Fleming College

OHS - Safe Work Procedure				
COVID-19: Welding Lab				
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Department/Lab	School of Trades and Technology – Welding Program (Lab D0130)	**Document #**		

1. Concern

The aim of this document is to establish a Safe Work Procedure for the Fleming College Sutherland Campus Welding Lab (Room D0130) that applies to staff and students who have approval from the Dean of the School of Trades and Technology to attend bootcamp labs at Fleming College throughout July and August 2020.

Fleming College is responsible for implementing all possible prevention and disinfection measures under the guidance of Provincial jurisdictions having authority and local public health units to ensure the health and safety of all. However, there is always a risk of contracting COVID-19 at Fleming facilities, as is the case in any other public space. COVID-19 is a respiratory disease caused by a new type of coronavirus. Public Health Ontario suggests that the virus is spread predominantly through respiratory droplets produced by an infected person when coughing, sneezing, or talking to others within 2-meters (6 feet).

This Safe Work Procedure is Welding Lab Specific and must be used in conjunction with the Fleming College "Operational Procedure – Academic Bootcamp Pilot").

2. Scope

This document will provide guidance on working safely based on all COVID related H&S sector-specific and Public Health guidelines. This procedure applies to all Fleming staff and students and community members that use this lab space. ALL staff and students will be required to complete COVID-19 screening, prior to campus access or prior to participating in any off-campus academic activity.

3. Overview of Tasks / Outline of Activities in the welding lab

a. Perform work responsibly and safely in compliance with applicable regulations and standards.
b. Perform safe set-up, operation, and maintenance of Oxyfuel Gas Cutting/Gouging equipment, Plasma Arc Cutting/Gouging equipment, and Carbon Arc Gouging equipment.
c. Perform a variety of basic welding applications and post weld operations required in fabricating and manufacturing products or structures.
d. Utilize a variety of tools and equipment to sharpen tools, and remove edges, and/or grind welds.
e. Use basic destructive testing and non-destructive testing methods to determine weld defects.
f. Fabricate shop projects using engineering drawings.

g. Create patterns and templates for a variety of shapes.
h. Apply sustainable practices in the welding industry.

4. Recognize Hazards / Potential Exposure while Performing Work

a. Close contact (less than recommended 2-meters) with other personnel while supervising student work.
b. Handling shared equipment and materials.
c. Handling of porous materials within the lab environment (i.e.: welding jackets).
d. Potential for congregation and groupings of individuals.

5. Detail the Controls that are implemented to Reduce Hazards

a. Close Contact - Physical distancing at 2-meters is identified as best practice for the prevention of transmission and is to be encouraged at all times within the Welding Lab. However, due to the nature of the spaces and the skills that are to be completed within the spaces, a welding helmet or a grinding face shield must always be worn while in the Welding Lab.
b. Shared Equipment - Whenever possible, equipment will be dedicated to student workstations. Vigilant hand hygiene and routine disinfection practices will be put in place.
c. Porous Materials - Welding jacket and porous materials will be used only when necessary.
d. Congregation - Floor markings, entry/exit guidelines and staggering of breaks will be implemented to ensure that physical distancing will be maintained in and out of the lab spaces.

6. Preparation of Work Area

a. Close Contact
    i. All unnecessary equipment will be removed from the lab space to promote physical distancing.
    ii. One faculty and two technologists will be assigned to each bootcamp in order to maintain the 'contact bubble.'
    iii. Students will be assigned to a welding booth for the duration of their bootcamp and will not be permitted to move freely within the lab space without permission to move to another station.
    iv. Only if required due to specific project work, students will be assigned a partner for the entirety of the bootcamp. Activities that require contact will only be completed with assigned partners.
    v. All bootcamps and labs will be scheduled ensuring that students remain in cohorts or 'contact bubbles' to assist with contact tracing.
    vi. Attendance will be taken daily, including partnerships, and assigned workstations.
b. Shared Equipment
    i. Students will be encouraged to bring in their own tools when possible.
    ii. Disinfection stations will be set-up for each lab space. Students will be required to disinfect personal equipment prior to entering the space.
    iii. Diligent hand hygiene will occur before and after contact with a piece of equipment.

iv. All tools and equipment will be disinfected after use by each student, and in addition at the end of each lab by the assigned lab tech.
v. All tools, equipment and workstations will be thoroughly disinfected following each session and will be labelled with a 'clean' tag to ensure this is properly communicated.

c. Porous Materials
   i. Consumables such as wipes will be discarded in the garbage cans provided after use. Care will be taken to provide only what is required for each student, to prevent waste of supplies.
   ii. Welding booth curtains will remain in the space, and the room(s) will be disinfected using a fogger following the completion of a bootcamp by the Welding Technologist.

d. Congregation
   i. Lounge areas outside of the labs will be arranged to promote physical distancing.
   ii. Floor markings will be installed for students lining up to check into lab.
   iii. Students will be permitted to enter the lab following the lab techs direction.
   iv. Students will be assigned a spot on the desks in the welding classroom to store their personal belongings. DO NOT BRING VALUABLES. Fleming College is not responsible for lost or stolen property.
   v. No lockers are available currently.
   vi. Physical interaction between individual other than for essential tasks related to your work or learning are strictly prohibited.
   vii. All students, staff, contractors are required to maintain a distance of 2 meters (6 feet) from others in order to comply with physical distancing measures wherever possible. If other unexpected persons are found in your work or learning area, stop what you are doing and distance yourself. Inform your faculty and/or techs immediately. If necessary call Campus Security at extension 8000.

7. Procedure

a. Getting to the Welding Lab in the D-Wing
   i. Ontario Public Health recommends wearing a non-medical mask, such as a cloth mask, this is especially important in all common areas such as washrooms, water refill stations, dining areas, hallways and stairwells.
   ii. As per the "Operational Procedure – Academic Bootcamp Pilot" all students and staff must enter the building of the Sutherland Campus through either of the following entrances:
      - C Wing Main Door by the information booth for Fleming SAFE and Alternate Screening
      - D Wing Main Door for Fleming SAFE and Alternate Screening
   iii. Students will arrive at their lab area following the building entrance screening process. They will line up 2-meters apart on floor markings outside the welding lab in the downstairs D-wing hallway.
   iv. Students will provide name to check-in with an instructor and/or technologist, showing student identification.

v. Students will be assigned a welding booth for the duration of the bootcamp (up to 5 days). No other person will use this welding booth during the course of that specific bootcamp.
vi. Students will obtain a welding helmet to use for the remainder of the bootcamp (up to 5 days). If students bring their own welding helmet and if they do not have a flip up lens they will be issued a grinding face shield for the remainder of the bootcamps to use at all times in the welding lab when they come out of their booth when they are not welding.
vii. All attendance will be recorded.
viii. Bootcamps in other Trades programs have staggered start and end times to reduce the amount of people in the hallway waiting to enter or exit a lab.

b. Process to Enter the Welding Lab
   i. Students will provide their name to check-in with an instructor and/or technologist, showing student identification.
   ii. Students will be assigned a welding booth for the duration of the bootcamp (up to 5 days). No other person will use this welding booth during that specific bootcamp.
   iii. Students will obtain a welding helmet (matching their assigned welding booth number) to use for the remainder of the bootcamp (up to 5 days). If students bring their own welding helmet and if they do not have a flip up lens they will be issued a grinding face shield for the remainder of the bootcamps to use at all times in the welding lab when they exit their booth.
   iv. All attendance will be recorded.

c. Student Access and Movement within the Welding Lab Space
   i. Students are required to stay in their welding booths as much as possible.
   ii. All students and staff MUST wear a welding helmet and/or clear grinding face shield at all times in the welding lab.
   iii. Students must wash their hands with soap and water for 20 seconds before going to their assigned welding booth.
   iv. Students must sanitize all tools and equipment in their assigned welding booth with the wipes provided at the beginning of the lab.
   v. Students are NOT allowed to walk around the welding lab freely. The instructor or one of the lab techs will ask the student what they need and they will evaluate and advise when the student can move to a piece of equipment. Once that task is completed the student must immediately return to their welding booth. If the student has additional questions the student can stand outside of their assigned booth and wait for direction.
   vi. The Lab Tech has moved all required tools into each welding booth.
   vii. The Lab Tech will have most of the consumable materials needed prepared and delivered into each welding booth in order to minimize how much everyone moves around in the welding lab.
   viii. Students will be called up to view the instructor's demonstration in small groups while maintaining physical distancing as much as possible. Students will use markings on the floor as their guide to maintain physical distancing during the instructor's demonstrations.

ix. If students need to use a piece of equipment outside of their welding booth, they must stand outside of their welding booth and wait until an instructor assists them.
x. If required in each specific lab, students will receive an assigned partner for the duration of their bootcamp.
xi. Students even if working in pairs must try to stay 2 meters apart. If this is not possible then students must put on a cloth face covering in addition to their welding helmet or grinding face shield. All efforts must be made to minimize the time within 2 meters for example if one student is assisting by holding a piece of metal while the partner needs to add several tacks, as soon as the piece is secure the non-welding partner must move back so they can return to safe physical distancing of 2 meters.
xii. Students will be responsible for disinfection of equipment between partner use.
xiii. Students will also be responsible for diligent hand hygiene for the duration of their time on campus.
xiv. At all times the student and staff must comply with the guidelines of the Public Health Agency of Canada.
xv. It is extremely important that everyone maintains physical distancing of 2 meters and wash your hands immediately
    - before touching your face, eyes, or mouth;
    - before putting on your personal protective equipment (PPE):
    - before eating, drinking, smoking or vaping;
    - after removing your PPE or your soiled work clothing;
    - after working on a surface touched by other people; and
    - after using a tool or equipment that is shared with other people.

d. Process to Leave the Welding Lab
    i. Each student must hang up their assigned welding helmet or grinding face shield inside their welding booth. All Fleming issued welding helmets and grinding face shields cannot leave the welding lab. This will only be used by a single student for the duration of their bootcamp.
    ii. Put on your safety glasses and your face covering.
    iii. Each student must sanitize all tools, equipment, welding helmet and face shield in your assigned welding booth with the wipes provided.
    iv. Each student will stand outside of their welding booth to indicate they have completed the above steps.
    v. Each student will be called to wash your hands before they leave the welding lab.
    vi. Attendance will be taken as you exit the lab.
    vii. When exiting the lab you will stay 2-meters apart from anyone.

8. Disinfection Procedures

a. Equipment Disinfection Guidelines
    i. All tools and equipment and reusable supplies will be sanitized using wipes provided and allowed to air dry.

ii. Welding booths will receive a 'clean' tag at the start of every boot camps when a new student uses a welding booth for the first time. This process will continue more frequently if there are multiple bootcamps in a day or a week when using the same welding booth.

b. Daily Procedures

i. Following each day in lab, students will be required to return all supplies to the respective workstation basket.

ii. All workstation surfaces will be cleaned using disinfectant wipes and allowed to air dry.

c. Post Bootcamp Procedures

i. All daily procedures will be completed.

ii. All tools and equipment and reusable supplies will be disinfected using guidelines listed above and returned to their appropriate storage location.

iii. The instructor podium and electronics (i.e.: safety phone, computer keyboard and mouse, computer monitor, etc.) will be disinfected using the above guidelines.

iv. The room will be fogged by the Welding Lab Tech.

9. Welding Lab Personal Protective Equipment (PPE)

a. PPE for each task is base on the Occupational Health and Safety Standards following the guidelines of CSA W117.2. This includes but is not limited to the following:

- Students MUST bring their own welding gloves.
- Students MUST wear long non-flammable pants at all times in the welding lab.
- Students MUST wear safety glasses and a face covering in the welding lab when entering or exiting the lab when they do not have their welding helmet or their grinding face shield on.
- Students MUST wear protective footwear that meets the requirements of CSA Z195 Grade 1 (green patch) and meeting the electric shock resistance (ESR - Ω) for welding and cutting operations.
    - All welders shall wear flame-resistant protective footwear, e.g., of leather or a material of equivalent flame and heat protection. Footwear constructed from synthetic materials on the outer shell shall not be worn.
    - The protective footwear must be a minimum height (or cut) of 150 mm (6 inches). The boots shall be laced up and the trouser leg shall be worn over the boot in a manner that will shed falling sparks and spatter.
    - The following protective means shall be employed where appropriate: a) Where welding or cutting operations produce significant volumes of sparks, spatter, or dross that cannot be practically avoided, welders shall wear spats made of leather or

aluminized fabric to prevent laces from burning or hot metal from entering the boot tongue area. b) Where welders are exposed to a high probability of impacts from falling metal pieces, metatarsal protection as defined by CSA Z195 shall be incorporated into the protective footwear.

10. Evaluation

a. Frequent review of stock of disinfecting wipes, cleaning supplies and personal protective equipment.
b. Weekly inspections to ensure spaces remain decluttered and organized.
c. Frequent review and revision of Safe Work Plan to reflect ongoing policy revision and amendments.

11. Compliance

Failure to comply with this Safe Work Procedure, COVID-19 Welding Lab or any other procedures or policies of Fleming College will result in your dismissal from the lab, and therefore you will be asked to leave the College immediately until the College can be assured of your compliance for you safety and of those around you.

12. Approvals

Revision History

Date		Rev.	Revision Summary	by
		0	Original.	

HELP REDUCE THE SPREAD OF COVID-19

TAKE STEPS TO REDUCE THE SPREAD OF THE CORONAVIRUS DISEASE (COVID-19):

follow the advice of your **local public health authority**

wash your hands often with soap and water for at least 20 seconds

use an **alcohol-based hand sanitizer** containing at least 60% alcohol if soap and water are not available

try not to touch your eyes, nose or mouth

avoid close contact with people who are sick

cough and sneeze into your sleeve and not your hands

stay home as much as possible and if you need to leave the house practice **physical distancing** (approximately 2 m)

SYMPTOMS

Symptoms of COVID-19 may be very mild or more serious and may take up to 14 days to appear after exposure to the virus. The most common symptoms include:

FEVER

COUGH

DIFFICULTY BREATHING

IF YOU HAVE SYMPTOMS

Isolate at home to avoid spreading illness to others.

Avoid visits with older adults, or those with medical conditions. They are at higher risk of developing serious illness.

Call ahead before you visit a health care professional or call your local public health authority.

If your symptoms get worse, contact your health care provider or public health authority right away and follow their instructions.

FOR INFORMATION ON COVID-19:

1-833-784-4397 canada.ca/coronavirus

Public Health Agency of Canada / Agence de la santé publique du Canada

Canada