking requests are handled by The Hub.
3. Student groups who wish to book this space must submit the request through the Hatch Coordinator, who will make the request to The Hub on their behalf.

# 4. Controlled Access Areas

## 4.1. MES Office

1. The MES Office (JHE H202) is a space for the MES to have small meetings and to work to ensure that the MES completes its tasks.
2. It is expected that the MES Executive Team shall monitor the behaviour of members in this space. All students who have access to this space will sign and behave in accordance with the MES Office Usage Contract, outlined in the MES Policy Manual.
3. Access to the MES Office will be controlled by RFID card access, with the cards being administered by The Hub (JHE 216A).
4. The MES Policy Manual dictates who will be given access to the MES Office.
5. The MES President must submit a list of people to The Hub by the end of the second academic semester in order to ensure access throughout the summer months.

## 4.2. Clubs & Teams Office

1. The Clubs & Teams Office (JHE H206) serves as a space for MES ratified clubs and teams to work on their projects.
2. There are also lockers available for teams to store documents relating to their groups.
3. If teams wish to use the lockers, they must request access from the Director of Clubs.
4. Access to the Clubs & Teams Office will be controlled by RFID card access, with the cards being administered by The Hub (JHE-216A).
5. The MES VP Internal will submit a list to The Hub of individuals from the clubs and teams who will obtain access to the Clubs & Teams Office by August 20th.
6. Students are expected to treat the Clubs & Teams Office with respect and may not remove or add any furniture to the space without permission of the Hatch Coordinator.
7. Failure to do so may result in revoked access to the Clubs & Teams Office as explained in the Stewardship Agreement (Appendix C).

## 4.3. The Drain

1. The Drain (JHE H102) is the MES store. It is the main distribution outlet for McMaster Engineering paraphernalia, tickets to engineering events, and any other items sold on behalf of the MES.
2. The MES Drain Coordinator(s) are responsible for daily operation of the Drain, as outlined in the MES Bylaws.
3. The Drain Volunteer(s) may be authorized by the MES VP Internal and the Drain Coordinator(s) to have RFID card access to the Drain on weekdays from 9:00 am - 6:00 pm.

## 4.4. Project Lockers

1. Project Lockers are located on the second floor of the Hatch Centre and are available for students to book out for a maximum of two semesters with renewal approved per semester.
2. The lockers are meant to store things such as course-related projects and capstone prototypes, not for club or team related projects, or personal items such as gym clothes.
3. The MES will provide locks for the Project Lockers.
4. After the storage time has expired, students must remove their items from the lockers by the time of expiry.
5. The project lockers are treated as a service, and as such to ensure that all locks are returned and lockers are cleaned out, a $10 refundable charge will be administered to each group renting a locker with an MES lock.
6. Materials being stored must not pose any risk to the users of the Hatch Centre and any chemicals or other potentially harmful substances must be stored according to the Safety Data Sheet (SDS).
7. Students who leave items in storage lockers for longer than their specified time will be notified over email to remove their items.
8. If items are left for more than 24 hours after the expiry of a student's time slot, the lock will be removed from the locker and the items will be moved to the Drain for a period of 1 week.
9. After this time, the items will be disposed of appropriately.

10. MES sub-groups seeking storage for their projects may request access to the project lockers.
11. Access to these lockers will be provided on a case-by-case basis at the discretion of the Hatch Coordinator in consultation with the MES VP Internal & Director of Clubs.
12. Preference will be given to MES sub-groups with a demonstrated need for storage of excessively large project equipment.
13. Approximately 10 project lockers may be allocated to MES sub-groups under any circumstances.

## 4.5. Storage Rooms

1. Storage rooms (JHE H103, H105) are available for teams and groups to store equipment which they may not need to continually access.
2. Equipment kept in these rooms will be stored for at least a term at a time and as such, applications for storage space are required and can be found in Appendix D.
3. The storage room located in the Build Space will only be accessible to teams which have access to the Build Space and as such, preference will be given to these teams for this space.
4. However, in order to maintain a fair allocation of space, teams with storage in the Build Space may not receive storage space in H103.
5. Storage must be done in a safe manner and no chemicals or potentially harmful substances may be stored in H103.
6. The other storage rooms will be available for groups which have large objects to store for long periods of time.
7. Allocation of these storage spaces will be based on a team's application, available in Appendix D, which outlines what a group intends to store, how much space they require and how long they wish to occupy the storage room.
8. Storage will be allocated for a maximum of one school year (i.e. September – August) at a time.

## 4.6. Sea Can Storage

1. Sea can storage is located at McMaster Innovation Park (MIP) and is available for Clubs & Teams to store large items (such as vehicles) for long periods of time.
2. This storage should be used for items which are not sensitive to environmental changes (e.g., humidity and temperature) as the sea cans are not climate controlled.
3. Additionally, no hazardous chemicals may be stored in sea cans.
4. Groups wishing to apply for this storage space must complete Appendices A and D.
5. Storage may be given to teams who do not otherwise use the Hatch Centre facilities.
6. Teams are expected to keep the sea cans and surrounding areas tidy and to treat the areas with respect.
7. Failure to do so may result in revocation of access to the Hatch Centre facilities and sea can storage as outlined in Appendix D.
8. Sea Can storage allocations are to be conducted by the responsible executives as dictated in the MES Policy Manual and Bylaws.
9. In some cases where additional storage space is available in the MES Sea Cans, such space may be allocated to groups in need of long-term storage for items which will not be used frequently throughout the year and only need to be accessible for shorter periods of time, so as to allow for other groups with higher usage frequencies to utilise on-campus storage spaces more effectively.

## 4.7. After Hours Access

1. For MES and MES sub-group events that have been approved by UHS to extend outside normal campus building operating hours normal campus building operating hours (normally 7:00 a.m. to 11:00 p.m.), the MES Executive may sign-out an RFID card from the Hub for after hours access to MES-managed spaces.
2. This access card would have after-hours access to the MES Office, Clubs & Teams Office, Clubs & Teams Storage, the Lounge, the Meeting Rooms, and the Drain.

3. The access card shall be returned to the Hub's dropbox by 9:00 am of the day the after hours event occurred.
4. After Hours Access must be coordinated by a minimum of two individuals, at least one of which must be an MES Executive. The MES Executive member must inform Campus Safety Services about the event.
    i. RMM #304 Working Alone Program should not be necessary, as no after hours access shall be handled alone.

# 5. Hatch Centre Workshops

## 5.1. Student Workshop

1. The Student Workshop (JHE H104) is intended to support students who are working on projects by providing them with the space and tools to do so.
2. In order to work in the Student Workshop, students must obtain a minimum of a Tier 1 safety training as explained in Section 6.1.
3. To gain full usage of the space, students may require additional training as explained in Section 6.1.
4. The Student Workshop will contain basic hand tools available for qualified students to use (e.g. screwdrivers, wrenches, handsaws, etc.).
5. Furthermore, there will also be larger equipment available for use such as drill presses.
6. The space will need to be monitored to determine which equipment is in high demand from students and which equipment is missing from the space.
7. The Hatch Centre Operating Committee will determine which equipment is to be purchased using the various budget's (macLAB, MES funds, etc.).
8. The Hatch Centre Operating Committee and Workshop Technologist will make a recommendation to the MES as to whether missing equipment should be replaced.
9. The Workshop Technologist will be present in the shop during normal working hours and will supervise the activities of the students in the Student Workshop.
10. If they observe any unsafe practices being performed by students, the Workshop Technologist reserves the right to stop student(s) from continuing to use the Student Workshop.

11. The Workshop Technologist will explain to the student how their actions were unsafe before determining what further action to take. Further action might range from additional training to banning the student(s) from further access to the shop.

### 5.1.1. General Rules

1. The Student Workshop is to be used only by students registered in an undergraduate program within the Faculty of Engineering at McMaster or on a McMaster Engineering team and verified by the team captain.
2. Shop facilities may not be used unless the Workshop Technologist or a student with a Tier 3 safety rating is present as described in Section 6.1.
3. Students must recertify their training by April 30th each year.
4. Students who have not recertified their training by this date must complete the full training program.
5. There must be at least two individuals present at all times when the shop facilities are in use.
6. Smoking, chewing tobacco, or being under the influence of drugs or alcohol is strictly prohibited.
7. Eating or drinking within the Student Workshop is prohibited.
8. The use of headphones or any similar device is prohibited.
9. All accidents, including minor injuries and near misses and all hazardous conditions or activities must be reported immediately to the Workshop Technologist and the appropriate McMaster Injury/Incident Report Form must be filled out.
    i. If the Workshop Technologist is not present, students must contact Campus Safety Services (e.g., dial 88 from a campus phone, use the SafetyApp) in the case of any incident.
10. No more than 15 students may be in the Student Workshop at any given time unless approved by the Workshop Technologist.
11. No more than 20 students may be in the Build Space at any given time unless approved by the Workshop Technologist.

12. No more than a total of 30 students may be present in both the Student Workshop and Build Space at any given time unless approved by the Workshop Technologist.
13. Access cards may only be used by the student they were issued to with absolutely no exceptions.
14. Students must report any missing items to the Workshop Technologist immediately and any student found to be stealing items from the Hatch Centre will be reported to McMaster Campus Safety Services.
15. No tools may be removed from the Student Workshop for any use other than to be used in the Build Space.
16. Personal tools or equipment may not be brought into the Student Workshop unless approved by the Workshop Technologist.

### 5.1.2. Clothing Requirements

1. Any clothing, jewellery (e.g. rings, watches, dangling earrings, bracelets, necklaces, etc.), earphone cords (e.g. iPods, etc.) or other items that could become entangled in moving machinery is prohibited.
2. Always wear full-length pants. Opt for clothing that resists light cuts and does not melt when burned (e.g. cotton, canvas)
3. Avoid leggings and synthetic fabrics due to combustibility. Exceptions may be permitted by the Workshop Technologist.
4. Shop users must wear closed toe shoes that completely enclose their feet.
5. Non-slip, steel toed boots/shoes are preferred, but not required.
6. Long hair (i.e. exceeding shoulder length) must be adequately restrained to prevent becoming entangled in moving machinery.

### 5.1.3. Safety Rules

1. Eye protection must be properly worn at all times by all individuals in the Student Workshop areas.
2. Always wear safety glasses or face shields (required when using hand grinders) designed for the type of work being done.
3. Safety glasses must still be worn when using face shields or welding helmets.

4. Hearing protection is required when working with machines or tools that produce an excessive (85dB or greater) noise level for extended periods of time (e.g. when using hand grinders).
5. Hearing (ear) protection is provided within the shop.
6. Causing distractions of any kind is prohibited.
7. Students are expected to demonstrate mature judgment and common sense in their work and conduct while working in the Student Workshop and Build Space and may be asked to leave if they fail to do so.
8. Tools are to be used only for the purpose for which they are designed.
9. If you are unsure of which tool to use to accomplish a task, consult with the Workshop Technologist before beginning work.
10. If you are not sure how to operate any machinery check with the Workshop Technologist.
11. Read and follow all safety checklists and SOPs posted on or near the various machines.
    i. This should be done before turning on the machine.
12. Machine guards are to be in place and in use at all times.
13. If machine guards are to be removed for any reason, the machine must first be locked out and tagged out.
14. This shall only be done by the Workshop Technologist or a certified technician.
15. Operators will not leave a machine until it has come to a complete stop.
16. Students are not to attempt to perform repairs of any kind to shop equipment.
17. All damaged or defective equipment must be reported immediately to the Workshop Technologist.
18. All machine maintenance being performed must abide by the proper lock out tag out procedure.
19. Only one person may operate a machine at a time.
20. Keep aisles clear and maintain unobstructed access to all exits, first aid kits, fire extinguishers, electrical panels, eyewash stations, and fire cabinets.
    i. Take note of their location in the shops areas.
21. Keep floors free of loose tools, oil, grease or any other type of liquid.
22. Spills should be cleaned immediately if the student is trained to do so (i.e. has taken the Chemical Spills and Handling Training through UHS).

i. Otherwise the incident must be reported to the Workshop Technologist immediately.

23. Keep the floor clear of metal chips and scrap pieces.
24. Put them in the trash containers or the scrap metal bins.
25. Compressed air is not to be used to clean off machines, work areas, tools or clothing.

## 5.2. H. Douglas and June Barber Build Space

1. The H. Douglas and June Barber Build Space (JHE H106) (referred to as the Build Space throughout this document) is a controlled access area available for student teams, groups or clubs (referred to as Teams hereafter).
2. This space will facilitate teams' development of vehicles and other large projects for the purpose of competition or experiential learning.
3. Students require a Tier 2 safety rating, as described in Section 6.1.2, in order to enter and work in the Build Space.
4. Access to the Build Space is controlled via RFID card access which can be obtained from the Hub once the Workshop Technologist has signed off that the appropriate safety training requirements have been met as described in Section 6.1.2.
5. All safety rules for the Student Workshop also apply to the Build Space, such as wearing required PPE.
6. Students in the Build Space are expected to act in a safe manner and to only perform activities which they are confident and trained to complete.
7. Student teams wishing to apply for residency in the Build Space must be ratified as a club or team by the MES.
8. Teams must also meet the requirements outlined in the Stewardship Agreement (Appendix B) or in the process of meeting those requirements at the time of application.
9. Applications will be reviewed by the MES VP Internal and the Director of Clubs so that space allocations may be decided.
10. Students taking a vehicle out of or into the Build Space must use a spotter to ensure the safety of all of those around.

11. Failure to use a spotter may result in revocation of access to the Hatch Centre facilities as described in Appendix B.

### 5.2.1. Build Space Usage Rules

1. Teams with full bays must stay within their boundaries at all times.
2. Teams with half bays may use their half of the bay space.
3. If the other team is not present, half bay teams may use up to 2/3 of the bay space, but must return all tools and materials back to their own half when leaving.
4. Teams may not move or use another team's tools, materials, or workbenches.
5. All work outside of the bay space is strictly prohibited, including but not limited to the aisle, other teams' bays, and the back storage area.
6. A clear path to the bay door must be maintained at all times.
    i. The pull chain and latch must be easily accessible.
7. Windows and windowsills must be kept clear of materials and tools at all times.
8. Do not cause damage to the bay space.
9. This includes but is not limited to heavy impacts on floors or walls, excessive heat or cold on surfaces, exposing surfaces to chemicals or solvents, scraping or using heavy abrasive on surfaces, and painting or defacing surfaces.
10. Do not spray paint in the workshop, including HVLP and powder coat systems.
11. Store all flammables appropriately.
12. All flammables must be stored according to the SDS if the bay is empty, even if the team plans on returning later.
13. Do not keep garbage cans in the bay.
14. Garbage cans are shared between teams and should be positioned beside the pillars by the aisle.
15. Do not create excessive noise.
16. Noise should not exceed normal conversation levels and students must be able to hear each other if their names are called.
17. The bay door must be supervised when opened.
18. At least one team member must be in the bay or in the immediate area outside of the bay door.
19. At no point in time shall an open bay door be left unsupervised.

## 5.3. Dan Mance Woodworking Room

1. The woodworking room (JHE H106/B) is located next to the Student Workshop and will be used by students completing projects which involve combustible or flammable materials (e.g. sawdust).
2. This is to ensure that these materials are kept separate from any possible ignition sources which may be in the Student Workshop or the Vehicle Workspace.
3. Students must not bring any materials or tools which may react volatilely within the environment.
4. Any equipment which may cause any type of spark or excess heat are strictly prohibited within the woodworking room.
5. In order to access this room, students must have completed the appropriate Tier 1 safety training.
6. Furthermore, all students using the space must consult with the Workshop Technologist prior to use.
7. Failure to do so or inappropriate use of the space may result in revocation of Hatch Centre privileges.
8. If work is being performed after hours in this space, students must use the buddy system described in Section 6.1.5.
9. The “buddy” student must check up on the student performing the work every 15 minutes to ensure that they are okay.
10. The maximum occupancy for this space is 3.
11. More students may be permitted but must be authorised by the Workshop Technologist.

## 5.4. Dale McDonald Welding Room

1. The welding room (JHE H106/A) is located within the Build Space and is intended to house all welding and related activities (including those which produce excessive heat or sparking) in order to isolate these activities from the surrounding environment.
2. This space is intended to keep activities which cause excessive heat and ignition sources away from other students and combustible materials.

3. Students working in the welding room must wear all of the appropriate PPE every time they are performing work.
4. Furthermore, students must have completed the appropriate Tier 2 safety training as well as the required additional certification.
5. All students using the space must check in with the Workshop Technologist or inform their Captain or Safety Officer if being used after hours.
6. Failure to do so or inappropriate use of the space may result in revocation of Hatch Centre privileges.
7. If work is being performed after hours in this space, students must use the buddy system described in Section 6.1.5.
8. The “buddy” student must check up on the student performing the work every 15 minutes to ensure that they are okay.
9. The maximum occupancy for this space is 3.
10. More students may be permitted but must be authorised by the Workshop Technologist.

# 6. Safety

## 6.1. Tiered Safety System

1. The Hatch Centre Safety Policy is comprised of three tiers with additional qualifications available.
2. As students complete the required training for each tier and the additional qualifications, they will have access to more of the equipment available in the workspace of the Hatch Centre.
3. After completing a specific training, students will be required to have the Workshop Technologist sign off on their training record.
4. This will ensure that students are only able to access the areas available to them.
5. If a student performs any activities unavailable to their current training level they may have their privileges removed.
6. This potentially includes access to all of the Hatch Centre facilities and students may be reported for a breach of the McMaster University Student Code of Conduct if the offense is deemed to be serious enough.
7. This will be done at the discretion of the Workshop Technologist.
8. The Workshop Technologist shall keep a record of all of the safety training completed by students accessing the Student Workshop and Build Space.
9. Additionally, students are expected to have proof of their training (through their Hatch card) and their student card on them at all times while using the Student Workshop or Build Space.
10. When entering the Student Workshop or Build Space all students must check in with the Workshop Technologist if entering during normal operating hours.
11. If students are using the spaces after hours, it is the supervising Tier 3's responsibility to have their team members check in with them and constantly be aware of who is using the space with them.
12. Students participating in the Tiered Training Program should also be aware of McMaster's Emergency Guidebook.

### 6.1.1. Tier 1

1. Students who wish to enter the Student Workshop must have at least a Tier 1 safety rating.
2. This training level will allow students to use basic hand tools under the supervision of the Workshop Technologist.
3. Students must complete all of the required training as listed in the Hatch Centre Tier 1 & 2 course training instructions shown in Appendix E and fill out the Hatch Centre Workshop Waiver shown in Appendix F.
4. Students can register for safety training modules either through MOSAIC or by speaking to the Workshop Technologist.
5. Once registered, safety training modules can be found on Avenue to Learn along with the mandatory WHMIS 2015 training.
6. Students must bring their Hatch Card with them in order to perform work in the Student Workshop.
7. Upon completing the orientation training, students have the option to complete additional qualifications to access additional equipment above and beyond the basic hand tools available to Tier 1 students.
8. Access to additional qualification training will be at the discretion of the Workshop Technologist

### 6.1.2. Tier 2

1. Students with a Tier 2 safety rating have the additional ability to enter the Build Space (if on an approved team's roster) and access the Student Workshop and Build Space after hours if supervised by a person with a Tier 3 safety rating within the limitations set forth in Section 6.1.3.
2. The required training for a person to achieve this safety rating is shown in Appendix E, however, the person must have first completed all of the training for Tier 1 before beginning any Tier 2 training.
3. Upon completion of the safety training, students will receive a Hatch card which they must keep on their person at all times while in the Student Workshop or Build Space.

### 6.1.3. Tier 3

1. Each team will be granted up to 8 Tier 3 members: two Team Captains, five Sub Team Captains, and one Safety Officer.
2. To be eligible for Tier 3 training, a student must be associated with a team, have been a fully trained Tier 2 for at least eight months, logged at least 50 hours and 15 visits to the workshop, and have had no safety infractions within the past 12 months.
3. Accidents do not count as safety infractions, unless caused by negligence.
4. This final tier will allow student teams to access the Student Workshop and Build Space after hours.
5. Tier 3 is a combination of safety training in addition to professional skills training so that the Student Workshop and Build Space can be operated in a safe manner when the Workshop Technologist is not present.
6. Students must complete all of the training listed in the Tier 3 section of the safety training before they can be considered to have completed Tier 3 safety training, thus granting after-hours access to the Student Workshop and Build Space.
7. With a Tier 3 safety rating, students become accountable for the actions of their team members after hours.
8. These individuals are responsible for the safe behaviour of their team members and are required to uphold the safety policies of the Hatch Centre.
9. While working after hours with their team, a single Tier 3 person may not be responsible for more than 5 individuals with a Tier 2 safety rating and breaches of this may result in revocation of the team's access to the Hatch Centre.
10. A Tier 3 student may only supervise Tier 2 students who are on the team that their Tier 3 training is associated with.
11. Tier 3's must be active on the team to maintain their after-hour access.
12. If a captain, safety officer or sub team captain steps down from that position they will not have key card access.
13. Graduating Tier 3's may retain their key card access until August 31st of the year of their graduation, at the discretion of the Technologist.

### 6.1.4. Additional Qualifications

1. If students wish to use higher risk equipment additional training will be required.
2. These specific training sessions will be provided by the Workshop Technologist at their convenience.
3. Students must first complete all of the Tier 1 training in order to be eligible to obtain additional qualifications, with the exception of the welding additional qualification which requires Tier 2 training to be complete (exceptions may be made at the discretion of the Workshop Technologist).
4. Additional Qualifications:
    i. Vertical Mill
    ii. Welding
    iii. Drill Press
    iv. Paint & Woodworking Room
    v. Roll In Band Saw
    vi. Vertical Band Saw
    vii. Belt/Disc Sander
    viii. Disc Grinder
    ix. Precision Lathe
    x. Pedestal Grinder
5. As additional equipment is added, additional qualifications will be added to ensure the safe operation of that equipment.
6. In order to become fully trained and have the ability to use the piece of equipment unsupervised the following process must be completed.
    i. Watch the safety training video
    ii. Complete the associated quiz
    iii. Attend an in-person demonstration with the Technologist
    iv. Use the piece of equipment five times while being supervised by the Technologist, and an additional five times without making mistakes or asking for help.
7. The Technologist will log each student's progress.
8. All completed training requirements remain at the discretion of the Technologist.

### 6.1.5. Buddy System

1. This section applies when the Hatch Workshop Technologist is not present and shall be in accordance with RMM #304 Working Alone Program.
2. For the safety of students, working alone at any time will not be permitted.
3. Individual students and student teams will need to implement a buddy system, so that 2 or more students with the appropriate Tier of safety training (at least one Tier 3 for after hours) are present in the workspace at the same time.
4. Failure to do so may result in revocation of Student Workshop privileges.
5. For student teams this could result in a breach of the Stewardship Agreement and removal of the team's access to the space.

### 6.1.6. Safety Requirements

1. In addition to following all the safety requirements outlined in the online safety training modules and in-person training sessions, students are expected to work in compliance with all applicable codes, standards, and best practices.
2. Additional resources include, but are not limited to, the documents listed in Section 8 and Section 9.

## 6.2. Team Responsibilities

1. Teams will have varying organizational structures, however, to ensure the safety of the team, the following two roles must be fulfilled in order for teams to operate inside of the Hatch Centre.

### 6.2.1. Captain

1. The Captain is responsible for the overall operation and safety of their team within the Hatch Centre.
2. The following duties are considered to be the responsibility of the Captain:
    i. Submitting access requests for all of the team members
    ii. Submitting the required Appendices for space allocation
    iii. Promoting a culture of safety within their team
    iv. Ensuring that team members are pursuing the appropriate training
    v. Monitoring team activities within the Hatch Centre
3. In absence of the Safety Officer, the Captain will assume all of the responsibilities of this individual as described in Section 6.2.2.

4. Furthermore, the Captain must obtain a Tier 3 safety rating.

### 6.2.2. Safety Officer

1. The Safety Officer is the individual on a team who is responsible for ensuring that the team is receiving the appropriate training required of the members.
2. This person may be the Team Captain or another person on the team who already holds a specific role.
3. They are responsible for ensuring that team members are obtaining the required training and that they are not performing any tasks which are outside of their current qualifications.
4. Any incidents which occur must also be reported by the Safety Officer to UHS and all relevant parties including the Hatch Centre Operating Committee.
5. The Safety Officer position must be filled by a student who has been granted a Tier 3 safety rating.
6. The Safety Officer has the obligation to inform other teams using the Build Space of any safety risks their team's activities may possess to members of other teams and ensure other teams following necessary safety precautions so that all teams may simultaneously work in the space safely.
7. Furthermore, this individual should always be aware of activities being performed by other teams while they are working in the same space.
8. The Team Safety Officer should tell any student, regardless of their affiliation with any team, if they are performing work in an unsafe manner and report the situation to the Workshop Technologist.
9. The Safety Officer must be aware of any potentially hazardous materials which are being used by their team at any time.
10. This person must keep a binder/folder containing all of the MSDS/SDS and SOP's for materials used by their team.
11. Prior to using these materials, the Safety Officer must inform the Workshop Technologist about the work which will be performed and must provide them with a copy of the MSDS/SDS and SOP.
    i. This is to be done every time a hazardous material will be used.

12. The Safety Officer must also ensure that the team is disposing of all waste, including hazardous waste, in a safe and responsible manner corresponding to McMaster's Hazardous Waste Management Program RMM 502.

### 6.2.3. Team Members

1. Team members are expected to act in a safe and responsible manner at all times.
2. They must follow all guidelines and rules while working within the Hatch Centre and must not engage in any task which they are either unqualified to complete or feel unsure/unsafe completing.
3. Team members must report all incidents and "close calls" to the team Safety Officer or Workshop Technologist to ensure a safe environment is kept for all students.

### 6.2.4. Job Hazard Analysis

1. A Job Hazard Analysis (JHA) must be created and submitted by a team member with Tier 3 training by Friday at 5:00 p.m. so the Workshop Technologist will have sufficient time to review the document.
2. The JHA will serve as a way of ensuring students are conducting themselves in a safe manner while working on projects outside of normal operating hours.
3. The JHA can be found in Appendix L.

### 6.2.5. Infractions and Penalties

1. If teams are found to be acting in an unsafe manner in the Hatch Centre Student Workshop or Build Space, mistreating the Clubs & Teams Office or meeting rooms, or otherwise not acting in accordance with their expected behaviour they may lose access to some or all of the Hatch Centre facilities and may be reported for breaching the McMaster University Student Code of Conduct.
2. If a team or one of their members commits infractions, they will be kept on record by the Workshop Technologist using the form in Appendix G.
3. After committing one major infraction, the individual will lose access to the Hatch Centre and the related team may lose access to the Hatch Centre.
4. The differentiation of infraction levels is described below.

5. In the case of an infraction, or a series of infractions, which would lead to revocation of access, a temporary suspension will be issued to the individual or team who committed the infraction(s).
6. In the event of a temporary suspension, the Hub will be notified to cancel the individual(s)'s access to the Student Workshop and Build Space (if applicable) by the Hatch Coordinator and access will only be reinstated if the Hatch Centre Operating Committee decides to do so.

#### 6.2.5.1. Minor Infraction

1. This constitutes a small issue which is noted by the Workshop Technologist such as failure to clean up after one's self.
2. Minor infractions result from actions which do not cause harm inherently, but may lead to an unsafe working environment.

#### 6.2.5.2. Moderate Infraction

1. These can be obtained either through a single event or the accumulation of three minor infractions.
2. A moderate infraction includes a blatant disregard for safety information displayed in this procedural manual, taught during training or displayed on the equipment in the Hatch Centre.
3. These events may result in a near-miss or a minor injury, however, one of these two scenarios need not happen in order for a team to be given a moderate infraction.
4. For example, if a team member without vertical band saw training operates the vertical band saw, the team will receive a moderate infraction even if the individual completed their piece without harm.

#### 6.2.5.3. Major Infraction

1. A major can be accumulated by receiving three moderate infractions or through a single event.
2. This infraction occurs through the disregard of multiple rules governing the Hatch Centre.

3. For example, if a Tier 3 safety rated student were to give their access card to a Tier 2 student who then operated equipment alone in either the Student Workshop or Build Space, a team or individual could receive a major infraction.

# 7. Workshop Technologist

1. The Workshop Technologist is responsible for supervising student activities within the Student Workshop and the Build Space.
2. They will be required to assist in the development and updating of training documents as needed.
3. All of the responsibilities of this individual are listed below:

## 7.1. Representative Duties & Responsibilities

1. Develop workshop guidelines, policies, standard operating procedures and regulations regarding student health and safety.
2. Administer a multi-level safety program of more student safety training for equipment with more risks.
3. Enforce use of personal protective equipment required for the safety of authorised student users.
4. Provide general workshop safety training to classes of students.
5. Administer tests to assess student competency on workshop safety policies and best practices.
6. Conduct workshop training sessions in 3D printing, 2D laser cutting, soldering, woodworking, metalworking, and chemical handling.
7. Provide one-on-one workshop facilities training to students for specific equipment, such as mills and lathes as required.
8. Develop and deliver presentations.
9. Assess and mitigate the physical risks associated with the set-up and use of workshop equipment and projects.
10. Provide professional development experiences to students by advising, guiding and mentoring students who are completing workshop projects.
11. Assist students throughout workshop project development particularly on design and fabrication.
12. Design and fabricate specialized workshop projects within the context of a diverse educational and research environment.
13. Complete complex designs and calculations using design software.
14. Offer project design critiques coupled with the ability to suggest improvements and alternatives.

15. Modify and adapt fabrication, maintenance procedures, and equipment to meet specialized requirements.
16. Interpret blueprints and schematic diagrams of technical apparatus.
17. Direct students to other University and Department workshops that have the more specialized equipment needed for completing the student's workshop project.
18. Liaise with other laboratories, departments, agencies, and sales representatives.
19. Set up and operate nonstandard equipment, test systems, and devices.
20. Utilize software to complete drawings for workshop projects and to operate equipment such as 3D printers and 2D laser cutters.
21. Log incident reports and enforce violations of safety policy and extra-curricular team Stewardship Agreement breeches.
22. Plan, schedule, and coordinate the availability of workshop equipment and resources.
23. Greeting high school students attending campus tours and providing tours of the workshop facilities.
24. Provide preventative maintenance to the workshop and equipment to ensure the space and its facilities are in good working order.
25. Troubleshoot and repair machinery and equipment failures.
26. Prepare workshop for users by cleaning, purchasing supplies and setting up and giving demonstrations in machine and material handling.
27. Ensure the proper storage of materials and proper waste disposal.
28. Monitor budgets and purchase workshop equipment and consumables.
29. Gather and compile information pertaining to future equipment and material purchases.

## 7.2. Supervision

1. Ongoing responsibility for supervising up to 9 casual employees at any one time.
2. Ensure adherence to quality standards and procedures for short-term staff.
3. Provide orientation and demonstrate procedures to others.

# 8. Relevant Documents

1. The following documents are applicable within the Hatch Centre and all occupants of the Hatch Centre are expected to act in accordance with these documents.
2. Failure to follow these documents may result in revocation of access to the Hatch Centre and its facilities and/or breaches of the McMaster University Student Code of Conduct.
3. Risk Management Manuals (RMMS), specifically:
    i. McMaster University RMM #201 - Hot Work Program
    ii. McMaster University RMM #300 - Safety Training and Orientation Program
    iii. McMaster University RMM #301 - Standard Operating Procedures Program
    iv. McMaster University RMM #304 - Working Alone Program
    v. McMaster University RMM #310, 311, 312, 313, 403 - Personal Protective Equipment Program
    vi. McMaster University RMM #317 - Machine Shop Safety Program
    vii. McMaster University RMM #501 - Hazardous Materials Management Systems including WHMIS
    viii. McMaster University RMM #502 - Hazardous Waste Management Program
    ix. McMaster University Policy on Discrimination and Harassment: Prevention & Response
4. McMaster University Electronic Access Control Policy
5. Ontario Occupational Health and Safety Act

# 9. Hatch Workshop Standard Operating Procedures

1. The Workshop Technologist shall maintain a repository of Standard Operating Procedures for equipment and tools in the Hatch Workspace, available to all students with Hatch Workshop Training.
2. The repository can be found in the Hatch Centre (Workshops) Microsoft Teams, to which access will be granted upon completion of training (See Section 6.1)
3. The following SOPs are included:
    i. 18 Gauge Brad Nailer
    ii. AEON Super Nova 14 Laser Cutter
    iii. Angle Grinder
    iv. Arbor Press
    v. Belt Disc Sander Ferrous Metals
    vi. Belt Disc Sander Wood
    vii. Bench Grinder
    viii. Circular Saw and Accessory Kit
    ix. Composite Infusion
    x. Cordless Drill
    xi. Dremel
    xii. Festool Dust Extractor
    xiii. Festool Jigsaw
    xiv. Festool Rotex Palm Sander
    xv. Festool Router OF 1400
    xvi. Gear Head Drill Press
    xvii. High Speed Precision Lathe
    xviii. High Voltage
    xix. Hydraulic Jack and Jack Stands
    xx. MIG Welder
    xxi. Oscillating Multi-Tool
    xxii. Plate Shear
    xxiii. Soldering Equipment
    xxiv. TIG Welder
    xxv. Variable Speed Drill Press

xxvi. Vertical Gravity Bandsaw
xxvii. Vertical Milling Machine
xxviii. Vertical Wood Bandsaw
xxix. WAZER Desktop Waterjet

# 10. Appendices

A. Hatch Centre Usage Application

B. Student Workshop and Build Space Stewardship Agreement

C. Clubs & Teams Office and Meeting Room Stewardship Agreement

D. Storage Space and Sea Can Stewardship Agreement

E. Hatch Centre Student Workshop Commitment

F. Hatch Centre Infraction Record

G. Temporary Bay Space Use Request Form

H. Hatch Project Locker Usage Contract

I. Hatch Clubs & Teams Locker Usage Contract

J. Hatch Centre Job Hazard Analysis (JHA) Form

# Hatch Centre Usage Application

The following document serves as an application for MES Groups and Teams to apply for usage of the Build Space, Clubs & Teams Office, Meeting Rooms and storage space located in the Gerald Hatch Centre for Engineering Experiential Learning. Applications will be reviewed by the McMaster Engineering Society in accordance with their by-laws. The review will be based on this form, which must be fully completed to be considered.

**Contact Information:**

Club/Team Name: _____

Contact Person: _____

Contact Email: _____

Contact Phone Number: _____

Date: _____

**Applications:**

Access Requested (Check):

| | | | |
|---|---|---|---|
| Build Space Residency | ☐ | Meeting Rooms | ☐ |
| Build Space Access | ☐ | Storage Space | ☐ |
| Clubs & Teams Office | ☐ | Sea Can Storage | ☐ |

**Questions:**

Goals for the coming academic year:

_____

_____

_____

Summary of achievements from the previous 2 years:

_____

_____

_____

Recruitment activities, recruitment targets, means to ensure diversity and new student engagement:

_____

_____

_____

Contributions to the Student Experience (inside the group and the faculty as a whole):

_____

_____

_____

Contributions to student professional development:

_____

_____

_____

Collaborative activities with other teams, faculties, organizations, etc.:

_____

_____

_____

Estimated annual budget (Attach budget and itinerary for the year):

_____

_____

_____

Please list any current assets your team has and their location (e.g. meeting rooms, offices, etc.):

_____

_____

_____

Number of current active members: _____

Number of current active engineering members: _____

# Student Workshop and Build Space Stewardship Agreement

I, _____, the Captain and I, _____, the Safety Officer of _____ agree to abide by the following rules regarding the Gerald Hatch Centre for Engineering Experiential Learning Student Workshop and Build Space. I agree to ensure my team is aware of and follows these rules, the responsibilities outlined in the MES Policy Manual Section C and the McMaster University Student Code of Conduct. I further agree to ensure that all my team is knowledgeable regarding the safety expectations of the Hatch Centre.

We recognize that failure to follow these rules, the safety procedures described in Section 5 and Section 6 of the Hatch Centre Procedural Manual, the responsibilities outlined by the MES Policy manual, the Student Code of Conduct, or acting in an unsafe manner by myself or any other members of _____ may result in revocation of my own and my team's access to any and possibly all of the available facilities housed within the Hatch Centre. We understand that further consequences may be enforced by the individuals and committees outlined in Section IV of the McMaster University Student Code of Conduct.

The above individuals and their associated team members agree to the following rules and conditions:

**B.1:** No student shall operate equipment or enter a space which they have not been adequately trained to use. All students wishing to operate specific equipment must obtain the proper training prior to using it.

**B.2:** Students will only work on their projects in the Hatch Centre Build Space and Student Workshop during times which they are permitted to be in these spaces.

**B.3:** Students working in the Build Space or Student Workshop will never work alone. Any student working must be accompanied by another student who has received the proper training to be in that space.

**B.4:** Students working after hours shall have at least one Tier 3 student present with no more than 5 Tier 2 students present for each Tier 3 student.

**B.5:** Any incident or near miss which occurs while any student is performing work related to their team or attending an event related to their team will be reported to UHS and the Team Safety Officer as soon as it is practical to do so.

**B.6:** If a student witnesses another student operating a piece of equipment or entering a space which they have not been trained for, they will ask the offending student to stop what they are doing and explain the violation they are witnessing. If the offending student continues, the witness must immediately report the incident to the Workshop Technologist or Campus Safety Services during after-hours.

**B.7:** Students will maintain a tidy workspace to help ensure their own safety and the safety of those around them. If a student dirties their workspace, they shall immediately clean the area upon completion of their work.

**B.8:** Students working in the Build Space shall only work in the bay(s) which have been assigned to their team at that given time.

**B.9:** Students will inform those around them if the work they are performing may pose any risk to them (e.g. a cable running behind someone causing a trip hazard).

**B.10:** Students will actively search for safer alternatives to any task they must complete if it has some inherent risk.

**B.11:** Teams will act responsibly and in a manner reflective of McMaster Engineering at all times.

**B.12:** Students must have a spotter when moving a vehicle into or out of the Build Space.

**B.13:** If a team wishes to work with the bay doors open, the chain must be placed across the opening to deter others from using the space as a thoroughfare and the Captain and/or Safety Officer must stop any individuals from doing so.

**B.14:** Teams must keep a copy of all relevant MSDSs/SDSs and provide a copy to the Workshop Technologist.

**B.15:** Teams must be accommodating in the event of a special request for access from another team for multiple bays of the Build Space and must be able to move their project in a timely manner.

Captain Signature

_____

Date

_____

Safety Officer Signature

_____

Date

_____

# Clubs & Teams Office and Meeting Room Stewardship Agreement

I, _____, fulfilling the duties of _____ for _____ agree to abide by the following rules regarding the Gerald Hatch Centre for Engineering Experiential Learning Clubs & Teams Office and Meeting Rooms and agree to ensure my team is aware and follows these rules. Furthermore, I agree to follow the responsibilities outlined in the MES Policy Manual and the McMaster University Student Code of Conduct. I agree to treat the Clubs & Teams Office and Meeting Rooms with respect and recognize that breaking these rules, the responsibilities outlined in the MES Policy Manual and the Student Code of Conduct may result in revocation of my own and my group's access to the Club's & Teams Office, Meeting Rooms, and other facilities housed within the Hatch Centre. I recognize that further consequences may be enforced by the individuals and committees outlined in Section IV of the McMaster University Student Code of Conduct.

The above individual and their associated group members agree to the following rules and conditions:

**C.1:** No furniture shall be removed, added, or modified in any of the meeting rooms or the Clubs & Teams Office without approval from the Hatch Coordinator.

**C.2:** Groups shall only remain in the meeting rooms for the time which they have been allotted.

**C.3:** Groups will inform the Hatch Coordinator of any meeting cancellations at least 6 hours before the scheduled start time so that the space may be opened up to others.

**C.4:** Workspaces shall be kept clean within the Clubs & Teams Office and no materials will be left in there for extended periods of times aside from materials kept in the respective drawers.

**C.5:** No illicit substances, materials or objects will be kept in the Clubs & Teams Office filing cabinets.

**C.6:** Groups will only use the storage allotted to them within the Clubs & Teams Office.

**C.7:** No materials or garbage will be left behind in the meeting rooms.

**C.8:** Any missing furniture, vandalism or other malicious actions will be reported immediately to the respective authority (e.g. broken furniture will be reported to McMaster Campus Safety Services and the Hatch Coordinator).

Signature Date

_____ _____

# Storage Space and Sea Can Stewardship Agreement

I, _____, fulfilling the duties of _____ for _____ agree to abide by the following rules regarding the Gerald Hatch Centre for Engineering Experiential Learning's storage room and agree to ensure my team is aware and follows these rules. Furthermore, I agree to follow the responsibilities outlined in the MES Policy Manual Section C and the McMaster University Student Code of Conduct. I agree to treat the Storage Space and Sea Can with respect and recognize that breaking these rules, the responsibilities outlined in the MES Policy Manual and the Student Code of Conduct may result in revocation of my own and my group's access to the Club's & Teams Office, Meeting Rooms, other facilities housed within the Hatch Centre. I recognize that further consequences may be enforced by the individuals and committees outlined in Section IV of the McMaster University Student Code of Conduct.

The above individual and their associated group members agree to the following rules and conditions:

**D.1:** No hazardous materials may be stored in sea cans. Hazardous materials located in Hatch must be stored according to the SDS.

**D.2:** Groups shall only use the storage space which has been allocated to them.

**D.3:** Storage shall be done in a safe manner (e.g. heavy objects stored on lower shelves) to reduce risk of injuries or damage to property.

**D.4:** Groups will ensure that their area is kept clean and tidy.

**D.5:** All spills in the storage room will be cleaned up immediately (if it is safe to do so) or reported to the appropriate personnel.

**D.6:** Absolutely no illicit materials shall be stored in the Hatch Centre or the sea cans.

**D.7:** If the storage space is not being used it may be reassigned to another group.

_____ _____

Signature Date

# Hatch Centre Student Workshop Commitment

**Please read carefully before signing**

**Please save this file in the following format before submitting:**

**First Name, Last Name, MacID**

Ex. Lawrence Mak makl1

| **Student Name:** | **Date:** | |
|---|---|---|
| **MacID:** | **Team (if applicable):** | |

- I understand to use the Hatch Centre Student Workshop, I must complete all the safety training.
- I confirm that I have watched all the relevant safety training videos and completed the quizzes on Avenue to Learn.
- I understand training content may change and new training courses may be added.
- I will take responsibility to ensure my training is complete and up to date.
- I understand that my training expires on September 1st of each year and I must ensure my training is renewed to continue using the Hatch Centre Workshop.
- I understand that I must always work as outlined in the Hatch Centre Procedural Manual and have read through that document.
- I have read and understood all the safety rules, policies, and procedures that apply to the Hatch Centre Workshop.
- I understand failure to follow any of the safety rules or failure to act safely may result in revocation of my access to the Student Workshop and any of the Hatch Centre facilities.
- I understand that I must report all injuries and near misses immediately to the Workshop Technologist or a team captain/sub captain if the Workshop Technologist is not present.
- I will not utilize any equipment, tools, or machinery that I have not been trained on or do not feel comfortable using. I will watch the appropriate safety videos and consult the Technologist before using equipment, tools, or machinery.

**Signature:**

# Hatch Centre Infraction Record

Reported By: _____

Reporting Date: _____

Date of Infraction: _____

Club/Team Involved: _____

Infraction Committed By: _____

Infraction Severity: _____

Description of incident:

| |
|---|
| |

Reporter Signature: _____

Date: _____

Reviewed By: _____

Reviewer Signature: _____

Date: _____

# Temporary Bay Space Use Request Form

| | |
|---|---|
| Requesting Team: | Host Team: |
| Requesting Team Captain Name(s): | Host Team Captain Name(s): |
| Start Date: | End Date: |
| Reason for Request: | |
| Scope of Work: | |

**HOST TEAM APPROVAL**

| APPROVED? | | | NAME | SIGNATURE |
|---|---|---|---|---|
| SUBMISSION 1 | YES | NO | | |
| SUBMISSION 2 | YES | NO | | |
| SUBMISSION 3 | YES | NO | | |

**WORKSHOP TECHNOLOGIST USE ONLY**

| APPROVED? | | | NAME | SIGNATURE |
|---|---|---|---|---|
| SUBMISSION 1 | YES | NO | | |
| SUBMISSION 2 | YES | NO | | |
| SUBMISSION 3 | YES | NO | | |

Instructions:

1. Requesting team fills out all applicable portions of the form
2. Requesting team emails form to the host team and CCs the Workshop Technologist
3. Host team reviews and replies with an approved or rejected form
4. If approved, the Workshop Technologist reviews and will approve or reject request
5. If approved, the requesting team may begin using the space upon start date. The Workshop Technologist will reply with the completed and approved form
6. If rejected, the Workshop Technologist will reply with the rejected form. The requesting team may choose to revise and resubmit their bay space use request. The procedure will restart from Step 2
7. Three consecutive rejections will nullify a team's request, and they will need to submit a new request if they still need the space and have remaining request submissions

Guidelines:

- Maximum of TWO requests per semester
- Maximum time limit of TWO WEEKS per request
    - Use of space will begin at 12:00 AM of the start date
    - Borrowing team MUST vacate the bay by 11:59 PM of the end date
    - Borrowing team MUST return the space to its original condition before vacating
        - Failure to do so will affect borrowing privileges in the future
- Request MUST be submitted at least ONE week in advance
    - Less than one week of notice will result in an automatic rejection
    - Requests cannot be revised or altered once submitted
        - Revisions can only be made on rejected forms
- The host team will forfeit their space for the duration of the approved work period
    - The host team will not be permitted to use their space
    - Responsibility of the space will transfer solely to the borrowing team
    - Any infractions will be recorded as if the borrowing team was working in their own bay
- Only team captains can submit requests
- Borrowing team MUST abide by all Bay Space Use guidelines
- Borrowing team MAY NOT use any host team's resources unless requested and approved
- Approval can be revoked at any time by the Workshop Technologist
- Any activity outside of the approved Scope of Work will result in immediate revocation

# Hatch Project Locker Usage Contract

I _____, on behalf of _____ (project group), take full responsibility for the safekeeping and proper usage of the Project Locker. I agree to pay the $10 deposit to use the locker, and to ensure I clean out the locker by the end of my reservation. If supplied with a lock and key in the event of losing or damaging either, I agree that the $10 deposit I (or my team/group) paid will be forfeited in order to pay for any costs associated with repairs or replacement. If I supplied a personal lock for the locker, I agree to give the Hatch Coordinator the lock combination, and to remove the lock in a timely manner at the end of my reservation. When the personal lock is removed from the locker, or key supplied is returned, the $10 deposit will be refunded.

Project Locker Usage Guidelines

- The lockers are to store things for projects and capstone prototypes, not for club or team related projects
- Materials being stored must not pose any risk to the users of the Hatch Centre and any chemicals or other potentially harmful substances must be stored according to the SDS
- Personal items such as gym clothes, or food and beverages, are not to be stored in the locker
- The project locker can be rented for up to a maximum of two semesters with renewal approved per semester by the Hatch Coordinator.
- Students who leave items in storage lockers for longer than their specified time will be notified over email to remove their items. If items are left for more than 24 hours after the expiry of a student's time slot, the lock will be removed from the locker and the items will be moved to the Drain for a period of 1 week. After this time, the items will be disposed of appropriately, or given to Campus Safety Services

I, _____, the undersigned, agree to abide by the usage guidelines of the Hatch Project Locker as presented above.

| Signature | Witness | Date |
| --- | --- | --- |
| _____ | _____ | _____ |

# Hatch Clubs & Teams Locker Usage Contract

I _____, on behalf of _____ (Group or Team), take full responsibility for the safekeeping and proper usage of the Clubs and Teams Locker(s). I agree to use the allocated locker(s) and ensure to clean out by the end of our locker allocation. I agree to keep the lock and key safe and if it is lost or damaged will pay the $10 fee to the MES VP Finance or it may be removed from club funding.

Clubs and Teams Office Locker Guidelines

- The lockers are to store things for club or team related projects only
- Materials being stored must not pose any risk to the users of the Hatch Centre and any chemicals or other potentially harmful substances must be stored according to the SDS
- Personal items such as gym clothes, or food and beverages, are not to be stored in the locker
- Groups who leave items in storage lockers for longer than their specified time will be notified over email to remove their items. If items are left for more than 24 hours after the expiry of a group's time slot, the lock will be removed from the locker and the items will be moved to the Drain for a period of 1 week. After this time, the items will be disposed of appropriately, or given to Campus Safety Services.

I, _____, the undersigned, agree to abide by the usage guidelines of the Clubs and Teams Office Lockers as presented above.

| Signature | Witness | Date |
| --- | --- | --- |
| _____ | _____ | _____ |

# Hatch Centre Job Hazard Analysis (JHA) Form

| **Team Name:** | | | **Prepared by:** | | **Date:** | |
|---|---|---|---|---|---|---|
| **Description of Job:** | | | **Reviewed by:** | | **Date:** | |
| | | | **RISK** | | **RISK MITIGATION** | |
| **STEP** | **ACTIVITY** | **HAZARD** | **Probability** | **Severity** | **PIGS*RISE*** | **Responsibility/ Machine Operator** |
| A | Soldering Iron | 1. Inhalation of fumes from solder/flux can irritate the nose, throat, and respiratory organs.<br>2. The hot soldering iron can cause burns to the user, workpiece, or surrounding material.<br>3. Prolonged or repeated skin contact with lead solder or flux can cause moderate irritation or have permanent side effects. | Low | Low | 1. Do not keep your face over the top of the solder joint. Always use the fume extractor when heating solder and flux.<br>2. Use the soldering iron stand when the soldering iron is idle to prevent the tip from accidentally coming into contact with the material.<br>3. Wear nitrile gloves when working with the lead soldering or flux. | |
| B | Dremel, Die Grinders, Angle Grinders, & Rotary Tools | 1. A rotating wheel can cause entanglement.<br>2. Grinding discs can violently break.<br>3. Fire can start.<br>4. Wheels can explode if excessive grinding pressure is applied.<br>5. Tools can turn on unexpectedly.<br>6. Excessive noise will damage hearing, and airborne particulates can cause respiratory irritations.<br>7. Pressurized, flammable gasses can explode when the heat is applied through the grinding process.<br>8. Angle Grinders have high torque, and it is possible to lose control of it, or the workpiece can move violently. | Low | Moderate | 1. Roll up long sleeves, remove stray rags, never wear gloves when the machine is in operation. Remove any forms of jewellery. Tie back long hair.<br>2. Always wear a face shield and safety glasses when using the machine. Only use wheels that are in good condition. Report all issues to the Workshop Technologist. With the Angle Grinder, have the blade guard rotated to the proper orientation to protect the user.<br>3. Perform any tasks that create sparks or heat in the welding room. If you are creating sparks, ensure that they are not aimed at any flammable objects.<br>4. Apply slow, even pressure to the | |

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| | | | | | grinding wheel across the circumference.<br>5. Check that the power switch is in the OFF position before plugging the machine in.<br>6. Hearing protection is mandatory. A dust mask is recommended, fit test is required.<br>7. Never cut into closed containers or barrels.<br>4. Always use the attachment handle. Have a firm grip with sound footing. Take frequent breaks to relax muscles. Always have your workpiece firmly clamped to the workbench or in the vice. | |
| C | Bench Grinder | 1. A rotating wheel can cause entanglement.<br>2. Fingers can be caught in the wheel or burned by hot material.<br>3. The wheel can violently break.<br>4. Fire can start.<br>5. Wheels can explode if excessive grinding pressure is applied.<br>6. The grinder can turn on unexpectedly. | Low | Moderate | 1. Roll up long sleeves, remove stray rags, never wear gloves when the machine is in operation. Remove any forms of jewellery. Tie back long hair.<br>2. Maintain a maximum clearance of ⅛" or 3mm between the tool test and grinding wheel. If adjustments are required, ask the Workshop Technologist. Cool the material in the coolant pot regularly.<br>3. Only use wheels that are in good condition. Report all issues to the Workshop Technologist.<br>4. Ensure that the sparks created are not aimed at any flammable objects.<br>5. Apply slow, even pressure to the grinding wheel across the circumference. DO NOT USE THE SIDE OF THE WHEEL. DO NOT CREATE GROOVES IN THE GRINDING WHEEL.<br>6. Check that the power switch is in the OFF position before plugging the machine in.<br>7. Ensure the machine has come to a complete stop before leaving. | |
| D | MIG/TIG | 1. Fire risk | Low | Moderate | 1. Wear clothing made of natural | |

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| | Welders | 2. Compressed gas cylinders<br>3. Electrocution<br>4. Fume inhalation<br>5. Electric arcs | | | materials that is in good repair. No synthetics, cuts, or tears. Clothing must be free from any oil or grease. Remove stray rags and any forms of jewellery. Remove all flammable items from the area. Always wear welding-specific gloves, jackets, helmets, and caps. Wear high-cut work boots to protect against sparks.<br>2. Handle cylinders and regulators with care. Open and close the cylinder valves slowly. Bleed the gas lines once the job has been completed. Check for the proper gas flow rate.<br>3. Ensure cables are not damaged and the ground cable is connected to the workpiece properly. Do not open the machine while plugged in. Shut off power when changing electrodes.<br>4. Always use the fume extractor and have it positioned so it can effectively remove the fumes. Turn on the exhaust vent. Keep your face away from the fumes. Have other team members check on you every 15 minutes.<br>5. Always use welding-specific PPE such as gloves, jacket, and bandana. Always use a proper welding mask with properly adjusted darkening settings. Ensure exposed skin is covered to prevent UV skin burns. Do not wear contacts while using the welder.<br>6. Only start welding once all but the necessary individuals are removed from the welding room. Ensure the doors are shut with the window covers in place and the welding notice sign in place. | |
| E | Composites Infusion | 1. Skin irritations from materials. Respirable dust. | Low | Low | 1. Follow standard workshop chemical material handling PPE, | |

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| | | 2. Electrically conductive dust and material<br>3. Excessive fume inhalation of solvents and resin.<br>4. Exothermic reaction from resin.<br>5. Infusion pump malfunction | | | such as nitrile gloves, safety glasses, and organic respirator. Do not wear contact lenses. Cover exposed skin.<br>2. Use manual hand tools and a pneumatic vacuum to collect conductive dust—schedule material prep during low traffic. Cover electrically sensitive equipment with a drop sheet. Allow dust to settle, ensure fans/airflow will not disperse throughout Build Bay.<br>3. Only mix (at most) 500-gram batches. In a well-ventilated space, use fans to circulate the air. Use a NIOSH P95 rated mask. Reduce occupancy in Build Bay before mixing and infusion. Do not inhale solvent fumes.<br>4. Ensure pump oil levels are adequate, do not overfill. If white smoke is expelled from the pumps, cease operation immediately. Provide pumps with airflow from fans. | |
| F | Palm Sander | 1. Rotating parts can cause entanglement.<br>2. Dust inhalation.<br>3. Fire can start.<br>4. The machine can be damaged if the workpiece is not sufficiently supported or the proper setup is not used. | Low | Low | 1. Roll up long sleeves, remove stray rags, never wear gloves when the machine is in operation. Remove any forms of jewellery. Tie back long hair.<br>2. Always use the Festool Dust Extractor and the air cleaner in the woodworking room.<br>3. Depending on the material, the dust can be highly flammable. Keep away from direct flames, sparks, or hot work.<br>4. Ensure proper PPE is worn (i.e. respirator – fit test required).<br>5. Keep the workpiece firmly clamped or stationary on a sturdy work surface. Always ask the Workshop Technologist for the correct machine setup. There is a large assortment of sanding discs for each job and material, as well | |

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| | | | | | as machine settings | |
| G | Jigsaw | 1. The reciprocating blade can cause cuts or entanglement.<br>2. Dust inhalation.<br>3. Blades may damage or break if fed too quickly.<br>4. The machine and blade can be damaged if the workpiece is not sufficiently supported.<br>5. The blade will bind when making tight contour cuts, causing the blade to break.<br>6. The blade will wander and flex too much, which leads to inaccurate cuts. | Low | Moderate | 1. Roll up long sleeves, remove stray rags, never wear gloves when the machine is in operation. Remove any forms of jewellery. Keep your fingers away from the machine's cut path. Tie back long hair.<br>2. Always use the Festool Dust Extractor and the air cleaner in the woodworking room.<br>3. Always ask the Workshop Technologist for the correct machine setup and blade; there are many blades for each job and material and machine settings.<br>4. Keep the workpiece firmly clamped or stationary on a sturdy work surface.<br>5. Make relief cuts along the contour.<br>6. Rest the Jigsaw table flat on the surface of the workpiece. | |
| H | Hand Drill | 1. Rotating parts can cause entanglement.<br>2. Drill bits and material may heat up.<br>3. Drill bits may break if improper feed pressure is applied.<br>4. Hand drills have high torque, and it is possible to lose control of it, or the workpiece can move violently. | Low | Moderate | 1. Roll up long sleeves, remove stray rags, never wear gloves when the machine is in operation. Remove any forms of jewellery. Keep fingers away from the machine's cut path. Tie back long hair.<br>2. Always ask the Workshop Technologist for the correct machine setup and drill; there are many bits for each job, material, and machine settings.<br>3. Keep the workpiece firmly clamed or stationary on a sturdy work surface.<br>4. Have a firm grip with sound footing. Take frequent breaks to relax muscles.<br>5. Keep feed pressure in line with the drill bit. Do not apply off-axis feed pressure. | |
| I | Vehicle Jacks | 1. Suspended objects could tip over | Low | Moderate | 1. Ensure jacks and jack stands are | |

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| | and Jack Stands | and fall.<br>2. Pinch and shear points from lifting devices. | | | in good repair. There should be no damage, rust, or missing or incompatible parts.<br>2. Ensure all lifting devices and jack stands are used within their operating limits. Do not overload lifting devices or jack stands.<br>3. Lifting devices and jack stands must be placed securely on the floor. All the feet or wheels must be firmly in contact with the ground.<br>4. Vehicles must be fully suspended or self-supported. No partial lifting is permitted. Vehicles must be level.<br>5. A lifting device cannot be used to support vehicles. Jack stands or a similar holding device must be used for prolonged support.<br>6. Move jack stands with the welded lower frame. Do not move jack stands using the center column or ratchet release handle.<br>7. A minimum of three points of floor contact must be maintained for any suspended vehicle. All suspended vehicles must be secure.<br>8. Do not drop vehicles off the jack stands. Vehicles must be safely lifted, have the jack stands removed by a second person, and then slowly lowered to the ground. | |
| J | | | | | | |
| K | | | | | | |
| L | | | | | | |
| M | | | | | | |

**INSTRUCTIONS:**

1. Review all equipment and tasks listed in the JHA template.
2. Remove all equipment and tasks not to be used or performed during the requested time.
3. Add the names of all equipment and task operators in the last column of the appropriate rows.
4. Include detailed descriptions of all additional activities expected to be performed in the last row.
5. Include the names of all the members expected to be present during the requested time. Use full names for all members.

- JHAs must be submitted before 5 PM on the day preceding the Workshop Technologist's absence.
- One JHA is required per work period per team. Consolidate all expected work into one form for submission. (e.g. one JHA for Saturday + Sunday).
- JHAs **MUST BE APPROVED** before work may begin. A team **MAY NOT** proceed with the planned activities if the JHA is not approved.
- Only the listed workshop equipment on the JHA template is available for after-hours use. Any equipment not in the template is not released.

**ACTIVITY:** Briefly describe the activity carried out in each step.
**HAZARDS:** Identify (FOR *EACH* HAZARD RELATED TO *EACH* ACTIVITY) what could cause harm to a person, the job, materials, or the environment.
**RISK PROBABILITY:** The likelihood of an adverse event occurring

**H:** High probability, **M:** Moderate probability, **L:** Low probability

**RISK SEVERITY:** The likely severity of the adverse consequence

**A:** Major (High Risk - immediate danger to life and health) STOP WORK OR CONTROL HAZARD IMMEDIATELY
**B:** Moderate (Medium Risk- the potential for non-life-threatening injury)
**C:** Low (Low Risk - long term potential for slight injury or illness)

**RISK MITIGATION:** Use **PIGSRISE** as a guide in identifying risk mitigations. Every effort should be made to focus on **RISE.**

***P***PE, ***I***nformation, instruction (training), ***G***ood housekeeping, ***S***afe systems of work, ***R***educe, ***I***solate, ***S***ubstitute, ***E***liminate

**RESPONSIBILITY:** The person's name or position who will ensure that the risk controls are implemented.